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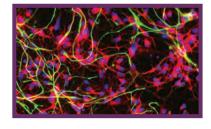
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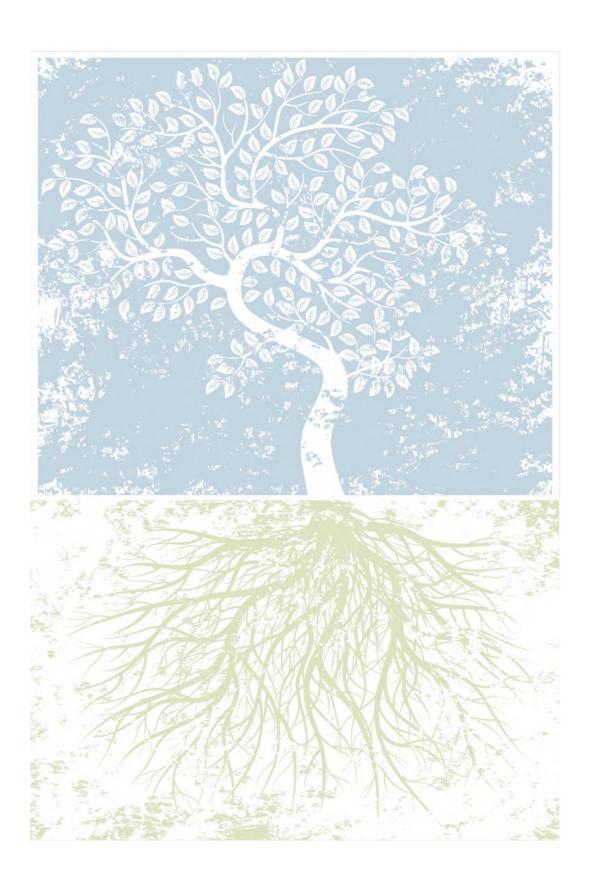






#### 2019 ACADEMIC UPDATE

Executive Editors: Laura Roberts, MD, MA and Megan Cid Cover Image: 3D brain culture from the Pasca Lab, Stanford Medicine. The information presented in this update represents data as of December 31, 2018, unless otherwise noted. med.stanford.edu/psychiatry



## A Message from our Chair

Together, we are creating a new paradigm for modern psychiatry. In this new paradigm, we move beyond the treatment of disease to the imperative of fostering overall health, resilience, and wellbeing. We work to understand the brain, with its extraordinary capacities and complexity, and to gain knowledge of its nature, development, adaptations, and dysfunction. We invent and combine evidence-based therapeutics, and we collaborate with our patients and their families so that each day may be lived well and in better health. We are developing new strategies to prevent and lessen the burdens of illness experienced by individuals, communities, and populations.

This new approach to psychiatry differs in that it is richly informed by extraordinary scientific discoveries and, at the same time, by an appreciation of the long-understood positive role of the therapeutic relationship in human healing. In this new paradigm we embrace the responsibility to transform human health -- and to cure as well as to care for mental illness.



The approach of the Department of Psychiatry and Behavioral Sciences of Stanford Medicine is driven by innovation – bringing novel approaches and technologies to tackle the hardest challenges in the laboratory, clinic, community, and nation. Our approach exists because of the acceleration of wonderful work by our scientists, scholars, educators, and learners in many academic disciplines.

And this approach is so important: mental disorders are the second-leading cause of disease burden throughout the world. Stigma, at this time, makes living with mental disorders so much harder and the opportunities for a healthier life so much fewer.

By rapidly translating great science and dismantling social barriers, our work thus redefines state-of-the -art standards of care for millions of people affected by mental disorders. This work is an expression of Precision Health and Wellness, the strategic vision of Stanford Medicine, and it is ambitious. We are transforming human health.

We have arrived at this moment because of the creativity, tenacity, and clarity of purpose of our academic community. We all have a role in advancing science, clinical innovation and service, educational excellence, community commitment and engagement, and professionalism and leadership. These missions, taken together, become a transformative methodology and have become the basis of this transformational new paradigm for psychiatry at Stanford.

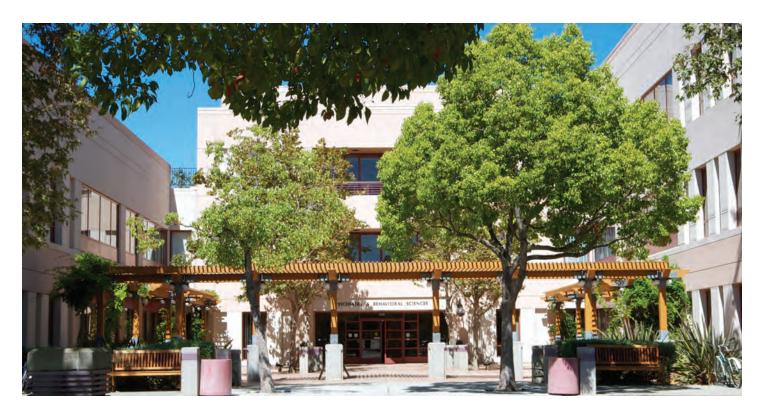
Laura Roberts, MD, MA

Chairman, Department of Psychiatry and Behavioral Sciences

The Katherine Dexter McCormick and Stanley McCormick Memorial Professor

## Our Aspirations, Our Values

### Department of Psychiatry and Behavioral Sciences



Our aim is to enable great science, prepare exceptional people, and inspire an engaged society to create a better future for all whose lives are affected by mental illness.

The Department of Psychiatry and Behavioral Sciences of Stanford Medicine has a great tradition of fundamental science, translational and clinical research, subspecialty expertise, multidisciplinary education, and influential leadership. Our faculty members are highly accomplished scientists, master clinicians, teachers, and community-engaged leaders with transformative impact across many disciplines of science, medicine, and health policy. Our work spans and integrates five interdependent academic missions of advancing science, clinical innovation and service, educational excellence, community commitment and engagement, and professionalism and leadership.

Advancing truly transformative science of significance to human health, now and in the future, is clearly Stanford Medicine's most important role throughout the world. The capacity of our department – one of the largest at Stanford University – to conduct great science and to connect this creative and influential work with our other academic missions is what distinguishes us and continues to inspire us.

The overarching aim of creating a better future is predicated on our shared pursuit of discovery across the basic, translational, clinical, and population sciences. This aim is also predicated on our collaborative efforts to translate and back-translate new knowledge in our training of scientists and expert clinicians, in supporting the careers of outstanding faculty and learners, and in addressing the needs of communities, local and global. Moreover, if we are to ensure that clinical care today at Stanford – and ten years from now throughout the world – leads to far better health outcomes, scientific discovery must be expressed in new approaches to prevention, new therapeutics, and new models of care.

## Academic medicine is entrusted with human health.

Academic medicine is entrusted with improving the health of individuals, communities, and populations. And in academic psychiatry and the behavioral sciences, we have a special responsibility to advance understanding of the nature of the brain and of behavior and to explore the role of personal meaning and the therapeutic relationship in human health -- not only to lessen the burden of disease in the world but also to foster wellbeing, resilience, and strengths for generations to come.

# Together we have created a truly distinguished department.

Building on the remarkable accomplishments of the past, together we have established a great modern academic department, integrating and accelerating our five missions of advancing science, clinical innovation and service, educational excellence, community commitment and engagement, and professionalism and leadership. And together we are making a difference in the lives of our patients, our students, our neighborhood, and our world. It is my privilege to serve with you in leading this department. With deep respect and my heartfelt thanks to my colleagues throughout our department, I offer these reflections on what is distinct about our academic home.

## Our department is inspired.

We are a community dedicated to transformational change and social good. We understand the impact of mental illnesses, which are the second leading cause of disability and premature mortality globally, and we are deeply affected by the immense suffering and social injustices associated with these conditions. We see that the path to health for people and populations is enabled by creating and applying new knowledge, by engaging in innovation, and by preparing future generations of scientists and clinicians. Each of us, whether faculty, learner, or staff, is passionate about our work because we recognize its vital importance to humanity -- to all of our health and futures.

# Our department takes on the hardest problems.

We aim to cure mental illness. We advance understanding of the body's most complex organ, the brain: its biological underpinnings, its functions, its development, its plasticity, its regulation, its dysfunction, its vulnerabilities, its aging, and its resilience. We study cognition, behavior, emotion, and relationships. We use this knowledge to develop evidence-based treatments, and with compassion and expertise we care for individuals living with prevalent, severe, and often highly treatment-resistant conditions. Our work informs clinical practices, systems of care, and health policy to reduce disability, loss of life, and stigma. We do not turn away from the hardest problems. Instead we move toward them. We understand that resolving the hardest problems will make the greatest difference.

## Our department is a hothouse of creativity.

Our scientists develop highly innovative approaches to discovery at every level in the clinical and behavioral neurosciences, thereby exerting scientific leadership throughout the world. In our laboratories, the molecular, cellular, and circuit mechanisms of mental disorders are being decrypted with leading-edge technologies like optogenetics, patient-derived pluripotent stem cells, neurocomputational-imaging models, e-health inventions, and more. Breakthroughs are translated to clinics, communities, and populations and accelerated by the latest approaches using big data analytics, design thinking, implementation science, and wisdom derived from collaboration across disciplines and spheres of life. Today, our faculty and trainees engage in ingenuity and innovation, transforming clinical methods and models of care across many nations. For tomorrow, we have built a pipeline of creative and critical thinkers whose work will advance knowledge and health beyond what we can now imagine.

# Our department is a community in which we value all people.

We are a community defined by our commitment to respect and to inclusiveness. We embrace diversity for its intrinsic value, not merely accepting differences among us but cherishing them as the opportunity for greater mutualism, demonstrations of authentic regard, and growth of our community. We promote the wellbeing of others and take joy in one another's success. We love our students, mentees, and trainees, and we are saddened by the hardships we see that are associated with stigma, unconscious bias, and disparities. We are present and compassionate in our work, helping others, whether in our neighborhood or around the world, to bear the suffering that comes with illness, loss, and trauma. We engage in work that fosters health and a sense of belonging, even for those who are most marginalized in society.

## Our department makes connections and works shoulder to shoulder.

We are a network of scientists, clinicians, educators, trainees, and staff with the shared intent to make a difference through our efforts in science, clinical care, education, the community, and leadership. We form research collaborations across the Stanford campus, we participate in and lead professional organizations, we teach at every level in the university, and we lecture internationally. As educators, we endeavor to bring forward the best in our gifted students through mentorship and rich collaborative learning experiences. We provide care in all parts of Stanford Medicine, with its continuum of care, outreach activities, and civic responsibilities. We join public health efforts in Palo Alto and across the globe. We work together, shoulder to shoulder, making intentional connections across the five interdependent missions of the department, as the prime strategy for transformative change.

Our department is dedicated to wellbeing: purpose, resilience, and belonging.

Our mission to improve the health of individuals, families, communities, and populations begins with attention to our own wellbeing. Our efforts to take care of ourselves -- to focus on our physical and mental health, to deepen our sense of purpose, to fill our reservoir of resilience, and to enrich our feelings of connection and belonging -- contribute to our capacity for sustainable contribution to each of our department's five missions. With every endeavor we engage in collectively to support the wellbeing of our colleagues and team members, we invest in our collective capacity that multiplies our contributions to our patients, our community, and the world. Wellbeing adds inspiration and creativity to the advancement of science, meaning and purpose to clinical innovation and service, and enduring integrity to educational excellence. With unwavering commitment to our own wellbeing and the wellbeing of those we love and those we work with, we create a compelling pattern for others to emulate in our community engagement efforts. Sustained commitment to our own wellbeing enables us to play our full part in preventing and relieving suffering and solving societal problems that deeply affect humanity.

Our department is creating the path to a better future.

Our department is home to leaders, innovators, and learners creating the path to a better future. The attributes that distinguish the department are many, and I have highlighted just a few. Being inspired, creative, and collaborative. Being drawn to the hardest problems, intellectually and personally. Making connections. Valuing all people. Always seeking to make a difference in the present, and yet always understanding our role in academic medicine as stewards of tomorrow. Seeking to bring about transformative change.

We are all touched by mental illness.

Every one of us, no matter our circumstance, is touched by the personal and societal impact of mental illness. The leaders, innovators, and learners of our department understand this. We envision a better world -- a world of improved health and lessened burdens of mental illness. We imagine a future in which children, adults, and elders live each day well and encounter life's inevitable challenges with strength. And we are creating the path to this better future.

## **Department Snapshot**

### 2018-2019 Accomplishments Dashboard

ranked Best Global ranked psychiatry ranked in the US Universities for department in on Doximity's psychiatry/psychology in 2018 in 2018-2019  $7,000^{+}$ \$101m learners across in overall diverse educational revenues in FY18 2018 and 2019 83,853 108 143% increase in postdoctoral clinical productivity scholars FY18 since FY10 \$46.3м 4 and 225+ in new research current competitively National Academy of Sciences and National grants/contracts funded projects and secured in FY18

\$197<sub>M</sub>

in proposals sought by our department faculty in FY18 <sup>\$</sup>105.6м

in philanthropic funds received from FY10-FY19 Q2 18%

of residents in 2019 identify as an underrepresented minority

14

endowed professorships in the department 100%

on-time performance for academic affairs since 2010

27

active NIH K-awards in FY18 #5

in NIH funding across Stanford Medicine's 37 departments and institutes in FY19 100%

PGSP-Stanford PsyD graduates matched into APA accredited internships in 2019

16

major laboratories, including incubator, in our department

780+

publications by department faculty in CY18 86%

department faculty expressed a sense of accomplishment with their work in FY18



## Professionalism and Leadership

Leadership requires the ability to articulate a vision, while supporting and empowering others to engage in and critically reflect on that vision and the actions taken to accomplish it.

559

total department faculty members

382

department staff members

5

interdependent academic missions





Academic medical centers have a special opportunity to promote, model, and encourage professionalism and leadership in all aspects of our work with students, patients, peers, and superiors. Professionalism in our Department means not only acquiring specialized knowledge of psychiatric care and treatment, though this is absolutely critical, but also promoting competency, integrity, self-regulation, and accountability in all clinical, academic, and administrative endeavors. Professionalism aligns with our mission of building leadership competency.

Leaders should embody professionalism, but leadership encompasses more than professionalism alone. Leadership requires the ability to articulate a vision, while supporting and empowering others to engage in and critically reflect on that vision and the actions taken to accomplish it. In our Department, the attitudes, knowledge, and skills necessary for leadership are developed in collaboration with other important missions related to patient care, training, research, and community engagement.

To strengthen our sense of purpose, our effectiveness, and our cohesiveness as one academic community, we have an established leadership team, including the Department Chair, the Vice Chair, Associate Chairs, Division Chiefs, and Senior Leadership Team. Beyond these roles, we have several standing committees that are important in fulfilling critical functions of the Department.

Together, this executive and administrative infrastructure supports department wide efforts to strengthen the leadership skills and aspirations of our early career faculty and staff, and to cultivate a culture that is supportive of professional growth and opportunities.

## Department Leadership

### Chair, Vice Chair, Associate Chairs, and Division Chiefs



Laura Roberts, MD, MA Chair



Victor Carrion, MD
Vice Chair



Steven Adelsheim, MD Associate Chair, Community Commitment and Engagement



Bruce Arnow, PhD
Associate Chair, Psychology and
Psychology Training
Division Co-Chief, General
Psychiatry and Psychology



Sallie De Golia, MD, MPH Associate Chair, Clinician Educator Professional Development



Karl Deisseroth, MD, PhD
Associate Chair,
Scientific Innovation
and Collaboration



Amit Etkin, MD, PhD Associate Chair, Research Strategy and Oversight



Cheryl Gore-Felton, PhD
Associate Chair, Administration
Division Co-Chief,
Public Mental Health and
Population Sciences



Antonio Hardan, MD
Division Chief,
Child and Adolescent
Psychiatry and Child
Development



Chris Hayward, MD, MPH Associate Chair, Translational and Clinical Services Division Co-Chief, General Psychiatry and Psychology



Clete Kushida, MD, PhD Division Chief, Sleep Medicine



James Lock, MD, PhD Associate Chair, Professionalism and Leadership



Alan Louie, MD Associate Chair, Education



Robert Malenka, MD, PhD Associate Chair, Scientific Discovery



Mark McGovern, PhD
Division Co-Chief,
Public Mental Health and
Population Sciences



Ruth O'Hara, PhD
Associate Chair,
Scientific and Academic
Development



Allan Reiss, MD
Division Chief,
Interdisciplinary Brain
Sciences



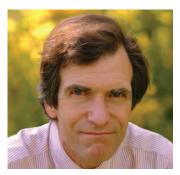
Carolyn Rodriguez, MD, PhD
Associate Chair,
Inclusion and Diversity



David Spiegel, MD Associate Chair, University Relations



Leanne Williams, PhD
Associate Chair,
Translational Neuroscience



Jerome Yesavage, MD Associate Chair, Veterans Affairs

## **Department Advisory Committees**

#### Clinical Executive Committee

Laura Roberts, MD, MA, Chair Steven Adelsheim, MD Bruce Arnow, PhD Victor Carrion, MD Amit Etkin, MD, PhD Cheryl Gore-Felton, PhD Antonio Hardan, MD Chris Hayward, MD, MPH David Hong, MD James Jacobs, MD, PhD Brett Kelly, MBA Heather Kenna, MA, MS Clete Kushida, MD, PhD Tina Lee, MD, MS Stephanie Lettieri, MBA James Lock, MD, PhD Alan Louie, MD Carolyn Rodriguez, MD, PhD Indy Singh, MPH Leanne Williams, PhD

#### Clinical Operations Committee: Adult

Chris Hayward, MD, MPH, Chair Bruce Arnow, PhD Nick Bassano Colette Bernard Ed Buelna Sonya Carten Brett Kelly, MBA Indy Singh, MPH Mytilee Vemuri, MD, MBA Lynda Wolfe

#### Clinical Operations Committee: Child

Antonio Hardan, MD, Chair
Beth Archibald, Administrative Lead
Steven Adelsheim, MD
Victor Carrion, MD
Shashank Joshi, MD
Brett Kelly, MBA
Albert Lam
James Lock, MD, PhD
Laura Roberts, MD, MA
Richard Shaw, MD
Indy Singh, MPH
Sharon Williams, PhD
Sanno Zack, PhD

#### Clinical Strategic Planning Committee

Chris Hayward, MD, MPH, Chair Steven Adelsheim, MD Bruce Arnow, PhD Ed Buelna Lindsay Flaherty, MBA, MPH Brett Kelly, MBA Catherine Krna Alan Louie, MD Jose Maldonado, MD, FAPM, FACFE Tim Morrison, LCSW, ACM Laura Roberts, MD, MA Kathy Sanborn, MD Indy Singh, MPH Sheila Tost, MHA Mytilee Vemuri, MD, MBA Lynda Wolfe

#### Appointments and Promotions Advisory Committee: Professoriate

Keith Humphreys, PhD, Co-Chair David Spiegel, MD, Co-Chair Bruce Arnow, PhD Charles DeBattista, MD, DMH Laura Dunn, MD Joachim Hallmayer, MD, Dr Med Chris Hayward, MD, MPH Booil Jo, PhD Clete Kushida, MD, PhD Alan Louie, MD Robert Malenka, MD, PhD Edith Sullivan, PhD Patricia Suppes, MD, PhD Jerome Yesavage, MD

#### Appointments and Promotions Advisory Committee: Clinician educators

Jennifer Derenne, MD, Co-Chair Kimberly Hill, PhD, Co-Chair Mahendra Bhati, MD Michelle Brown, PhD Kyle Hinman, MD Daniel Kim, MD Tina Lee, MD, MS Yasmin Owusu, MD Rafael Pelayo, MD Divy Ravindranath, MD, MS Daryn Reicherter, MD Yelizaveta Sher, MD Shannon Sullivan, MD

#### Appointments and Promotions Advisory Committee: Subcommittee on VA Affiliated Clinician Educators

Tina Lee, MD, MS, Co-Chair Alan Louie, MD, Co-Chair Peter Bayley, PhD Daniel Blonigen, PhD Eric Kuhn, PhD Claudia Padula, PhD Joy Taylor, PhD

## Adjunct Clinical Faculty Review Committee

Cheryl Gore-Felton, PhD, Chair Mali Mann, MD Donald Mordecai, MD Thomas Plante, PhD

#### Grand Rounds/ CME Committee

Lawrence Fung, MD, PhD, Co-Chair Alan Louie, MD, Co-Chair Bruce Arnow, PhD Sepideh Bajestan, MD, PhD Belinda Bandstra, MD, MA Sallie De Golia, MD, MPH William Faustman, PhD Anita Kishore, MD Malathy Kuppuswamy, MD Steve Lindley, MD, PhD Gerry Piaget, PhD Kristin Raj, MD Gisela Sandoval, MD, PhD Peter van Roessel, MD Lynn Yudofsky, MD

#### Advisory Committee on Annual Awards and Nominations

Alan Louie, MD, Co-Chair Sharon Williams, PhD, Co-Chair Sherry Beaudreau, PhD Kate Corcoran, PhD Amit Etkin, MD, PhD David Hong, MD Booil Jo, PhD Mark McGovern, PhD Philippe Mourrain, PhD Karen Parker, PhD Ranak Trivedi, PhD

#### Veterans Affairs Psychiatry Education Committee

Alan Louie, MD, Chair Smita Das, MD, PhD, MPH George Freeman, MD, PhD Aazaz Haq, MD Malathy Kuppuswamy, MD Tina Lee, MD, MS Margaret May, MD Michael Ostacher, MD Divy Ravindranath, MD, MS Tasha Souter, MD Marina Urman-Yotam, MD Sarah Yasmin, MD

## Education Leadership and Integration Advisory Committee

Alan Louie, MD, Chair Sallie De Golia, MD, MPH, Assoc. Chair Amy Alexander, MD Bruce Arnow, PhD Sepideh Bajestan, MD, PhD Belinda Bandstra, MD, MA John Barry, MD Michelle Brown, PhD Kate Corcoran, MD Smita Das, MD, PhD, MPH Chuck DeBattista, MD, DMH Laura Dunn, MD Glen Elliot, MD, PhD Kaci Fairchild, PhD William Faustman, PhD Mark Freeman, MD, PhD Cheryl Gore-Felton, PhD Chris Hayward, MD, MPH Kimberly Hill, PhD Robert Holaway, PhD David Hong, MD Jeanette Hsu, PhD Shashank Joshi, MD Daniel Kim, MD Malathy Kuppuswamy, MD Anna Lembke, MD Jose Maldonado, MD Margaret May, MD Michael Ostacher, MD, MPH Yasmin Owusu, MD Divy Ravindranath, MD, MS Laura Roberts, MD, MA Yelizaveta Sher, MD Shannon Sullivan, MD Allison Thompson, PhD Sharon Williams, PhD

Isheeta Zalpuri, MD

## **Department Administration Team**

#### **Executive Office**

Director of Finance and Administration Inderjit (Indy) Singh, MPH

Executive Assistant and Special Projects Lead Megan Cid

Executive Assistant Lingfei Ni

Administrative Associate Denise Knab

Program Manager Laura Turner-Essel, PhD

Web, Communications, and Special Projects Administrator Mindy Hantke

Communications & Media Jane McMillan

Senior Editor and Publishing Projects Manager Ann Tennier, ELS

Special Initiatives Team Kyle Lane-McKinley, MFA Katie Ryan, MA Gabrielle Termuehlen Tenzin Tsungmey, MPH

## Research Development and Research Finance

Director of Research Development, Integrity, and Strategy Aimee-Noelle Swanson, PhD

Program Director, Clinical Research Implementation and Compliance Jennifer Howden

Senior Finance Managers Jenny Chen Judy Fredendall Diven Sharma Cindy Lee

Finance Managers Maria Nichols Timothy Ly

Accounting Associate Kat Wong

#### **Finance Administration**

Director of Finance and Clinical Operations Brett Kelly, MBA

Senior Clinical Financial Analysts Albert Lam Jolyna Loanzon

Finance and Contracts Analyst Ozeir Nassery

## Academic Affairs and Education Programs

Director of Faculty Affairs and Strategic Planning Heather Kenna, MA, MS

Faculty Affairs Manager Jacqueline Ching

Faculty Affairs Administrator Diana Kim

Faculty Affairs Associate Sandra Day

Academic Services Administrator and Core Training Programs Manager Mario Mercurio

Medical Education Team Manager, Child & Adolescent Program Manager Ola Golovinsky

Medical Clerkship Coordinator Quynh Dang

Fellowship Coordinator Romola Breckenridge

Adult Residency Coordinator Stephanie Roberts

Child & Adolescent Fellowship Coordinator Maryam Mossadeghian

#### Human Resources

Human Resources Manager Linda Vargas

Human Resources Administrator Maria Ruiz

Human Resources Associates Xanthie Cook Sherry Vega

Postdoc Coordinator Chris Medina

#### Sleep Medicine Administration

Associate Director of Finance and Administration, Sleep Medicine Stephanie Lettieri, MBA

Finance Manager Carlos Perez:

Research Administrator Ashley Gomez

Senior Manager of Clinical Research Eileen Leary

#### Facilities and Operations

Facilities Director Chia-Yu Cardell, MBA









## **Department Faculty**



Elias Aboujaoude, MD, MA Clinical Professor



Daniel Abrams, PhD Clinical Assistant Professor



Emily Ach, PhD Clinical Assistant Professor



Steven Adelsheim, MD Clinical Professor



Sarah Adler, PsyD Clinical Assistant Professor



William Stewart Agras, MD Emeritus (Active) Professor



Ronald Albucher, MD Clinical Associate Professor



Amy Alexander, MD Clinical Assistant Professor



Andrea Ament, MD Clinical Assistant Professor



Bruce Arnow, PhD Professor



Lauren Asarnow, PhD Instructor



Rania Awaad, MD Clinical Assistant Professor



James Bae, MD Clinical Assistant Professor



Sepideh Bajestan, MD, PhD Clinical Associate Professor



Joseph Baker, PhD Instructor



Tali Ball, PhD Instructor



Jacob Ballon, MD, MPH Clinical Associate Professor



Belinda Bandstra, MD, MA Clinical Associate Professor



John Barry, MD Professor



Fiona Barwick, PhD Clinical Assistant Professor



Anne Benham, MD Clinical Professor



Michele Berk, PhD Assistant Professor



Rebecca Bernert, PhD Assistant Professor



Mahendra Bhati, MD Clinical Associate Professor



Justin Birnbaum, MD Clinical Professor



Thaddeus Block, MD Clinical Instructor



Cara Bohon, PhD Assistant Professor



Daniel Bowling, PhD Instructor



Michelle Brown, PhD Clinical Associate Professor



Suzanne Bruch, MD Clinical Assistant Professor



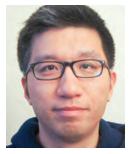
Jennifer Bruno, PhD Instructor



Michael Buckle, PhD Clinical Instructor



Kim Bullock, MD Clinical Associate Professor



Weidong Cai, PhD Clinical Assistant Professor



Michelle Cao, DO Clinical Associate Professor



David Carreon, MD Clinical Instructor



Victor Carrion, MD Professor



Regina Casper, MD Emeritus (Active) Professor



Erin Cassidy Eagle, PhD Clinical Associate Professor



Sundari Chetty, PhD Assistant Professor



Mehak Chopra, DO Clinical Instructor



Stephanie Clarke, PhD Clinical Instructor



Danielle Colborn, PhD Clinical Assistant Professor



Latoya Conner, PhD Clinical Associate Professor



Kate Corcoran, PhD Clinical Associate Professor



Victoria Cosgrove, PhD Clinical Assistant Professor



Jessica Crawford, MD Clinical Instructor



Katharine Dahl, PhD Clinical Assistant Professor



Whitney Daniels, MD Clinical Assistant Professor



Sallie De Golia, MD, MPH Clinical Professor



Luis de Lecea, PhD Professor



Charles DeBattista, MD, DMH Professor



Jennifer Derenne, MD Clinical Associate Professor



Ana DiRago, PhD Clinical Instructor



Jennifer Douglas, PhD Clinical Instructor



Laramie Duncan, PhD Assistant Professor



Laura Dunn, MD Professor



Timothy Durazzo, PhD Associate Professor



Emmanuel During, MD Clinical Assistant Professor



Katherine Eisen, PhD Clinical Assistant Professor



Flint Espil, PhD Clinical Assistant Professor



Amit Etkin, MD, PhD Professor



Carl Feinstein, MD Emeritus (Active) Professor



Katie Fracalanza, PhD Clinical Assistant Professor



Lawrence Fung, MD, PhD Clinical Assistant Professor



Dolores Gallagher-Thompson, PhD, ABPP Emeritus (Active) Professor



Renee Garcia, MD Clinical Assistant Professor



Sonia Gaur, MD Clinical Assistant Professor



Grace Gengoux, PhD Clinical Associate Professor



William Giardino, PhD Instructor



Elise Gibbs, PsyD Clinical Instructor



Marie Gipson, MD Clinical Assistant Professor



Soudabeh Givrad, MD Clinical Instructor



Michelle Goldsmith, MD Clinical Associate Professor



Andrea Goldstein-Piekarski, PhD Clinical Assistant Professor



Cheryl Gore-Felton, PhD Professor



Heather Gotham, PhD Clinical Associate Professor



Tamar Green, MD Instructor



Christian Guilleminault, MD, DBiol Professor



Michael Haberecht, MD, PhD Clinical Associate Professor



Laura Hack, MD, PhD Clinical Instructor



Scott Hall, PhD Associate Professor



Joachim Hallmayer, MD, Dr med Professor



Antonio Hardan, MD Professor



Kate Hardy, ClinPsychD Clinical Associate Professor



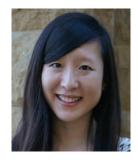
Chris Hayward, MD, MPH Professor



Kimberly Hill, PhD Clinical Associate Professor



Kyle Hinman, MD Clinical Assistant Professor



Tiffany Ho, PhD Instructor



David Hong, MD Assistant Professor



Hadi Hosseini, PhD Assistant Professor



Rona Hu, MD Clinical Associate Professor



Keith Humphreys, PhD Professor



Filza Hussain, MD Clinical Assistant Professor



Randall Inouye, DDS, MSD Clinical Instructor



James Jacobs, MD, PhD, FAACP Associate Professor



Booil Jo, PhD Associate Professor



Shashank Joshi, MD Associate Professor



Agnieszka Kalinowski, MD, PhD Clinical Instructor



Katherine Kaplan, PhD Clinical Instructor



Julie Kauer, PhD Professor



Makoto Kawai, MD, DSc Clinical Assistant Professor



Jennifer Keller, PhD Clinical Associate Professor



Matthew Kendra, PhD Clinical Assistant Professor



Moira Kessler, MD Clinical Assistant Professor



Ahmed Khan, MD, MPH Clinical Assistant Professor



Christina Khan, MD, PhD Clinical Assistant Professor



Daniel Kim, MD Clinical Assistant Professor



Jane Kim, PhD Clinical Assistant Professor



Sue Kim, MD, MS Clinical Assistant Professor



Nina Kirz, MD Clinical Assistant Professor



Anita Kishore, MD Clinical Associate Professor



Hilit Kletter, PhD Clinical Assistant Professor



Lynn Koegel, PhD Clinical Professor



Manuela Kogon, MD Clinical Associate Professor



Cheryl Koopman, PhD Emeritus (Active) Professor



Lorrin Koran, MD Emeritus (Active) Professor



Mari Kurahashi, MD, MPH Clinical Assistant Professor



Clete Kushida, MD, PhD Professor



Scott Kutscher, MD Clinical Assistant Professor



Sheila Lahijani, MD Clinical Assistant Professor



Rie Lebus, PhD Clinical Instructor



Kevin Lee, MD Clinical Assistant Professor



John Leikauf, MD Clinical Assistant Professor



Anna Lembke, MD Associate Professor



Douglas Levinson, MD Professor



Andrea Lewallen, PhD Clinical Instructor



Steven Lindley, MD, PhD Associate Professor



James Lock, MD, PhD Professor



Juliana Lockman, MD Clinical Assistant Professor



Anthony Lombardi, PsyD Clinical Instructor



Linda Lotspeich, MD, MEd Clinical Professor



Alan Louie, MD Professor



Kristine Luce, PhD Clinical Associate Professor



David Lyons, PhD Professor



Jose Maldonado, MD, FAPM, FACFE Professor



Robert Malenka, MD, PhD Professor



Rachel Manber, PhD Professor



Daniel Mason, MD Clinical Assistant Professor



Ryan Matlow, PhD Clinical Assistant Professor



Lawrence McGlynn, MD Clinical Professor



Mark McGovern, PhD Professor



Vinod Menon, PhD Professor



Emmanuel Mignot, MD, PhD Professor



Lauren Mikula Schneider, PsyD Clinical Associate Professor



Adam Miner, PsyD Instructor



Adriana Sum Miu, PhD Clinical Instructor



Nichole Mogharreban, PsyD Clinical Instructor



Kelli Moran-Miller, PhD Clinical Assistant Professor



Philippe Mourrain, PhD Associate Professor



Greer Murphy, MD, PhD Emeritus (Active) Professor



Seiji Nishino, MD, PhD Emeritus (Active) Professor



Douglas Noordsy, MD Clinical Professor



Ruth O'Hara, PhD Professor



Maurice Ohayon, MD, DSc, PhD Professor



Nichole Olson, PhD Clinical Assistant Professor



Lilya Osipov, PhD Clinical Assistant Professor



Michael Ostacher, MD, MPH, MMSc Professor



Yasmin Owusu, MD Clinical Assistant Professor



Oxana Palesh, PhD Associate Professor



Karen Parker, PhD Associate Professor



Sergiu Pasca, MD Assistant Professor



Bina Patel, MD Clinical Assistant Professor



Sujata Patel, MD Clinical Assistant Professor



Rafael Pelayo, MD Clinical Professor



Cassandra Perret, PsyD Clinical Insturctor



Jennifer Phillips, PhD Clinical Associate Professor



Kilian Pohl, PhD Associate Professor



Lisa Post, PhD Clinical Associate Professor



Erica Ragan, PhD Clinical Assistant Professor



Amer Raheemullah, MD Clinical Instructor



Douglas Rait, PhD Clinical Professor



Kristin Raj, MD Clinical Assistant Professor



Natalie Rasgon, MD, PhD Professor



Elizabeth Reichert, PhD Clinical Assistant Professor



Daryn Reicherter, MD Clinical Professor



Allan Reiss, MD Professor



Alan Ringold, MD Clinical Professor



Thalia Robakis, MD, PhD Clinical Assistant Professor



Laura Roberts, MD, MA Professor



Anstella Robinson, MD Clinical Associate Professor



Carolyn Rodriguez, MD, PhD Assistant Professor



Elsa Rojas-Ashe, PhD Clinical Instructor



Craig Rosen, PhD Associate Professor



Heather Rosen, PhD Clinical Instructor



Cristin Runfola, PhD Clinical Assistant Professor



Srikanth Ryali, PhD Instructor



Debra Safer, MD Associate Professor



Manish Saggar, PhD Assistant Professor



Katherine Sanborn, MD Clinical Associate Professor



Mary Sanders, PhD Clinical Associate Professor



Gisela Sandoval, MD, PhD Clinical Assistant Professor



Vidushi Savant, MD Clinical Assistant Professor



Alan Schatzberg, MD Professor



Shebani Sethi-Dalai, MD Clinical Instructor



Nirao Shah, MD, PhD Professor



Ripal Shah, MD, MPH Clinical Instructor



Richard Shaw, MD Professor



Yelizaveta Sher, MD Clinical Associate Professor



Melissa Silverman, MD Clinical Instructor



Norah Simpson, PhD Clinical Assistant Professor



Manpreet Singh, MD, MS Associate Professor



Hugh Solvason, MD, PhD Clinical Professor



Barbara Sommer, MD Emeritus (Active) Professor



David Spiegel, MD Professor



Nicole Starace, PhD Clinical Assistant Professor



Hans Steiner, MD Emeritus (Active) Professor



Keith Sudheimer, PhD Clinical Assistant Professor



Edith Sullivan, PhD Professor



Shannon Sullivan, MD Clinical Associate Professor



Kaustubh Supekar, PhD Clinical Assistant Professor



Patricia Suppes, MD, PhD Professor



Steven Sust, MD Clinical Instructor



Margo Thienemann, MD Clinical Professor



Allison Thompson, PhD Clinical Associate Professor



Jared Tinklenberg, MD Emeritus (Active) Professor



Julie Tinklenberg, MD Clinical Associate Professor



Hui Tong, PhD Clinical Associate Professor



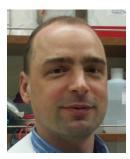
Paula Tran, MD Clinical Assistant Professor



Ranak Trivedi, PhD Assistant Professor



Mickey Trockel, MD, PhD Clinical Associate Professor



Alexander Urban, PhD Assistant Professor



Peter van Roessel, MD Clinical Assistant Professor



Nina Vasan, MD, MBA Clinical Assistant Professor



Mytilee Vemuri, MD, MBA Clinical Associate Professor



Janani Venugopalakrishnan, MD Clinical Assistant Professor



Po Wang, MD Clinical Professor



Julie Weitlauf, PhD Clinical Professor



Kirsten Willar, PhD Clinical Instructor



Katherine Williams, MD Clinical Professor



Leanne Williams, PhD Professor



Nolan Williams, MD Assistant Professor



Sharon Williams, PhD Clinical Professor



Helen Wilson, PhD Clinical Associate Professor



Shannon Wiltsey-Stirman, PhD Associate Professor



Matthew Wright, MD, PhD Instructor



Tonita Wroolie, PhD Clinical Associate Professor



Jerome Yesavage, MD Professor



Jong Yoon, MD Associate Professor



Lynn Yudofsky, MD Clinical Assistant Professor



Sanno Zack, PhD Clinical Associate Professor



Isheeta Zalpuri, MD Clinical Assistant Professor



Laraine Zappert, PhD Clinical Professor



Jamie Zeitzer, PhD Associate Professor

61%
department faculty
members are female

38

new faculty appointments and promotions in FY18

250<sup>+</sup>
professoriate and
CE faculty in AY18
ncludes FTE and PTE)

### **Secondary Appointments**



Maheen Adamson, PhD Clinical Associate Professor



Chwen-Yuen Angie Chen, MD Clinical Assistant Professor



Lu Chen, PhD Professor



Karl Deisseroth, MD, PhD Professor



Shaul Druckmann, PhD Assistant Professor



Korey Hood, PhD Professor



Mitchell Miglis, MD Clinical Assistant Professor



Diana Naranjo, PhD Clinical Associate Professor



Pablo Paredes Castro, PhD Instructor



Gaurav Singh, MD, MPH Clinical Assistant Professor

82%

department faculty believe our workplace culture cultivates innovation Our department outperformed external diversity benchmarks in 6 of 8 categories in FY19. 74%

department leadership in 2019 identify as an under represented minority

\*Department Faculty as of March 2019.

#### **Faculty Not Pictured**

Christiane Brems, PhD, ABPP Clinical Professor

Robert Gorney, MD Clinical Assistant Professor

Carrie Holmberg, MD, PhD Instructor

Farnaz Hooshmand, MD Clinical Instructor

Laura Lazzeroni, PhD Professor

Jonathan Lee, MD Clinical Instructor

Jennifer Alexis Ortiz, PhD Clinical Assistant Professor

Mariana Schmajuk, MD Clinical Assistant Professor

Julie Sutcliffe, PsyD Clinical Instructor

Jeff Taylor, PsyD Clinical Instructor

M. Dhyanne Warner, MD, PhD Clinical Professor

Wei Wu, PhD Instructor

#### **Inactive Emeritus Faculty**

Elizabeth Bing, PhD

Emeritus Faculty (Academic Council)

Raymond Clayton, PhD

Emeritus Faculty (Academic Council)

William Dement, MD, PhD, DSc Emeritus Faculty (Academic Council)

Judith Ford, PhD

Emeritus Faculty (Academic Council)

Ira Glick, MD Emeritus Faculty

Terence Ketter, MD Emeritus Faculty

Roy King, MD

Emeritus Faculty (Academic Council)

Helena Kraemer, PhD

Emeritus Faculty (Academic Council)

P Herbert Leiderman, MD

Emeritus Faculty (Academic Council)

Robert Matano, PhD

Emeritus Faculty (Academic Council)

Rudolf Moos, PhD

Emeritus Faculty (Academic Council)

Adolf Pfefferbaum, MD

Emeritus Faculty (Academic Council)

Walton Roth, MD

Emeritus Faculty (Academic Council)

Javaid Sheikh, MD, MBA

Emeritus Faculty (Academic Council)

Craig Barr Taylor, MD

Emeritus Faculty (Academic Council)

Larry Thompson, PhD

Emeritus Faculty (Academic Council)

Brant Wenegrat, MD

Emeritus Faculty (Academic Council)

Irvin Yalom, MD

Emeritus Faculty (Academic Council)

Vincent Zarcone, MD

Emeritus Faculty (Academic Council)

#### By Courtesy Faculty

Tandy Aye, MD Associate Professor

Michele Barry, MD, FACP

Professor

Beth Darnall, PhD Clinical Professor

Katharine Edwards, PhD Clinical Assistant Professor

Joseph Garner, PhD Associate Professor

Michael Greicius, MD Associate Professor

Casey Halpern, MD Assistant Professor

Thomas Harrison

Clinical Associate Professor

Valerie Hoover, PhD Clinical Instructor

Lynne Huffman, MD Associate Professor

Safwan Jaradeh, MD

Professor

Michelle Monje-Deisseroth, MD, PhD

Assistant Professor

Barbara Sourkes, MD

Professor

Thomas Südhof, MD

Professor

Dennis Wall, PhD Associate Professor

Max Wintermark, MD, MAS, MBA

Professor

#### **Affiliated Faculty**

John Ashford, MD, PhD Clinical Professor

Peter Bayley, PhD Clinical Associate Professor

Daniel Beal, MD Clinical Associate Professor

Sherry Beaudreau, PhD Clinical Professor

Stephen Black, PhD, PhD Clinical Assistant Professor

Daniel Blonigen, PhD Clinical Assistant Professor

Jessica Breland, PhD Clinical Assistant Professor

Kimberly Brodsky, PhD Clinical Associate Professor

Sarah Carey, MD Clinical Assistant Professor

Eve Carlson, PhD Clinical Professor

Jauhtai Cheng, MD, PhD Clinical Assistant Professor

Marylene Cloitre, PhD Clinical Professor

Michael Cochran, MD Clinical Assistant Professor

Michael Danovsky, PhD Clinical Assistant Professor

Smita Das, MD, PhD, MPH Clinical Assistant Professor

Katherine Eisen, PhD Clinical Assistant Professor

Glen Elliott, MD, PhD Clinical Professor

Jennifer Kaci Fairchild, PhD Clinical Associate Professor

William Faustman, PhD Clinical Professor

Howard Fenn, MD Clinical Associate Professor

George Freeman, MD, PhD Clinical Assistant Professor Ansgar Furst, PhD Clinical Associate Professor

Aazaz Haq, MD

Clinical Assistant Professor

Claire Hebenstreit, PhD Clinical Assistant Professor

John Herbert, MD

Clinical Assistant Professor

Valerie Herman, MD Clinical Instructor

Olga Hewett, MD Clinical Instructor

Jeanette Hsu, PhD Clinical Professor

Lynette Lukuang Hsu, MD Clinical Associate Professor

Rex Huang, MD, FAPA Clinical Assistant Professor

Emily Hugo, PsyD

Clinical Associate Professor

Shaili Jain, MD

Clinical Associate Professor

Neda Kharrazi, PsyD Clinical Assistant Professor

Eric Kuhn, PhD

Clinical Associate Professor

Malathy Kuppuswamy, MD Clinical Associate Professor

Whitney Landa, MD Clinical Assistant Professor

Tina Lee, MD, MS Clinical Professor

Bruce Linenberg, PhD Clinical Associate Professor

Alka Mathur, MD Clinical Instructor

Margaret May, MD Clinical Instructor

Shannon McCaslin-Rodrigo, PhD Clinical Associate Professor

Carmen McLean, PhD Clinical Associate Professor Margaret Windy McNerny, PhD Clinical Assistant Professor

Kalpana Nathan, MD Clinical Associate Professor

Jennifer Pien, MD

Clinical Assistant Professor

Manasi Rana, MD, MBBS Clinical Assistant Professor

Divy Ravindranath, MD, MS Clinical Associate Professor

Allyson Rosen, PhD Clinical Associate Professor

Blake Scanlon, PhD Clinical Assistant Professor

Matthew Stimmel, PhD Clinical Instructor

Tasha Souter, MD Clinical Assistant Professor

Joy Taylor, PhD Clinical Professor

Christine Timko, PhD Clinical Professor

Jodie Trafton, PhD Clinical Professor

Raziya Wang, MD

Clinical Assistant Professor

Julie Weitlauf, PhD Clinical Professor

William Wilkes, MD Clinical Assistant Professor

Steven Woodward, PhD Clinical Professor

Sarah Yasmin, MD, MPH Clinical Associate Professor

Joshua Zeier, PhD Clinical Assistant Professor

Anna Nedelisky Zeman, PhD Clinical Assistant Professor

#### **Adjunct Clinical Faculty**

Diana Adams, EdD Adjunct Clinical Assistant Professor

Richard Almond, MD Adjunct Clinical Professor

Jennifer Alvarez, PhD Adjunct Clinical Associate Professor

Anthony Atwell, MD Adjunct Clinical Professor

Richard Bale, PhD (Emeritus) Adjunct Clinical Associate Professor

Barbara Ballinger, MD Adjunct Clinical Assistant Professor

Daniel Becker, MD Adjunct Clinical Professor

Joseph Belanoff, MD Adjunct Clinical Instructor

Kimberly Bell, MD Adjunct Clinical Instructor

Peter Berman, PhD (Emeritus) Adjunct Clinical Associate Professor

Maria Pilar Bernal-Estevez, MD Adjunct Clinical Associate Professor

Wendy Bernstein, MD Adjunct Clinical Instructor

Kari Berquist, PhD Adjunct Clinical Assistant Professor

Elizabeth Biggart, PhD

Adjunct Clinical Assistant Professor

Britney Blair, PsyD Adjunct Clinical Instructor

Daniel Blum, PhD Adjunct Clinical Instructor

Neil Brast, MD (Emeritus) Adjunct Clinical Associate Professor

Alan Brauer, MD (Emeritus) Adjunct Clinical Associate Professor

John Brentar, PhD Adjunct Clinical Instructor

Charles Browning, MD (Emeritus) Adjunct Clinical Associate Professor

David Burns, MD (Emeritus) Adjunct Clinical Professor Macario Camacho, MD

Adjunct Clinical Assistant Professor

Charles Casella, MD (Emeritus) Adjunct Clinical Associate Professor

Randolph Charlton, MD Adjunct Clinical Professor

Cynthia Chatterjee, MD

Adjunct Clinical Assistant Professor

Cathy Cheng, MD

Adjunct Clinical Assistant Professor

Carolyn Compton, PhD (Emeritus) Adjunct Clinical Associate Professor

James Corby, MD (Emeritus) Adjunct Clinical Professor

Richard Corelli, MD Adjunct Clinical Associate Professor

Paula de la Cruz, MD Adjunct Clinical Assistant Professor

Katherine DeVaul, MD Adjunct Clinical Assistant Professor

Norman Dishotsky, MD (Emeritus) Adjunct Clinical Professor

Harvey Dondershine, MD (Emeritus) Adjunct Clinical Professor

Kathleen Dong, MD Adjunct Clinical Assistant Professor

Edward Duggan, PhD Adjunct Clinical Assistant Professor

Magdolna Dunai, MD Adjunct Clinical Associate Professor

Susan Edelman, MD

Adjunct Clinical Associate Professor

Elaine Ehrman, PhD (Emeritus) Adjunct Clinical Associate Professor

Kathleen Eldredge, PhD Adjunct Clinical Assistant Professor

Stephanie Evans, PhD Adjunct Clinical Instructor

Barbara Finn, PhD Adjunct Clinical Assistant Professor

Stanley Fischman, MD Adjunct Clinical Associate Professor Shela Fisk, PhD

Adjunct Clinical Assistant Professor

Caroline Fleck, PhD

Adjunct Clinical Assistant Professor

Justine Forbes, MD (Emeritus) Adjunct Clinical Associate Professor

Craig Forte, MSW

Adjunct Clinical Assistant Professor

William Fry, MD (Emeritus)

Adjunct Clinical Associate Professor

Emery Fu, MD

Adjunct Clinical Assistant Professor

Michael Gadbaw, MD Adjunct Clinical Instructor

Danielle Galante, PhD Adjunct Clinical Instructor

Ivan Gendzel, MD (Emeritus) Adjunct Clinical Associate Professor

M Rameen Ghorieshi, MD Adjunct Clinical Instructor

John Glathe, MD (Emeritus) Adjunct Clinical Professor

Cheryl Goodrich, PhD

Adjunct Clinical Assistant Professor

Christine Gray, PhD

Adjunct Clinical Assistant Professor

John Greene, MD

Adjunct Clinical Assistant Professor

Robert Harris, MD (Emeritus) Adjunct Clinical Associate Professor

William Hart, MD

Adjunct Clinical Associate Professor

Nancy Haug, PhD

Adjunct Clinical Associate Professor

James Hawkins, MD (Emeritus) Adjunct Clinical Associate Professor

Elizabeth Herb, MD (Emeritus) Adjunct Clinical Associate Professor

Suzanne Horowitz, PhD (Emeritus) Adjunct Clinical Associate Professor

Leslie Hsu, MD (Emeritus)

Adjunct Clinical Associate Professor

#### Adjunct Clinical Faculty (continued)

Shehlanoor Huseni, MD Adjunct Clinical Instructor

Paula Jacobsen, LCSW Adjunct Clinical Professor

Vikas Jain, MD Adjunct Clinical Instructor

Rania Johnson, MD Adjunct Clinical Instructor

Megan Jones, PsyD Adjunct Clinical Assistant Professor

Jana Kahn, PhD Adjunct Clinical Assistant Professor

Gloria Kardong, MD Adjunct Clinical Associate Professor

Ayelet Kattan, PsyD Adjunct Clinical Instructor

Stewart Kiritz, PhD (Emeritus) Adjunct Clinical Assistant Professor

Kerry Kravitz, MD, PhD Adjunct Clinical Associate Professor

Robert Landeen, MD (Emeritus) Adjunct Clinical Assistant Professor

Gary Lapid, MD (Emeritus) Adjunct Clinical Associate Professor

Jill Levitt, PhD Adjunct Clinical Instructor

Jack Lewis, MD (Emeritus) Adjunct Clinical Associate Professor

Grace Liu, MD Adjunct Clinical Instructor

Michael Loughran, PhD Adjunct Clinical Associate Professor

Elizabeth Mahler, MD Adjunct Clinical Assistant Professor

Alan Maloney, MD Adjunct Clinical Associate Professor

Mali Mann, MD Adjunct Clinical Professor

Susan Markowitz, PhD (Emeritus) Adjunct Clinical Assistant Professor

Matthew May, MD Adjunct Clinical Instructor Johanna Mayer, PhD (Emeritus) Adjunct Clinical Assistant Professor

Viola Mecke, PhD (Emeritus) Adjunct Clinical Professor

Terry Miller, MD Adjunct Clinical Associate Professor

Kerry Mitchell, MD Adjunct Clinical Assistant Professor

Donald James Mordecai, MD Adjunct Clinical Associate Professor

Elliot Morrison, MD (Emeritus) Adjunct Clinical Associate Professor

James Moses, PhD (Emeritus) Adjunct Clinical Professor

Anna Muelling, MD (Emeritus) Adjunct Clinical Associate Professor

Ricardo Muñoz, PhD Adjunct Clinical Professor

Thomas Nagy, PhD Adjunct Clinical Associate Professor

Sharon Nash, PhD Adjunct Clinical Assistant Professor

Nicholas Ney, PhD Adjunct Clinical Assistant Professor

Cynthia Nguyen, MD Adjunct Clinical Associate Professor

Mary Ann Norfleet, PhD (Emeritus) Adjunct Clinical Professor

Harold Novotny, MD (Emeritus) Adjunct Clinical Associate Professor

Michael O'Connor, PhD (Emeritus) Adjunct Clinical Assistant Professor

Chinyere Ogbonna, MD Adjunct Clinical Instructor

Mari Shimizu Ormiston, MD Adjunct Clinical Instructor

Isabel Paret, PhD (Emeritus) Adjunct Clinical Associate Professor

Gerald Piaget, PhD (Emeritus) Adjunct Clinical Associate Professor

Thomas Plante, PhD Adjunct Clinical Professor Donn Posner, PhD

Adjunct Clinical Associate Professor

Fawn Powers, PhD (Emeritus) Adjunct Clinical Assistant Professor

Rebecca Powers, MD

Adjunct Clinical Associate Professor

Michael Quach, MD

Adjunct Clinical Assistant Professor

Stacey Quo, DDS

Adjunct Clinical Assistant Professor

Anil Rama, MD

Adjunct Clinical Instructor

Ildiko Ran, MFT, CGP Adjunct Clinical Instructor

Nicole Redzic, PsyD

Adjunct Clinical Assistant Professor

George Reimer (Emeritus) Adjunct Clinical Professor

Angela Riccelli, LCSW (Emeritus) Adjunct Clinical Assistant Professor

Elizabeth Richards, MD (Emeritus) Adjunct Clinical Associate Professor

Stephen Richmond, MD

Adjunct Clinical Assistant Professor

David Ringo, MD, PhD (Emeritus) Adjunct Clinical Assistant Professor

Jules Riskin, MD (Emeritus) Adjunct Clinical Associate Professor

Beverly Rodriguez, MD, PhD Adjunct Clinical Assistant Professor

Deborah Rose, MD (Emeritus) Adjunct Clinical Assistant Professor

Jerome Rose, MD (Emeritus) Adjunct Clinical Associate Professor

Alan Rosenthal, MD Adjunct Clinical Professor

Elise Rossiter, PhD, MS

Adjunct Clinical Associate Professor

Jacob Roth, MD

Adjunct Clinical Assistant Professor

Chad Ruoff, MD

Adjunct Clinical Assistant Professor

#### Adjunct Clinical Faculty (continued)

Jonathan Russ, MD (Emeritus) Adjunct Clinical Associate Professor

Kenneth Seeman, MD (Emeritus) Adjunct Clinical Associate Professor

Nicole Shiloff, PhD Adjunct Clinical Assistant Professor

Allison Siebern, PhD Adjunct Clinical Assistant Professor

Alan Sidle, MD, PhD (Emeritus) Adjunct Clinical Associate Professor

Judith Simon, PhD Adjunct Clinical Instructor

Monica Sinha-Evenson, MD Adjunct Clinical Instructor

Carol Slotnick, MSW, PhD Adjunct Clinical Assistant Professor

Michael Smith, PhD Adjunct Clinical Assistant Professor

John Smolowe, MD (Emeritus) Adjunct Clinical Associate Professor

Mary Jo Spencer, LCSW (Emeritus) Adjunct Clinical Assistant Professor

Janet Spraggins, MD Adjunct Clinical Assistant Professor

Nicholas St. John, PhD Adjunct Clinical Instructor

Sheldon Starr, PhD (Emeritus) Adjunct Clinical Associate Professor

Maria-Christina Stewart, PhD Adjunct Clinical Instructor

Cary Lee Stone, LCSW (Emeritus) Adjunct Clinical Associate Professor

Lisa Talbot, PhD Adjunct Clinical Assistant Professor

Thomas Tarshis, MD Adjunct Clinical Assistant Professor

Jacob Towery, MD Adjunct Clinical Instructor

William Van Stone, MD (Emeritus) Adjunct Clinical Associate Professor

Shivani Verma Chmura, MD Adjunct Clinical Assistant Professor Lynn Waelde, PhD Adjunct Clinical Professor

Leon Wanerman, MD Adjunct Clinical Associate Professor

Saul Wasserman, MD (Emeritus) Adjunct Clinical Associate Professor

William Waterfield, Jr, MD (Emeritus) Adjunct Clinical Associate Professor

Randall Weingarten, MD Adjunct Clinical Professor

Joellen Werne, MD (Emeritus) Adjunct Clinical Associate Professor

Barbara White-Huber, PhD (Emeritus) Adjunct Clinical Associate Professor

Dana Wideman, PhD Adjunct Clinical Assistant Professor

Jeremy Wilkinson, MD Adjunct Clinical Assistant Professor

William Wittner, MD (Emeritus) Adjunct Clinical Associate Professor

Kenneth Woodrow, MD Adjunct Clinical Associate Professor

Frances Wren, MB, BCh Adjunct Clinical Associate Professor

Gary Wynbrandt, MD Adjunct Clinical Assistant Professor

Helen Yeni-Komshian, MD Adjunct Clinical Instructor

Robert Yoerg, MD (Emeritus) Adjunct Clinical Associate Professor

Lenora Yuen, PhD Adjunct Clinical Assistant Professor

Eugene Zukowsky, PhD (Emeritus) Adjunct Clinical Associate Professor

#### **Adjunct Faculty**

Mark Abramson, DDS Adjunct Professor

Thomas Anders, MD Adjunct Professor

Vandana Aspen, PhD Adjunct Lecturer

Jed Black, MD Adjunct Professor

Mark Buchfuhrer, MD Adjunct Lecturer

Sophia Colamarino, PhD Adjunct Professor

Alison Darcy, PhD Adjunct Lecturer

Sanjay Dube, MBBS Adjunct Professor

David Eagleman, PhD Adjunct Professor

Wendy Froelich-Santino, PhD

Adjunct Lecturer

Steven Harris, MD Adjunct Professor

William Hewlett, MD, PhD Adjunct Professor

Paul Insel, PhD Adjunct Professor

Thomas R Insel, MD Adjunct Professor

Michael Jaffe, MD Adjunct Lecturer

Jonathan Kaplan, PhD Adjunct Professor

Maor Katz, MD Adjunct Lecturer

Sharon Keenan, PhD Adjunct Lecturer

Leena Khanzode, MD Adjunct Lecturer Brian Kleis, MD Adjunct Lecturer

Tonja Krautter, PsyD, LCSW

Adjunct Lecturer

Julie Lee-Ancajas, PHD Adjunct Lecturer

Laurie Leventhal-Belfer, PhD

Adjunct Lecturer

Martin Mumenthaler, PharmD

Adjunct Professor

Karoly Nikolich, PhD Adjunct Professor

Jennifer Park, PhD Adjunct Lecturer

Brandon Peters, MD Adjunct Lecturer

Joy Pollard, PhD Adjunct Lecturer

James Reich, MD, MPH Adjunct Professor

Jenna Rinsky, PhD Adjunct Lecturer

Josef Ruzek, PhD Adjunct Professor

Ahmad Salehi Najaf Abadi, MD, PhD

Adjunct Professor

Michael Bret Schneider, MD Consulting Associate Professor

Pascale Stemmle, PsyD Adjunct Lecturer

Dona Tversky, MD Adjunct Lecturer

Pablo Villoslada, MD Adjunct Professor

#### **Faculty Lecturers**

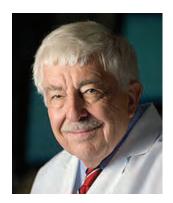
Kathryn Dewitt, PhD Senior Lecturer

David Schrom, JD

Lecturer

# Recognition of Service

## Faculty Retirements Since 2016



William Dement, MD, PhD



Carl Feinstein, MD



Dolores Gallagher-Thompson, PhD



Cheryl Koopman, PhD



Greer Murphy, MD, PhD



Seiji Nishino, MD, PhD



Hans Steiner, MD



Jared Tinklenberg, MD

## **Faculty Honors**

## National Academy of Sciences Members



Karl Deisseroth, MD, PhD Stanford University Primary: Systems Neuroscience Secondary: Cellular and Molecular Neuroscience

Robert Malenka, MD, PhD Stanford University Primary: Cellular and Molecular Neuroscience Secondary: Systems Neuroscience Emmanuel Mignot, MD, PhD Stanford University Primary: Medical Physiology and Metabolism

Thomas Südhof, MD Stanford University Primary: Cellular and Molecular Neuroscience Secondary: Biochemistry

## National Academy of Medicine Members



Michele Barry, MD, FACP Elected 2002 California

Karl Deisseroth, MD, PhD Elected 2010 California

William Dement, MD, PhD Elected 1983 California

Helena Chmura Kraemer, PhD Elected 2003 California

Robert Malenka, MD, PhD Elected 2004 California Emmanuel Mignot, MD, PhD Elected 2005 California

Allan Reiss, MD Elected 2009 California

Alan Schatzberg, MD Elected 2003 California

David Spiegel, MD Elected 2012 California

Thomas Südhof, MD Elected 2007 California





















Pictured Alphabetically: Barry, Deisseroth, Dement, Kraemer, Malenka, Mignot, Reiss, Schatzberg, Spiegel, Südhof

## Stanford University and National Awards

## **Recent Exemplars**

Our faculty, staff, and students are frequently recognized for their extraordinary contributions to scholarly research, clinical care, education, and professional leadership. Below you will find some recent awards and honors received by our department faculty from the department, the larger Stanford community, local, national, and international organizations.



### Rania Awaad, MD Stanford Outstandin

Stanford Outstanding Community Partner Award Office of Community Engagement, Stanford University School of Medicine

#### 2. John Barry, MD

Irma Bland Award for Resident Teaching American Psychiatric Association

#### 3. Victoria Cosgrove, PhD

2018 McCormick and Gabilan Faculty Award Stanford Medicine Office of Faculty Development and Diversity

#### 4. Smita Das, MD, PhD, MPH

2018 Committee Person of the Year Award Northern California Psychiatric Society

#### 5. Karl Deisseroth, MD, PhD

- 2018 Geri Taylor Memorial Service Award Northern California Psychiatric Society
- 2018 Kyoto Prize
- Massry Prize

Meira and Shaul G. Massry Foundation

- 2016 Harvey Prize in Human Health Technion-Israel Institute of Technology

#### 6. Neir Eshel, MD, PhD

2016 Science & SciLifeLab Prize for Young Scientists Science/AAAS and SciLifeLab

#### 7. Amit Etkin, MD, PhD

- Joel Elkes Research Award American College of Neuropsychopharmacology
- 2017 Pioneer Award, National Institutes of Health

#### 8. Lief Fenno, MD, PhD

Award for Humanism and Excellence in Teaching Arnold P Gold Foundation

#### 9. Dolores Gallagher-Thompson, PhD

Outstanding contributions to the field of Gerodiversity American Psychological Association

## Dolores Gallagher-Thompson, PhD and Larry Thompson, PhD M. Powell Lawton Distinguished Contribution Award for Applied

Gerontology, American Psychological Association

#### 11. Ira Glick, MD

Dean Award for Research in Schizophrenia The American College of Psychiatrists

#### 12. Jessi Gold, MD, MS

- Arnold P Gold Foundation Award for Humanism and Excellence in Teaching, Stanford School of Medicine
- George Ginsberg Fellowship, American Association of Directors of Psychiatric Residency Training

#### 13. Chris Hayward, MD, MPH

Program Director Award Stanford Medicine GME Program

#### 14. Rona Hu, MD

2017 Stanford Asian American Faculty Award Stanford University Asian American Activities Center Student Affairs Advisory Board

#### 15. Shashank Joshi, MD

- The Roberts Award for Inspirational Mentorship in Academic Psychiatry, The Association for Academic Psychiatry
- Nancy C.A. Roeske, MD, Certificate of Recognition for Excellence in Medical Student Education, American Psychiatric Association
- Tall Tree Award, Outstanding Professional Palo Alto Chamber of Commerce & Palo Alto Weekly

#### 16. Corey Keller, MD, PhD

Postgraduate Award, Alpha Omega Alpha

#### 17. James Lock, MD, PhD

- 2018 Agnes Purcell McGavin Award for Distinguished Career Achievement in Child and Adolescent Psychiatry American Psychiatric Association
- Distinguished Fellow American Academy of Child & Adolescent Psychiatry

#### 18. Jose Maldonado, MD, FAPM, FACFE

2018 Eleanor and Thomas P. Hackett Memorial Award Academy of Consultation-Liaison Psychiatry

#### 19. Robert Malenka, MD, PhD

Julius Axelrod Prize from the Society for Neuroscience

#### 20. Lawrence McGlynn, MD

- 2018 Excellence in Healthcare, Silicon Valley Business Journal
- Red Ribbon Award for outstanding service to individuals with HIV/AIDS, HEALTHTrust

#### 21. Mark McGovern, PhD

2018 Dondero Award LaSalle University in Philadelphia

#### 22. Ricardo Muñoz, PhD

Elected as a Fellow American Association for the Advancement of Science

#### 23. Ruth O'Hara, PhD

2016 Allan V Cox Medal for Faculty Excellence in Fostering Undergraduate Research, Stanford University

#### 24. Yasmin Owusu, MD

MD Program Teaching Award for excellence in promotion of humanism, Stanford University School of Medicine

#### 25. Sergiu Pasca, MD

- Ben Barres Investigator, Chan-Zuckerberg Initiative
- 2018 Early Career Award, American Society of Cell Biology
- Daniel H. Efron Research Award American College of Neuropsychopharmacology
- 2018 A.E. Bennett Award, Society of Biological Psychiatry
- Jordi Folch-Pi Award, American Society for Neurochemistry
- Vilcek Prize for Creative Promise in Biomedical Science
- Ad Astra Award in Life Science, Ad Astra Research Association
- New York Times, Visionaries in Medicine

#### 26. Laura Roberts, MD, MA

- Lifetime Achievement Award, American Association of Directors of Psychiatric Residency Training
- Inspiration Tribute Award, Constellation Behavioral Health
- MacLean Center Prize in Clinical Ethics, MacLean Center for Clinical Medical Ethics, University of Chicago
- Bowis Award, American College of Psychiatrists

#### Carolyn Rodriguez, MD, PhD

27. - A.E. Bennett Research Award
The Society of Biological Psychiatry

- Killam Award, American College of Neuropsychopharmacology

#### Alan Schatzberg, MD

- 28. 2018 Judd Marmor Award, American Psychiatric Association
  - Axelrod Award, American College of Neuropsychopharmacology

#### Edith Sullivan, PhD

29. docteur honoris causa École Pratique des Hautes Études

#### Ranak Trivedi, PhD

 2017 McCormick Faculty Award, Stanford University School of Medicine, Office of Faculty Development and Diversity

#### Nina Vasan, MD, MBA

31. 2018 Excellence in Healthcare Silicon Valley Business Journal

#### Randall Weingarten, MD

32. Irma Bland Award for Resident Teaching American Psychiatric Association

#### Leanne Williams, PhD

33.

Fellow, American College of Neuropsychopharmacology

#### Shannon Wiltsey-Stirman, PhD

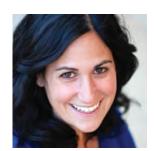
Mid-Career Innovator Award
 Association for Behavioral and Cognitive Therapies

## Annual Chairman's Awards

### 2019 Chairman's Award Winners

The Annual Chairman's Awards were initiated in 2012 to recognize faculty in our Department for their exceptional work in one or more of the Department's interdependent mission areas: advancing science, clinical innovation and service, educational excellence, community commitment and engagement, and leadership and professionalism. We also created the "Unsung Hero" award to recognize individuals who give tirelessly and selflessly to the members and/or missions of the Department. New this year, we invited nominations for an Adjunct/Affiliated Faculty Award to recognize exceptional contributions of an Adjunct, Adjunct Clinical, or Affiliated faculty member at any rank. Candidates for the Annual Chairman's Awards are nominated each year by the faculty and are vetted by the Departmental Advisory Committee on Annual Awards and Nominations before final selections are made by the Chairman.

### Excellence in Leadership and Professionalism



#### Sarah Adler, PsyD

"Dr. Adler has spearheaded our measurement-based care initiative, bringing to bear considerable technical ability to bring this capability online, coordination with IT, coordination with multiple clinics with different needs, and with our data analytic staff. She has brought incredible dedication and skill to this critical effort"



#### Ranak Trivedi, PhD

"Dr. Trivedi is unique in her workgroup involvement leadership to improve health and well-being among faculty. Her professionalism extends to her support of colleagues and as a model for other researchers and educators in our department."

### Excellence in Advancing Science



Makoto Kawai, MD, DSc

"Dr. Kawai's research is incredible and groundbreaking as he examines the brains of older adults utilizing incredibly modern Polysomnography and Near-Infrared Spectroscopy equipment. His amazing research will continue to make Stanford University very proud."



#### Nolan Williams, MD

"Dr. Williams is remarkably deserving of this award through his dedication to the advancement and development of efficacious psychiatric interventions, such as the use of neuromodulatory transcranial magnetic stimulation, for the treatment of severely treatment-resistant depressed patients."



Manish Saggar, PhD

"Dr. Saggar is doing some of the most innovative work now in the neurocomputational aspect of psychiatry. He is helping to model brain networks associated with psychopathology, which forms the basis of his recent publications and grants. Notably, he is collaborating with some of the most respected researchers in this area, both nationally and internationally."

#### **Excellence in Education**



#### Kristin Raj, MD

"Dr. Raj should be recognized for her passion for teaching and her dedication to resident education. Her efforts and devotion to resident teaching have greatly improved the resident educational experience. Her lectures have been well-conceived, well-taught and helpful clinically."



#### Tali Ball, PhD

"I have found Dr. Ball's teaching to be invaluable to my own development as an academic clinician. I particularly appreciate her flexible, responsive, and generous teaching style, as well as the clear thoughtfulness and effort she puts into preparation for each session."

#### Excellence in Community Engagement



#### Ryan Matlow, PhD

"I am amazed with the energy Dr. Matlow puts into his projects and the extra steps he tackles to ensure that the community gets access to mental health treatment. He goes over and above in the dreariest of conditions to touch the lives of the most vulnerable in our global community."



## Gisela Sandoval, MD, PhD

**Excellence in Clinical Innovation** 

"Dr. Sandoval is a true team player, often taking on the most complex patients in child and adolescent psychiatry. She often works with severely medically ill youth with complex psychiatric comorbidities. This has developed into the Pediatric Functional Neurological Disorders/Conversion Disorders program."

### Excellence Across Multiple Missions (The "Polymath" Award)



#### Scott Hall, PhD

"Dr. Hall is a thoughtful and exacting scientist who strives to improve our understanding of behavior in children with developmental disorders. His clinical care is most unique and highly valued - he consults on the most complex outpatient and inpatient cases. Taken as a whole, he is a gem in our department's portfolio."



#### Ruth O'Hara, PhD

"Not only is Dr. O'Hara an incredibly caring mentor to everyone, but she has excelled in all aspects of academics: scholarship, education, and program building. She's a dynamic member of the department who contributes to the missions of the department on many levels."

#### **Unsung Hero**



#### Andrea Lewallen, PhD

"Dr. Lewallen is a team player who provides a professional, stable, and positive presence. She receives high accolades from patients, trainees, and colleagues. She is a pleasure to work with -- always willing to go the extra mile for patients and our department."



### Adjunct/Affiliated Recognition

#### Sophia Colamarino, PhD

"Dr. Colamarino has worked tirelessly in support of the Department's missions. She co-taught a highly successful undergraduate course on Autism and supports our scientific and clinical missions by advocating and advising for expansion of cuttingedge research and clinical programs."

## Annual Chairman's Awards

### 2012-2018 Award Winners



- Steven Adelsheim, MD (2014) Community Commitment and Engagement
- Bruce Arnow, PhD (2017) Professionalism & Leadership
- 3. Jacob Ballon, MD, MPH (2016) Clinical Innovation
- Sepideh Bajestan, MD, PhD (2018) Professionalism & Leadership
- 5. Belinda Bandstra, MD, MA (2016) Educational Excellence
- 6. Sherry Beaudreau, PhD (2015) Advancing Science
- Michele Berk, PhD (2018) Clinical Innovation
- Victor Carrion, MD (2013) Community Commitment and Engagement
- 9. Sallie De Golia, MD, MPH (2014) Educational Excellence
- Karl Deisseroth, MD, PhD (2017) Advancing Science
- John Etchemendy, PhD (2014) Unsung Hero
- 12. Amit Etkin, MD, PhD (2014) Clinical Innovation and Advancing Science
- Dolores Gallagher-Thompson, PhD, ABPP (2017) 13. Clinical Innovation & Service
- Cheryl Gore-Felton, PhD (2016) Professionalism & Leadership
- 15. Christian Guilleminault, MD, DBiol (2017) Unsung Hero
- Joachim Hallmayer, MD, Dr med (2015) 16. Unsung Hero
- 17. Antonio Hardan, MD (2015) Advancing Science









10.	Clinical Innovation	55.	Advancing Science
19.	Kimberly Hill, PhD (2014) Leadership and Unsung Hero	36.	Douglas Noordsy, MD (2018) Professionalism & Leadership
20.	Kyle Hinman, MD (2018) Unsung Hero	37.	Ruth O'Hara, PhD (2015) Professionalism & Leadership
21.	David Hong, MD (2018) Professionalism & Leadership	38.	Rafael Pelayo, MD (2018) Educational Excellence
22.	Jeanette Hsu, PhD (2017) Professionalism & Leadership	39.	Jennifer Phillips, PhD (2016) Unsung Hero
23.	Rona Hu, MD (2017) Community Commitment and Engagement	40.	Elizabeth Reichert, PhD (2018) Community Commitment and Engagement
24.	Booil Jo, PhD (2012) Leadership and Unsung Hero	41.	Daryn Reicherter, MD (2015 and 2016) Community Commitment and Engagement
25.	Shashank Joshi, MD (2012) Community Commitment and Engagement	42.	Carolyn Rodriguez, MD, PhD (2018) Excellence Across Multiple Missions "Polymath"
26.	Heather Kenna, MA, MS (2017) Unsung Hero	43.	Yelizaveta Sher, MD (2016) Clinical Innovation
27.	Shelli Kesler, PhD (2014) Clinical Innovation and Advancing Science	44.	Manpreet Singh, MD, MS (2018) Advancing Science
28.	Anita Kishore, MD (2018) Educational Excellence	45.	Alexander Urban, PhD (2013) Clinical Innovation and Advancing Science
29.	Tina Lee, MD, MS (2014) Leadership and Unsung Hero	46.	Leanne Williams, PhD (2016) Advancing Science
30.	Anna Lembke, MD (2015) Clinical Innovation	47.	Helen Wilson, PhD (2017) Community Commitment and Engagement
31.	Linda Lotspeich, MD, MEd (2013) Leadership and Unsung Hero	48.	Shannon Wiltsey-Stirman, PhD (2018) Excellence Across Multiple Missions "Polymath"
32.	Alan Louie, MD (2017) Educational Excellence	49.	Sanno Zack, PhD (2016) Professionalism & Leadership
33.	Kristine Luce, PhD (2017) Educational Excellence		

35.

Philippe Mourrain, PhD (2018)

Rachel Manber, PhD (2012)

Clinical Innovation and Advancing Science

34.

18.

Kate Hardy, ClinPsychD (2018)

## Intentional Model of Academic Excellence

### **Departmental Strengths**

Our Department embraces an intentional model of excellence in modern academic department leadership and organization. Our Department is structured to bring greater academic coherence, organizational alignment and accountability, and transparency to our governance. This configuration also brings new opportunities for increased cross collaboration within the Department and also with other programs in the School of Medicine and the University and with our hospitals and community partners. Our Department has tremendous depth and breadth in its leadership team, and intentional effort to bring representation, inclusion, and diversity in the governance of our academic missions. Alongside these strengths are a number of significant challenges. In comparison with other departments in the School of Medicine, we face greater difficulties with respect to workplace dimensions of clinical service, compensation, promotion, and medical school governance, according to the 2018 Standpoint Survey conducted by the Dean's Office. Addressing these organizational challenges represents an opportunity for greater engagement and collaborative problem-solving among our faculty and staff as well as an opportunity to focus on solutions that novel technology may offer in supporting our academic work.

#### ADMINISTRATIVE EXCELLENCE: A MESSAGE FROM OUR DIRECTOR OF FINANCE AND ADMINISTRATION, INDY SINGH, MPH



The future of our work is constantly being shaped by technology and innovation. As we create a new paradigm for modern psychiatry and human health based on these advances, we also strive to improve our business operations in support. It is with this in mind, and with a focus on the enormous transformative potential of technology, that we endeavor to creatively enhance our approach to work.

In order to achieve the aims of operational excellence in this digital age, we continue to adopt novel technologies, implement advanced data-driven decision making, and modernize our physical and virtual workspaces. These strategies feed our overarching goals to reduce administrative burden, increase our capacity to perform meaningful high-quality work, and ensure we remain equipped with the right skills for a rapidly-evolving workspace.

By evaluating our administrative infrastructure, and looking to our neighbors in Silicon Valley, we strive to implement the latest technological tools. Increased adoption of enterprise systems such as Tableau, Box, Slack, Zoom, and Oracle Business Intelligence, among others, help improve our operational effectiveness, while reducing redundancy and waste. In addition, we use our resources as an institution of higher education to develop and train our high-performing teams on these new systems.

The deployment of new tools also informs our data-collection models and helps drive operations. Enhancing our data management infrastructure ultimately allows our teams to use real-time information to make better informed decisions. By "connecting the dots" between distinct systems used to manage space, finance, research management, clinical operations, human resources, academic affairs, and others, we empower our teams to drive business with a full suite of information. In addition to providing increased insight into decision drivers, these synergies further serve to strengthen our departmental spirit of collaboration.

In conjunction with new tools and systems, we are also modernizing our workspaces and revisiting traditional models of work. The accelerated adoption of workspace sharing and teleconferencing systems have greatly transformed the ways in which our teams collaborate. Also as a result, work options such as telecommuting and remote work have become increasingly viable. While it is important to continue to implement these changes strategically, the groundwork has effectively been laid, both departmentally and via the institution at large. In addition to virtual solutions, we have also invested in our physical workspaces. As such, this spring will mark the first time that a majority of our department central team will be located at a newly developed site in Redwood City.

While the nature of our work evolves in this digitally-driven era, we strive to remain in step. As a result, we are confident that these collective efforts will improve the wellbeing, health, and work-life balance of our teams, all the while continuing to contribute to the successes of our department.

#### **LEADERSHIP**

In developing strategy and reaching key decisions, the Chair works in close partnership with the Vice Chair, Associate Chairs, Division Chiefs, and the Senior Staff Leadership Team of the Department and with key leaders across the School of Medicine and our affiliated hospitals, Stanford Health Care, Stanford Children's Health, and Palo Alto Veterans Affairs Health Care System. Advisory Committees facilitate and assist in oversight of key departmental functions and responsibilities, such as faculty appointments and promotions, clinical executive and operations, and space use and allocation. We established a Council of Major Laboratories to enhance strategic development and increase representation of scientific perspectives in Department leadership. The Senior Staff Leadership Team continues to evolve and prioritizes best practices and the highest standards of professionalism.

#### **DIVISIONS**

The fundamental work of the Department occurs in our Divisions, Major Laboratories, and the Chair's Special Initiatives. The Department has five divisions that have full academic portfolios with scientific, clinical, educational, community, and leadership commitments; the five Divisions are Child and Adolescent Psychiatry and Child Development, General Psychiatry and Psychology, Interdisciplinary Brain Sciences, Public Mental Health and Population Sciences, and Sleep Medicine. Within these Divisions reside many of our highly recognized centers and research programs, such as the Mood Disorders Clinic, Eating Disorder Clinic, and the Stanford Center for Sleep Sciences and Medicine.

#### MAJOR LABORATORIES AND CLINICAL TRANSLATIONAL NEUROSCIENCES INCUBATOR

The Major Laboratories include the Center on Stress and Health, the Chetty Lab, the Cognitive & Systems Neuroscience Lab, the de Lecea Lab, the Early Life Stress and Pediatric Anxiety Program, the Etkin Lab, the Nancy Friend Pritzker Laboratory, the Personalized and Translational Neuroscience Lab (PanLab), the Parker Lab, the Program on the Genetics of Brain Function, the Shah Lab, the Sullivan Lab, and the Urban Lab, the SRI Alcohol Research Program, and the Neurobiology of Brain States Lab. The major laboratories engage in scientific discovery, mentorship, and training and often work closely with the clinical, education, and community programs of the Department.

#### **SPECIAL INITIATIVES**

The Special Initiatives of the Chair are novel and diverse academic activities of special priority to the Department, such as Community Outreach Activities, Precision Mental Health, Humanities and Medicine, The Stanford Center for Youth Mental Health and Wellbeing, and the newly launched YogaX.

#### COLLABORATIONS ACROSS STANFORD MEDICINE

Teaming up with Stanford Medicine, including key partners, Catherine Krna, Chief Administrative Officer and Vice President, Ambulatory Care and Service Lines, Tim Morrison, Administrative Director, Ambulatory Care & Service Lines, and Lynda Wolfe, Director, Clinic Operations, our Department is dedicated to providing outstanding, evidence-based clinical and wellbeing services for individuals of all ages who are living with mental health related conditions and their families. The department's world-class faculty is defining new approaches to treatment and prevention, seeking not only to cure psychiatric disorders but to foster overall health, wellbeing and resilience. Our faculty, fellows, and advanced clinical trainees see patients in many different settings in our community and throughout the health systems of Stanford Health Care, Stanford Children's Health/Lucile Packard Children's Hospital, and the Veterans Affairs Hospital.



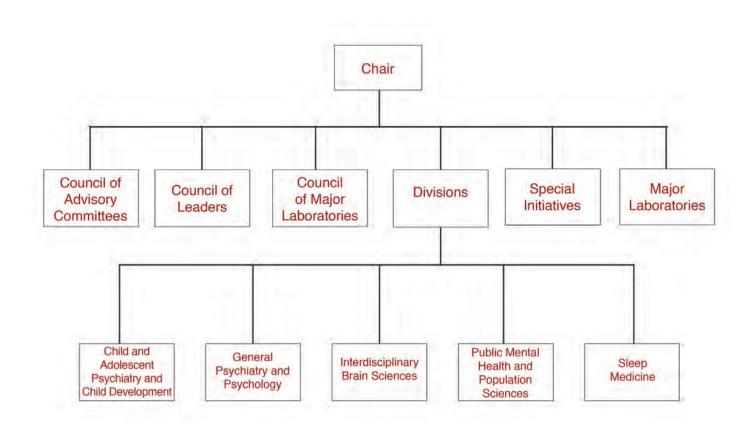




Listed Alphabetically: Krna, Morrison, Wolfe

## **Department Structure**

## **Organizational Chart**



#### **Council of Advisory Committees**

Clinical Executive Committee
Clinical Strategic Planning Committee
Clinical Operations Committees
Appointments and Promotions Advisory Committees
Strategic Space Use and Allocation Advisory Committee
Grand Rounds/CME Committee
Advisory Committee on Annual Awards and Nominations
Adjunct Clinical Faculty Review Committee
Veterans Affairs Psychiatry Education Committee
Education Leadership and Integration Advisory Committee

#### **Council of Leaders**

Vice Chair Associate Chairs Division Chiefs Chair of Major Laboratories Steering Committee Senior Staff Leadership Team

#### **Council of Major Laboratories**

Luis de Lecea, PhD Laramie Duncan, PhD Amit Etkin, MD, PhD Julie Kauer, PhD Douglas Levinson, MD Robert Malenka, MD, PhD Vinod Menon, PhD Karen Parker, PhD Kilian Pohl, PhD Nirao Shah, MD, PhD David Spiegel, MD Edith Sullivan, PhD Alexander Urban, PhD Leanne Williams, PhD

Victor Carrion, MD

Sundari Chetty, PhD

#### **Divisions**

#### Child and Adolescent Psychiatry and Child Development

Autism

Community Programs

**Eating Disorders** 

Externalizing Disorders

General

Mood & Anxiety

Psychosomatic Medicine Services

Special Programs & Nested Laboratories

#### General Psychiatry & Psychology

Addiction

**Anxiety Disorders** 

Assessment and Training Clinics

Community Mental Health

Geriatric Psychiatry

Inpatient/Hospital

Integrative Medicine

Interventional Psychiatry

Neuropsychiatry

Psychosomatic Medicine

Psychosocial Clinics

Special Programs & Nested Laboratories

Specialty Clinics

Women's Wellness

#### Interdisciplinary Brain Sciences

Clinical Neuroscience

Behavioral Neuroscience

Research

#### Public Mental Health & Population Sciences

Epidemiology

Ethics

Health Policy

Student Health & Wellbeing

Veteran & Military

Vulnerable & Special Populations

Special Programs & Nested Laboratories

#### Sleep Medicine

Behavioral Sleep Medicine

Community Programs

General Sleep & Insomnia

Pediatric Sleep Medicine

Special Programs & Nested Laboratories

#### Special Initiatives of the Chair

allcove

The Belonging Project at Stanford

Brain-Mind Initiative

Brainstorm

Clinical Neuroscience Internship Experience (CNI-X)

Clinical Neuroscience Research Experience (CNR-X)

Community Outreach Activities

Editor in Chief, Books, APA

Editorial Office: Academic Psychiatry

Forensic Psychiatry

Humanities and Medicine

Innovator Grant Program

LGBTQ Mental Health

Lyme Disease Working Group

Media and Mental Health Initiative

Pegasus Physician Writers at Stanford

Precision Mental Health

Project Catalyst for Mental Health

Reimagining Mental Healthcare

Small Scope High Impact Partnerships

Stanford Center for Youth Mental Health and Wellbeing

Stanford Mental Health Technology & Innovation Hub

Stanford Neurodiversity Project

Suicide Prevention through Outreach

Wellbeing and Self-Care

WellConnect

YogaX

#### Major Laboratories and Incubator

Center on Stress and Health (Spiegel)

Chetty Lab (Chetty)

Cognitive & Systems Neuroscience Lab (Menon)

Computational Neuroscience (Pohl)

de Lecea Lab (de Lecea)

Early Life Stress and Pediatric Anxiety Program (Carrion)

Etkin Lab (Etkin)

Integrative Mental Health Lab (Duncan)

Kauer Lab (Kauer)

Nancy Friend Pritzker Laboratory (Malenka)

PanLab (Williams)

Parker Lab (Parker)

Program on the Genetics of Brain Function (Levinson)

Shah Lab (Shah)

Sullivan Lab (Sullivan)

Urban Lab (Urban)

## Divisions of the Department

## Division of Child and Adolescent Psychiatry and Child Development

The Division of Child and Adolescent Psychiatry and Child Development in the Department of Psychiatry and Behavioral Sciences is an integral part of one of the preeminent child and adolescent mental health treatment consortiums in the country, which includes Lucile Packard Children's Hospital at Stanford, Stanford Children's Health, Stanford Hospital and Clinics, and Stanford University School of Medicine.



The mission of the Division of Child and Adolescent Psychiatry and Child Development is advancing science through exploration of psychopathology in children and adolescents; psychotherapy process and outcomes; early childhood stress/trauma; and psychological adjustment. The Division's goal is to increase understanding of the pathophysiology of youth mental health concerns including mood, eating, childhood medical, anxiety, and autism related disorders using innovative translational approaches ranging from stem cell research to imaging and clinical trials. Services are provided through several outpatient specialty clinics, inpatient, and community-based programs.

The clinical mission is founded on a commitment to family-focused evaluation and treatment using the best available evidence-based methods as well as time-limited psychotherapeutic interventions. The Division's treatment philosophy embodies an emphasis on improving parent empowerment and providing parent training, when indicated, to make meaningful improvements in family quality of life and optimize outcome. The assessment services also use gold standard diagnostic measures to provide parents with detailed individualized recommendations for improving day-to-day and long-term functioning. Child and Adolescent Psychiatry Faculty provide comprehensive clinical services using evidence-based intervention to achieve excellence in patient care, while implementing innovative approaches and time-limited strategies to optimize functioning and long-term outcome.

These services are provided through several outpatient specialty clinics, inpatient programs, and community-based programs. The outpatient clinics provide psychiatric care to children and adolescents with a variety of diagnoses from 2 to 18 years of age.

Clinic staff, consisting of child psychiatrists and psychologists, child psychiatry and postdoctoral psychology fellows, and general psychiatry residents, provide initial evaluations, second opinions, and ongoing treatment, in the areas of Early Life Stress and Pediatric Anxiety, Early Psychosis, Eating Disorders, Disruptive Behavior Disorders such as Attention Deficit Hyperactivity Disorder, Mood Disorders, Psychological Assessment, Autism and Developmental Disorders, and School-Based Mental Health.

In addition to the clinical activities, faculty in the child division are involved in a wide range of research activities including stem cell investigations, cutting edge biological and neuroimaging studies, longitudinal observational programs, and innovative clinical trials. The focus of the rich intervention research is to develop evidence-based time-limited psychotherapeutic treatments that aim at improving the functioning of youth with psychiatric disorders in a short period of time. These activities are generating promising findings that are helping to advance the science of youth mental health leading to improved prognosis and long-term outcome of children and adolescents suffering from neuropsychiatric disorders.

### Division of General Psychiatry and Psychology

The Division of General Psychiatry and Psychology is focused on adult mental health and carries out its work across all five of the Department's missions, namely advancing science, clinical innovation and service, educational excellence, community commitment and engagement, and leadership and professionalism. The scientific interests of our faculty cover a broad range of mental health problems and include programs in basic and translational science, treatment development and evaluation, and dissemination/ implementation. Our Division is also the home of several key departmental educational programs including our Adult Psychiatry Residency, our Adult Clinical PostDoctoral Fellowships, our T32 Fellowships in Adult Mental Health Disorders, and our graduate clinical psychology program, the PGSP-Stanford PsyD Consortium (operated jointly with Palo Alto University).

The Division provides comprehensive psychiatric and psychological services across a continuum of care. Outpatient clinics include a range of specialties encompassing Mood Disorders, Bipolar Disorder, Interventional Psychiatry (including transcranial magnetic stimulation), Geropsychiatry, Women's Wellness, Obsessive-Compulsive Disorder, Psychosis, Integrative Medicine, Psychosomatic Medicine, Addiction Medicine/ Dual Diagnosis, Sleep Health and Insomnia, and Neuropsychiatry. The Evaluation and Brief Intervention team provides a Consultation Clinic for patients who require urgent assessment, as well as an Evaluation Clinic for short-term treatment.

The Division supports an active Consultation and Liaison service for hospitalized patients in other departments and patients seen in the Cancer Center. The Integrated Behavioral Health Service is under development to support Stanford Primary Care Medicine. The Psychosocial and Subspecialty Care Clinic provides psychotherapy including Cognitive Behavioral Therapy, Dialectical Behavior Therapy (DBT), and Couples/Family Therapy for patients with a wide range of presenting problems. Subspecialties include Eating Disorders, Sports Psychology, Adult DBT, Couples and Family Therapy, Neuropsychological Assessment, Sleep Health/ Insomnia and the Wellness Program for Stanford faculty and trainees. The Individual Psychotherapy Clinic, staffed by Department of Psychiatry residents, provides the opportunity for patients to receive long-term psychodynamic psychotherapy.

As part of a world-renowned university hospital, Stanford's psychiatry service is prepared to treat individuals with complex and challenging illnesses. The Inpatient Psychiatry Service at Stanford is recognized for its commitment to coordinating all patient care through a multidisciplinary team including psychiatrists, psychologists, nurses, occupational and physical therapists, social workers and case managers. The 29-bed Inpatient Psychiatry Service features both open and secured unit programs. Our treatment program is structured to maintain the safety, dignity, and confidentiality of every patient on the unit.

20,000+

visits in our departmental/LPCH clinics in FY18 60,000+

visits in our departmental/SHC clinics in FY18 90,000+

visits (projected) in all our departmental

## Divisions of the Department

### Division of Interdisciplinary Brain Sciences



The Division of Interdisciplinary Brain Sciences brings together faculty in psychiatry, psychology, statistics, and computational neuroscience, whose collective efforts are committed to the following:

- Leveraging interdisciplinary knowledge to provide explanatory models for human behavior that captures the inherent complexity of genetic, biological, and environmental factors
- Developing innovative methods for studying the brain and behavior and applying these tools to better understand brain

   behavior associations underlying cognitive, developmental and neuropsychiatric impairments
- Addressing an individual as a whole person undergoing unique trajectories of development, across all stages of the lifespan

Psychiatry is currently undergoing a dramatic transformation, as earlier models of defining psychiatric disorders are evolving to incorporate a rapidly expanding knowledge base of mechanisms underlying human cognition and behavior. Faculty within the Division of Interdisciplinary Brain Sciences believe this dynamic environment represents an incredible opportunity – an opening to rethink mental healthcare through the combination of clinical expertise with cutting-edge scientific research.

The ultimate goal of clinical activities within the Division aims to leverage advances in both these domains, with a constant focus on improving the lives of patients suffering from psychiatric illnesses. It is an unfortunate truth that many interventions in psychiatric practice continue to have relatively low rates of treatment response, meaning a disproportionate number of individuals continue to be affected by psychiatric symptoms, causing a substantial burden on their daily functioning and wellbeing.

To address these health disparities, clinical and research initiatives within the Division are focused on several key domains: (1) Comprehensive treatment and evaluation of neurogenetic disorders, such as Fragile X syndrome and sex chromosome aneuploidies, as better understanding of these conditions with well defined causal mechanisms allows broader application to disease processes in more generalized psychiatric disorders with similar symptomatology; (2) Development of transdiagnostic and lifespan approaches to classification of psychiatric disorders using innovative clinical and computational methods, thereby bypassing current reliance on phenomenological rather than mechanistic frameworks; and (3) Innovation in treatment intervention leveraging neurobiological principles, such as neurofeedback and biophysical measures, which extend beyond current mainstays of medications and psychosocial treatments.

### Division of Public Mental Health and Population Sciences



The Division of Public Mental Health and Population Sciences focuses on understanding and enhancing the wellbeing of populations throughout the world and of distinct and special populations by bridging the fields of psychiatry, epidemiology, psychology, ethics, and public policy.

The Division is a newly evolving academic program engaged in the Department's five missions of advancing science, clinical innovation and service, educational excellence, community commitment and engagement, and professionalism and leadership.

It was created four years ago to respond to the need for documentation and promotion of public mental health by public health authorities and professionals, with the goal of enhancing understanding about mental wellbeing and psychiatric disorders around the world.

This Division strives to reach the following objective in parallel with the departmental missions: developing science in the field of public mental health; developing innovative screening and intervention tools to address gaps in clinical care and treatment, particularly for vulnerable populations; organizing educational opportunities for learners of all levels at the university and globally; serving the community through program development and outreach to address the unique needs of vulnerable populations; and establishing leadership in the field of public mental health.

We meet these objectives through the creation and development of several sections, including Public Mental Health and Epidemiology, Public Mental Health and Addiction Policy, Student Wellbeing and Young Adult Public Health, Veteran and Military Populations, and Ethics and Vulnerable/At Risk Populations.

The faculty in the Division of Public Mental Health and Population Sciences has an extremely broad spectrum of expertise. The Division harnesses the academic resources of Stanford University, encompassing the renowned areas of scholarship in medicine, business, law, education, biomedical data and computer science, social sciences, policy, ethics and design. Research endeavors across our division broadly focus on improving public mental health, reducing health disparities, removing barriers to care and reducing stigma, reaching vulnerable populations, and advancing precision health in psychiatry. For example, the Veteran and Military Populations section has focused on the dissemination of novel treatments for depression and post-traumatic stress disorder, efforts that mirror the major challenge of widespread affective and stress disorders in this vulnerable population.

The Division encourages the development of professionals as well as trainees, students, and psychiatry residents. The faculty engage in the development of new science in the area of population psychiatry, as well as dissemination of that knowledge and application to communities locally and globally.

## Divisions of the Department

### Division of Sleep Medicine



The Division of Sleep Medicine engages in the full five missions of the Department of Psychiatry and Behavioral Sciences. In our clinics we evaluate and manage patients with sleep problems across the age spectrum, from infancy to the elderly. We have one of the largest sleep clinics in the world, with 18 bedrooms for in-laboratory sleep studies, 16 sleep clinicians, 5 basic sleep scientists, and over 60 clinical and research personnel. We use cutting-edge, new technology to aid in the care of our patients, using a patient-centered care and translational approach for the diagnosis and treatment of sleep disorders in our patients. Our sleep research group is not only active in basic and translational research, but also clinical research supported by NIH and industry that includes multicenter studies assessing treatments for sleep disorders, genetic studies, new diagnostic and therapeutic tools, and evaluation of sleep-related comorbidities.

This background of our Division's faculty in basic and/or clinical sleep research allows us to employ a bench-to-the bedside approach in using the latest discoveries not only from our research laboratories, but also those of others, in designing a customized treatment plan for our patients.

Seventy million people suffer from chronic, severe sleep disorders in the United States. That means nearly one of every four Americans has a sleep problem. No other chronic disease affects more people than obstructive sleep apnea, a potentially fatal condition that causes some individuals to stop breathing several hundred times every night. As the birthplace of sleep medicine, Stanford has been instrumental in developing the field of sleep medicine.

17,000+

visits in our sleep clinics in FY18 Stanford is the birthplace of sleep medicine.

3,000+

in-laboratory sleep studies per year

### Major Laboratories and Clinical Translational Neuroscience Incubator



Within the Major Laboratories and Clinical and Translational Neurosciences Incubator, we are national leaders in developing neuroscience-informed models for transforming the overall understanding of mental illnesses and their treatments. Our laboratories are intently focused on accelerating the pace of scientific progress, and most importantly its translation to the clinic. We integrate across scales of measurement and across species, to synthesize insights from fundamental neuroscience, clinical neuroscience and real-world application in practice.

We serve as a hub for engaging faculty across major research programs in the Department. The faculty experts within the Incubator offer guidance targeted to fostering the trajectories of early-career investigators and scholars. In this service, we develop the next generation of preeminent leaders in neuroscience-informed mental health research, education, and clinical excellence. Given the profound and escalating burden of mental disorders, there is a pressing need for creative approaches and collaborative effort. We are each leaders within our fields, driving new models for understanding and treating mental illnesses.

Work across the major laboratories covers the human lifespan in both healthy and mentally ill individuals, include special or vulnerable populations, as well as animal models of disease.

We leverage a variety of brain imaging methods to advance our vision of personalized mental health assessments, as well as to understand how the healthy brain works. Genetic and molecular tools in humans and animals have revealed how dysfunction in genes and proteins contributes to illness, opening up novel avenues for diagnosis and prognosis.

A focus on brain circuitry across humans and animals has allowed us to reimagine interventions in psychiatry, giving rise to a new discipline of "interventional psychiatry" to complement traditional medication and psychotherapeutic approaches. We likewise take leadership roles across Stanford, the nation, and internationally, providing a voice for the future of psychiatry through integration with neuroscience.

Excellence in research is predicated on outstanding science and adherence to the highest ethical and professional standards.

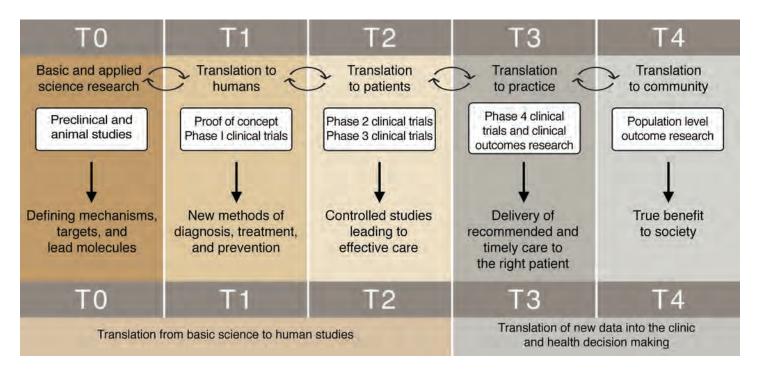


Our Department is accelerating discovery, innovation, and implementation, coordinating efforts across five mission areas, and selecting points of optimal influence and impact.

At Stanford, the future is now. The Department of Psychiatry and Behavioral Sciences sits at the nexus of discovery and innovation. We embrace the dynamic nature of the Silicon Valley and our place in this environment. We constantly challenge ourselves to be at the forefront of high-impact, multidisciplinary development to foster and improve the health and wellbeing of persons living with mental illness, intellectual and developmental disorders, and addiction.

It is only through the continual process of exploration, evaluation, and refinement that we can provide best-in class treatments and options for those who need them the most. We thrive in this fast-paced environment and derive strength from it.

What is Uniquely Stanford in our Department is our rapid and focused movement along this translational science and clinical research model in order to accelerate discovery, innovate dissemination and implementation (vertical integration), and coordinate these efforts across the five mission areas (horizontal integration) of our Department, selecting points of maximal influence for strategic impact to the populations and communities we serve.



Exemplars of this Uniquely Stanford position are highlighted on the following pages:

- Addiction Medicine Research and Programs
- Anna Deveare Smith: Communicating and Connecting for Social Justice
- Autism Spectrum Disorder Innovations
- BrainMind Initiative
- Building Bridges: Technology and Mental Health
- Communication Tools
- Creating Impact Through Philanthropic Partnerships

- Department Innovator Grants Program
- Enhancing Inclusion, Diversity, and Wellness
- Humanities and Medicine Initiative
- Special Initiatives of the Chair
- Veteran Mental Illness Research Education and Clinical Center (MIRECC)
- YogaX
- Youth Resilience

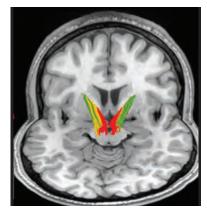
## Addiction Medicine Research and Programs

#### **OVERVIEW**

Nearly one quarter of all deaths in the United States are attributable to addiction; to tobacco, alcohol, opioids, and other drugs. Pushing back on this enormous social and medical problem is a daunting task, but at the same time is precisely the sort of challenge which Stanford was founded to undertake.

Accordingly, upon assuming the position of department chair in 2010, Dr. Laura Roberts engaged key faculty to develop strategies for advancing science, clinical innovation, training and outreach, and public education and policy related to addiction and its consequences.

Faculty members are working on every level of addiction science and intervention. Internationally recognized researchers Drs. Robert Malenka and Karl Deisseroth are conducting animal research revealing the role of altered brain circuitry in the development and maintenance of addiction.



Simultaneously, in a broad effort, engaging other faculty members including Drs. Mahendra Bhati, Timothy Durazzo, Amit Etkin, Steven Lindley, Michael Ostacher, and Edith Sullivan are using the latest neuroscience techniques to illuminate the nature of addiction in humans, as well as how to treat its destructive effects on the brain. Within the dynamic collaborative atmosphere of the department, the basic and clinical researchers enrich each other's work on addiction, helping to focus investigations in the most maximally productive areas.

#### RESEARCH

Psychiatry faculty research on addiction is constantly in productive interchange with the department's innovative clinical and prevention services. These include school-based programs led by faculty including Drs. Laura Roberts, Shashank Joshi, and Steven Adelsheim that provide young people with the core emotional and cognitive strengths that help them avoid substance misuse as well as a range of other developmental problems, bold initiatives to incorporate treatment for substance misuse into primary care, led by Dr. Mark McGovern, and innovative anti-smoking programs for individuals undergoing treatment for serious diseases such as cancer, led by Dr. Matthew Kendra.

#### **TRAINING**

The training of the next generation of addiction clinicians and researchers is another departmental mission. Our nationally-recognized, award-wining program to train physicians in addiction medicine, led by Dr. Anna Lembke, has graduated leaders in diverse addiction treatment settings including academia, Kaiser, county mental health, and community hospitals. This is one of the first addiction medicine fellowship programs to be approved by the Accreditation Council for Graduate Medical Education. Our department also trains many postdoctoral research fellows in the laboratories of our addiction investigators.

#### **IMPLEMENTATION**

Translation of science to clinical and preventive work is critical to battle addiction, yet also insufficient because the lessons faculty are learning have direct relevance to the laws and regulations affecting the country's substance use problems as a whole (e.g., the opioid epidemic). Multiple faculty in psychiatry, led by Dr. Keith Humphreys, with support from scholars in the Law School and Stanford Neurosciences Institute are thus actively engaged with policymakers, including testifying in Congress, providing addiction science briefings to elected officials, and writing empirically-grounded newspaper editorials on drug related policy.

Throughout their diverse efforts, faculty share the belief that the whole must be greater than the sum of the parts. Collaborative projects that spans levels of analysis and stretch disciplinary boundaries are thus the norm, and nothing less is required to understand and address the multi-faceted nature and harms of addiction.

### Anna Deveare Smith: Communicating and Connecting for Social Justice

One of the most innovative voices in American theater and cultural entertainment made a return visit to Stanford to do what she does best: listen. Actress, playwright, and social justice activist Anna Deveare Smith has a rich history with Stanford University, including ten years as the Anna O'Day Maples Professor of the Arts in the Department of Drama. Professor Smith came back to The Farm for part of last spring and summer as an Artist in Residence at the invitation of Drs. Laura Roberts and Victor Carrion.

Her mission was two-fold; to investigate whether, and how, art might help inform the practice of psychiatry, and to suss out whether one of the department's primary goals, furthering social justice, was being "lost in translation" across the many studies, clinics, research and community outreach projects underway.



In her style of journalistic, or documentary theater, Smith interviews a cross-section of Americans, famous and ordinary, before distilling their stories into a collective narrative to address some of the most pressing issues of our time. Her latest work in this form is her play, and now HBO film, "Notes from the Field," the centerpiece of "The Pipeline Project," which investigates why too many poor and minority kids are being swept into the criminal justice system. Her first-person storytelling, in the voice and character of her subjects, creates a unique listening and learning experience for the audience. As she says, it all begins with her doing the listening.

Smith employed this practice of giving audience to others in her examination of Dr. Carrion's two questions. Does art have a place in psychiatry, and is the mission of social justice prevailing in the department's work? She interviewed some two dozen mental health experts, in and out of the department, participated in group discussions and attended Grand Rounds. She heard that art can, indeed, provide value in psychiatric treatment, serving as an additional portal to reach people who may have shied away from mental health care or even the acknowledgment it might be needed. Art can be used to bridge cultures and generations, breaking through those myriad stigmas, while also creating space for sharing empathy and even humor in the healing process.

But, it was the inquiry into the social justice mission of the department that held the spotlight for Smith, and for those she interviewed. Across staff and faculty, Smith heard over and over that using their work to promote social justice was front of mind, and in some cases, the singular reason for the work or research itself. Whether tailoring a healing program for groups with specific risks and stressors, marshaling technology to understand the intricate systems of the brain, or offering scientific proof of psychiatric damage in cases of human rights violations, the desire to serve those most in need, but least attended to, was clearly stated across all disciplines. Smith concludes, "Is the social justice mission of the Department of Psychiatry getting lost in translation?' The simple answer is no, but it is getting held in silos." And those silos require breaking down, says Smith, for more interdisciplinary collaboration.

Every person Smith interviewed expressed a desire to do more, and do better for their patients and society. More communication and partnerships could foster that by creating opportunities for more diversity in providers, study participants and treatment methods, by harnessing the fresh potential of trainees and residents to further the social justice mission, and by incorporating the wisdom of patients themselves in modes of treatment, as well as care providers with other specialties... from housing to spirituality.

Smith says everything she learned in her time in Stanford's Department of Psychiatry and Behavioral Sciences points to a ripeness of moment for a significant leap forward in promoting social justice in mental health. As Smith put it to Dr. Carrion in her closing thoughts, "The faculty and staff are truly extraordinary, and you have a perfect opportunity at the right time with the right leadership [...] to push the mission forward." Perhaps, in reference to breaking down those "silos," as Anna Deveare Smith described them, another playwright and social activist of his day said it best;

"The single biggest problem in communication is the illusion that it has taken place."

- George Bernard Shaw

### **Autism Spectrum Disorders Innovations**

At Stanford, we approach intellectual and developmental disorders with the same drive and passion that we bring to all conditions that we study and treat. Our work on understanding Autism Spectrum Disorder (ASD) is exemplary of a multidisciplinary approach with a bench to bedside to community model. ASD is a developmental disability that presents with significant social, communication, and behavioral challenges. Investigators in our Department work together across subfields to better understand the biological mechanisms underlying ASD and to develop effective treatment strategies. It is only by approaching ASD from all angles that progress can be made. Here, the sum is truly greater than the parts and each team facilitates the work of another.



#### NEW TREATMENT OPTIONS AND METRICS

Under the leadership of Drs. Antonio Hardan and Jennifer Phillips, the Autism and Developmental Disorders Research Program (ADDRP) focuses on the examination of the neurobiology of ASD and on the development of innovative treatment for individuals with developmental disorders. Through research methods that range from clinical trials, neuroimaging investigations, behavioral analysis to basic science methods, these researchers conduct a variety of research studies of novel behavioral and biological therapies in hopes of developing effective interventions for the treatment of core features of ASD. ASD manifests as a heterogeneous group of disorders, and the main goals of these investigations are to identify subgroups that will share common pathologic pathways. Additionally, the ADDRP team has been working on the development of several innovative interventions. Furthermore, the group has focused on the investigation of behaviorally and developmentally-based interventions for very young children with ASD, with particular interest in targeting those with limited language abilities. Finally, and more recently, the ADDRP investigators have been working on the development and use of objective measures that are sensitive and valid to be used in clinical trials since existing measures are overly subjective. Similarly, Dr. Vinod Menon and his team in the Cognitive and Systems Neurosciences Laboratory are investigating the functional architecture of human brain circuits and seeking to determine how disruptions in specific brain networks impact behavior, cognition, emotion, and learning in normal healthy individuals and in individuals with ASD, psychiatric, developmental and neurological disorders.





















Listed Alphabetically: Hall, Hallmayer, Hardan, Hong, Menon, O'Hara, Pasca, Phillips, Reiss, Urban

#### EXPANDING THE NONHUMAN PRIMATE MODEL

The goal of Dr. Karen Parker and the Social Neurosciences Research Program at Stanford is to better understand the biology of social functioning -- a key deficit in ASD -- using an integrative, translational approach. Their behavioral research spans studies of rhesus monkey social development to social cognition impairments in clinical populations (e.g., in children with autism; in survivors of pediatric hypothalamic-pituitary tumors; in adults with posttraumatic stress disorder).

The Parker Lab is also developing several innovative monkey models of social impairments, including studies of rhesus monkeys that naturally exhibit social deficits and marmosets which are engineered to do so. Their biological studies employ epigenetic, gene expression, and neurotransmitter-based approaches to identify biomarkers of impaired social functioning, and they also conduct treatment trials to test the efficacy of novel pharmacotherapies to improve social abilities in low-social monkeys and in children with autism. The Parker Lab is particularly interested in testing whether "social" neuropeptide signaling pathways are implicated in human and nonhuman primate social behavior, and whether these neuropeptide pathways are robust biomarkers of, and treatment targets for, social impairments in youth diagnosed with ASD.



#### REACHING COMMUNITY: EMPIRICALLY-BASED INTERVENTIONS

Recently joining the Department of Psychiatry and Behavioral Sciences, Drs. Robert and Lynn Koegel developed Pivotal Response Treatment (PRT) for ASD. PRT is an empirically validated, efficient and effective behavioral intervention, which has proven to be a breakthrough in improving the core areas of autism, resulting in very widespread improvements to both the individual symptoms of autism as well as to the entire condition of the disorder. PRT targets key areas thought to be central to the disorder of autism by improving motivation, social initiations, self-control, empathy, and responsiveness to multiple cues. They are working on programs to disseminate their research findings and intervention procedures throughout the world through "train the trainer" and parent education models. Thus their work is both helping individual children and is also addressing the severe shortage of services for this population.



#### **GENETIC UNDERPINNINGS**

One focus of the biological work of investigators in the Department of Psychiatry and Behavioral Sciences is to determine if and how genetic variations impact the development of ASD and other neuropsychiatric disorders. Through the work of Drs. Joachim Hallmayer, Ruth O'Hara, Sergiu Pasca, and Alex Urban, in addition to other researchers, we now know that a substantial proportion of genetic risk for ASD resides in rare genetic variants. During the past several years these investigators have become one of the first groups to study neurons derived from induced pluripotent stem cells (iPSCs) to better understand which common and rare genetic variants increase the risk for developing ASD. Using this approach, they have identified cellular and molecular phenotypes for rare, but highly penetrant, forms of autism, which were rescued by treatment with specific pharmacologic agents acting on identified molecular targets. More recently they have started to characterize neurons derived from iPSCs from patients with 22q11 deletion syndrome (or Velocardiofacial Syndrome).



### **BrainMind Initiative**

#### **BRAINMIND SUMMIT AT STANFORD**

In September 2016 the Department of Psychiatry and Behavioral Sciences co-hosted the first ever BrainMind Summit at Stanford, bringing together neuroscientists, entrepreneurs, philanthropists, and community stakeholders in a collaborative environment to foster innovation. The extraordinary work of our faculty presented at this Summit drove the academia-industry-philanthropy discussion.

In 2018, a co-host of the original summit in 2016, Dr. Michael McCullough, founded the BrainMind Ecosystem, a not-for-profit organization dedicated to making good on the promise of the summit according following principles:

- Create a high-consciousness community of powerful and influential people to drive a cultural shift valuing ideas principally on their potential human impact.
- Establish a roadmap for effective forward progress maximizing impact in brain science, focusing special attention on areas and ideas that are currently under-supported relative to their importance.
- Infuse these under-supported ideas with high consciousness capital, leadership, and network support to grow and scale from the lab to society.

The Department continues to play a large role in this mission by co-hosting a follow up Summit being planned for Fall 2019. Additionally, faculty members will represent the department at a Summit at MIT in May 2019 and at numerous smaller events around the Bay Area, and planning is underway for an event at Asilomar in May 2020 focused on the ethics and regulation of biotechnology and brain science. As the BrainMind Ecosystem continues to grow, the department marks its foundational role in this exciting endeavor through the BrainMind initiative within the department, helping to ensure that these efforts serve to advance the departments five missions for years to come.



#### **PARTICIPANTS**

The BrainMind Summit at Stanford included over 200 participants. All BrainMind Summit participants are carefully selected for potential contribution, influence, and moral intent. They share a passion for the BrainMind space and significant leadership in their respective careers (scientists, founders, government leaders, venture capitalists, inventors, philanthropists, philosophers). The goal is to foster vital impact investing needed to bridge the resource gap for rapid and impactful innovation in medicine and technology, catalyzing transformative proof-of-concept development in this field.

#### **EXPERIENTIAL NEUROLAB**

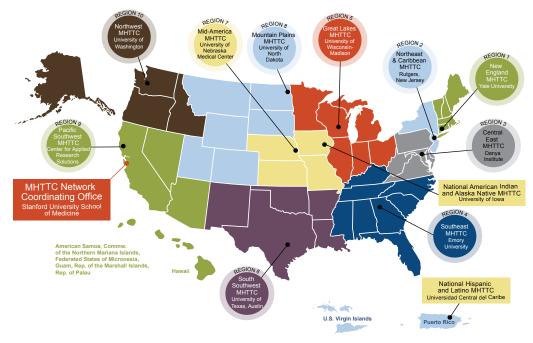
The BrainMind Summit included a hands-on Experiential NeuroLab with exciting invention and technology demonstrations and exhibits. Experiences include mind-controlled visual media, AR and VR-based technologies, real human brains and 10-100x expanded brains, neuroscience-driven perceptual illusions, immersive education experiences, and more. The NeuroLab will also include immersive art exhibitions exploring the theme of "digital consciousness."



### Building Bridges: Technology and Mental Health

#### MENTAL HEALTH TECHNOLOGY TRANSFER CENTER

Over half of people who need mental health services -- 44.6 million individuals -- do not receive them. Even fewer receive high quality, evidence-based treatment. To improve public access to the most effective mental health prevention and treatment services possible, the Department of Psychiatry & Behavioral Sciences at Stanford University School of Medicine was recently awarded a 5-year center grant to serve as the National Coordinating Office of the US Substance Abuse and Mental Health Services Administration Mental Health Technology Transfer Center (MHTTC) network. The network includes 10 regional centers, a National American Indian and Alaska Native Center, and a National Hispanic and Latino Center. The MHTTC network provides evidence-based practice dissemination and implementation support to all 57 US states and territories.



#### **FACULTY OF MHTTC**

Drs. Mark McGovern and Heather Gotham head the center network by providing leadership, technology and communication platforms, infrastructure, and expert guidance using innovative implementation science strategies, measures, and outcomes. Other core faculty from the Department include Drs. Steven Adelsheim, Kate Hardy, Shashank Joshi and Shannon Wiltsey-Stirman. The evidence-based practices being scaled up into routine care systems and organizations vary by regional need. Among the most common are enhancing and expanding workforce capacity using community health workers and peer specialists, integrating mental health services in primary medical care settings, reducing health care disparities by fitting practices to culture and communities, improving recognition and early intervention for first episode psychosis, and implementing sustainable school-based mental health services that effectively address disaster response and youth suicide.













Listed Alphabetically: Adelsheim, Gotham, Hardy, Joshi, McGovern, Wiltsey-Stirman

## Building Bridges: Technology and Mental Health

Our Department brings cutting edge technological science together with clinical expertise to create an array of unique and innovative solutions for those facing mental health challenges. In addition, we are fortunate to have a close collaboration with Psychiatry and Behavioral Science faculty partners from the VA Palo Alto Health Care System. Departmental faculty and staff are utilizing technology to provide support for people of all age groups and diagnostic categories with interventions ranging from web-based tools and telehealth models to mental health wearables, apps, virtual reality, augmented reality, and artificial intelligence.

What follows are but a few examples of the novel efforts of our faculty.



#### ADOLESCENT-CENTERED TECHNOLOGY AND GAMING

The Center for Youth Mental Health and Wellbeing has continued to play a leadership role in highlighting the role of media and social media on youth mental health. They are collaborating with a number of organizations, including Facebook, to address these issues. The center also developed a webinar for SAMHSA presented by Dr. Steven Adelsheim on "Creating a Public Mental Health Continuum of Care for Youth in the US." They have actively recruited a Youth Advisory Board to help inform and guide their research and insights.



#### ARTIFICIAL INTELLIGENCE

Artificial intelligence offers new potential to harness massive amounts of data to improve diagnosis and treatment of mental health. Our Department's growing efforts in Artificial Intelligence (AI) include the work of Dr. Adam Miner, who runs the Artificial Intelligence Lab, which addresses the use and design of conversational AI in improving access to high quality mental health care. Specifically, Dr. Miner focuses on enabling digital assistants and chat bots to recognize, respect, and respond to health issues through controlled and naturalistic studies.

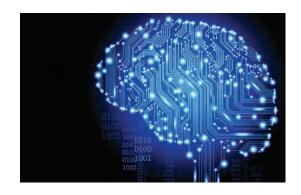


#### AUGMENTED REALITY AND VIRTUAL REALITY

Virtual and augmented reality offer a unique experience to address elements of pathology and treatment from chronic pain relief to exposure therapy. Dr. Kim Bullock leads the Department's Virtual Reality-Immersive Technology (VR-IT) Laboratory, which is aimed towards guiding and safe-guarding the evolution of technology's inevitable merging with the human nervous system in the service of behavioral and mental health. This laboratory bridges gaps between clinical research, evidenced-based psychotherapy, augmented/VR content development, and medical technologies to innovate treatment for a spectrum of psychiatric and mental health conditions. Projects include pediatric preoperative stress inoculation, VR integrated biofeedback for ADHD, and sensory modulation for auditory hallucinations.

#### THE MENTAL HEALTH TECHNOLOGY AND INNOVATION HUB

The foundation of our department's technology efforts are in a department-wide collaboration, the Mental Health Technology and Innovation Hub. A center of over 20 faculty labs studying the nuances that technology plays in advancing mental health from ethics to social media to entrepreneurship. The Hub envisions a world where mental health and emotional wellbeing is within reach wherever you are. It strives to achieve this goal through developing, evaluating, and disseminating mental health technology and innovation to foster emotional wellbeing and ease the burden of mental illness worldwide. The Hub mirrors the Department's mission by fostering excellence in research, patient care, education, community, and leadership as it relates to technology and innovation in mental health. Hub membership is diverse and inclusive, consisting of clinicians, researchers, educators, trainees, faculty, and staff.



#### TECH PRODUCT INNOVATION AND ENTREPRENEURSHIP

Brainstorm: The Stanford Lab for Brain Health Innovation and Entrepreneurship partners with entrepreneurs and tech companies to design and build products that have the potential to transform the way we view, diagnose, and treat mental health. Started by Nina Vasan, MD, MBA, Brainstorm has drawn upon its team's experience working with over 100 startups to create cross-sector guidelines on what mental health technology products need from the clinical, business, tech, and design perspectives to maximally improve patient outcomes. Brainstorm and Dr. Bullock's VR Lab hosted the Governor of Jalisco, Mexico to discuss best practices in building a multidisciplinary tech innovation ecosystem. Dr. Vasan is also bringing this leadership in technology to the American Psychiatric Association by chairing the Workgroup on Psychiatry Innovation, newly established in 2019.



1 st

Brainstorm is the world's first academic laboratory dedicated to transforming brain health through entrepreneurship.

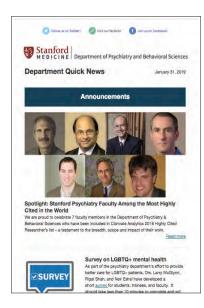
Our department combines cutting edge technological science together with clinical expertise.

500<sup>+</sup>

attended our 2018 Adolescent Mental Wellness Conference

### **Communication Tools**

We treasure our faculty, staff, and students in the Department of Psychiatry and Behavioral Sciences – so it is our privilege to spread word of the significant and diverse work being done here every day in a variety of different ways. To do this, we have developed a strategic collection of communication tools to share our work with the local academic community, our colleagues around the world, our partners in philanthropy, and beyond.



#### ← DEPARTMENT QUICK NEWS

Under the leadership of Mindy Hantke, head of Web and Communications, our Quick News department newsletter has delivered department announcements, events, and news via email every two weeks to over 650 people in our department community since 2017.

#### IMPACT NEWSLETTER →

New in 2018, we are delighted to introduce IMPACT, a quarterly email newsletter for community members who are in contact with the School of Medicine's Office of Development that highlights department work undertaken with the generous support of our philanthropic partners. We would like to give special thanks to Emily Simonson, Editor and Production, and Deborah Stinchfield, Content and Philanthropic Advisor.

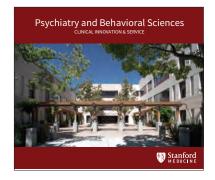


#### DEPARTMENT WEBSITE →

We are delighted to welcome over 80,000 visitors to our website each year - where we are proud to feature the latest news and upcoming events, highlight the work being done in each of our 5 mission areas, and celebrate the awards and honors of our people.

As users click through the pages, they can read about our clinical and research faculty, our students, our staff, and our wonderful leadership team. In addition, visitors can learn about research projects that are currently recruiting volunteers. They can also watch videos and listen to podcasts featuring our faculty, explore books authored and edited by people in our department, and more! We are also expanding our online resources for faculty, staff, and students to support their work each day.





#### ← CLINICAL SERVICES BROCHURE

This Spring we published a new Clinical Services Brochure highlighting many of our clinical activities and programs, new efforts, and collaborations. Our faculty, fellows, and advanced clinical trainees see patients in many different settings in our community and throughout the health systems of Stanford Health Care and Stanford Children's Health/Lucile Packard Children's Hospital. Our department is dedicated to providing outstanding, evidence-based clinical and wellbeing services for individuals of all ages who are living with mental health-related conditions and their families. The department's world-class faculty is defining new approaches to treatment and prevention, seeking not only to cure psychiatric disorders but to foster overall health and resilience.

#### ACADEMIC UPDATE

The Department's Academic Update, first published in 2016, is printed and posted online once a year. The update celebrates the numerous achievements and extraordinary work of our faculty, students, and staff. We also feature the many exemplars of work and special projects that are unique to our department.









2016

2017

2018

2019

#### SOCIAL MEDIA PRESENCE →

Our Facebook page and Twitter feed both feature links to media articles where faculty are interviewed or mentioned, scholarly articles, upcoming events, awards, faculty searches and other topics that we are excited to share.

Our YouTube playlist is a collection of talks and interviews archived on video – there, visitors can watch talks on a variety of topics, including Virtual Reality Technology Treatment for Mental Illness, Sleep Away Your Back Pain, Development of Optogenetics - and many more - that showcase the distinct and exceptional work of the members of this department.



face book.com/Stanford Dept Psychiatry/



twitter.com/StanfordPSY



Find our YouTube Channel by searching Stanford Department of Psychiatry and Behavioral Sciences

80,000

department website each year 750+

recipients of inaugural
IMPACT newsletter

1,500+

followers among our social media accounts

## Creating Impact Through Philanthropic Partnerships

Our Department's ability to have impact depends on the ideas, good will, and philanthropy of individuals, foundations, and corporations who join with us to bring innovative solutions to life in a field with complex challenges and enormous impact across the lifespan and around the world.

At Stanford, philanthropy is not a transaction. It is an opportunity to identify shared hopes and dreams, and make them come true. The potential for creating good is magnified by working together. Our development team helps us:

- Build capacity in perpetuity through endowment for professorships, faculty scholar awards, fellowships, research and programs
- Link basic, translational, and clinical sciences in the name of innovation and acceleration
- Grow the department's seed grant program to rise all boats
- Advance early stage ideas and promising projects at critical stages
- Educate the next generation of clinicians and scientists in neuroscience-informed clinical solutions
- Engage the public to join with us to create a better future

Our invaluable partners in this life-span endeavor are Stanford Medical Center Development and Lucile Packard Foundation for Children's Health. Your work inspires these talented and committed professionals to engage with and bring forward philanthropists who wish to create good and create a brighter future for all those touched by mental illness.

#### **DEVELOPMENT OFFICERS**



"Donors with a personal or family experience are deeply honored to hear directly from our brilliant faculty about their most promising research and their commitment to discovery and patient care. They can see the landscape changing and feel hopeful about the future."

Lyra Ghose
 Medical Center Development

"The donor families we meet are eager to connect with Stanford faculty because they have the vision and the expertise to address the most complex challenges in medicine. I look forward to every opportunity to build a connection between prospects and our Stanford researchers and clinicians."

-Andrew Cope
 Lucile Packard Foundation
 for Children's Health

"It's a great day when I introduce a prospective donor to a faculty member and see eyes light up around a shared passion. I just sit back and watch the magic happen. I have never felt so privileged and grateful in my work."

Deborah Stinchfield
 Medical Center Development

#### DONOR STORIES



#### Liesl and Charles Moldow

"We like building things in partnership. Our family's philanthropy to the department goes back three generations. Our current efforts launched a new era for addiction medicine at Stanford."

Liesl and Charles Moldow established the expendable Women's Hope and Healing Fund and more recently the endowed Liesl Pike Moldow and Charles Moldow Family Fund.



#### George Ting, MD

"I was looking for an institution that has the concentration of firepower and long-term commitment to crack difficult problems. That's why I decided to establish the Esther Ting Memorial Professorship at Stanford."

Dr. George Ting established this professorship in memory of his 18-year-old daughter.



#### Deirdre and Clark Lehman

"We were most fortunate to experience firsthand an innovative treatment study in the Department of Psychiatry at Stanford that we deemed miraculous. We have committed to help advance this research -- through financial assistance from all resources we can convince -- so that this world-changing mood disorder discovery can help as many people as possible."

Deirdre and Clark Lehman established the Neuromodulation Research Fund for an early career clinician-scientist.



#### Bruce Blackie and Heidi Blackie

"Guided by our research-minded development officer, we have found a number of faculty who share our goal of advancing primary research to diagnose and treat mental disorders. We appreciate partnering with three teams making advances into the unknown."

Bruce Blackie and Heidi Blackie support multiple faculty through a donor advised fund.

### **Department Innovator Grants Program**

The Department of Psychiatry and Behavioral Sciences Innovator Grants Program has replaced the Department's Small Grant Program which launched in 2015. The Innovator Grants Program is designed to promote research and collaborative scholarly projects advancing the academic interests of our faculty and the strategic themes of the Department. Projects across the full spectrum of science and scholarship were encouraged, and a large number of highly meritorious applications were received, far exceeding the amount of funding available. The selected projects represent those most highly rated by reviewers and recognized for salience and balance across department missions. Information about each of these projects is noted on the following pages.

In 2019, 9 projects were selected including 8 pilot studies and 1 small scholarly project. Since its launch, the Department Innovator Grants Program has funded 27 pilot studies, 30 small scholarly projects, as well as 2 projects provided with seed grants made possible by a generous donor.

#### 2019 PRINCIPAL INVESTIGATORS OF SELECTED PROJECTS



















Listed Alphabetically: de Lecea, Goldstein-Piekarski, Leikauf, Reicherter, Robakis, Shaw, Singh, van Roessel, Yoon

#### 2019 FUNDED PILOT STUDIES

#### Manpreet Singh, MD, MS

Evaluating the efficacy and tolerability of targeted transcranial magnetic stimulation in youth (with Nolan Williams, MD, Hugh Brent Solvason, PhD, MD, Keith Sudheimer, PhD, and Antonio Hardan, MD)

#### Richard Shaw, MD

Group-Based Trauma Focused Cognitive Behavior Therapy (TF-CBT) to Prevent Psychological Stress in Parents of Premature Infants (with Booil Jo, PhD, and LaTrice L. Dowtin, PhD)

#### Peter van Roessel, MD, PhD

Vestibular Neuromodulation of Insight: A Pilot Study in Obsessive-Compulsive Spectrum Disorders (with Booil Jo, PhD, Chi-Ming Chen, PhD, and Carolyn Rodriguez, MD, PhD)

#### Luis de Lecea, PhD

Linking Brain to Immunity via Deep Brain Stimulation and Mass Cytometry (with Jeremy Borniger, PhD, Andrew Krystal, MD, (UCSF), Aric Prather, PhD, (UCSF), and Brice Gaudilliere, MD, PhD)

#### Andrea Goldstein-Piekarski, PhD

Sleep as a Mechanistic Target and Predictive Biomarker of an accelerated rTMS Intervention for Depression and Suicidality (with Nolan Williams, MD)

#### John Leikauf, MD

StopWatch (with Leanne Williams, PhD, and Carlos Correa, BS)

#### Daryn Reicherter, MD

Expansion of Trauma Mental Health Outcomes Data Collection in Survivors for Advocacy in Three Different Legal Contexts (with Ryan Matlow, PhD)

#### Jong Yoon, MD

Developing Automated Methods for Characterizing Speech and Language Disturbances in Schizophrenia (with Daniel Jurafsky)

#### 2019 FUNDED SMALL SCHOLARLY PROJECT

#### Thalia Robakis, MD, PhD

Maternal attachment style in relation to parenting practices and child development (with Jane Paik Kim, PhD)

## 2018 Department Innovator Grants Program Awardees

#### **SEED GRANTS**

#### Tali Ball, PhD and Kristine Luce, PhD

Personalized trans-diagnostic group therapy for anxiety: Program development and quality improvement (with Leanne Williams, PhD)

#### Jamie Zeitzer, PhD

Restless Leg Syndrome: Does it start with a Gut Feeling? (with Daniel Jin Blum, PhD, Fiona Barwick, PhD, and Emmanuel During, MD)

#### **FUNDED PILOT STUDIES**

#### Mahendra Bhati, MD

Detecting and inhibiting fear with responsive neurostimulation (RNS) of the human amygdala (with Amit Etkin, MD, PhD)

#### Kim Bullock, MD

A Randomized Controlled Trial of Virtual Reality Delivered Mirror Visual Feedback for Functional Neurological Disorder (with Jeremy N. Bailenson, PhD, and Andrea Stevenson Won, PhD)

#### James R. Jacobs, MD, PhD

The Neurophysiology of Secrets (with Keith Sudheimer, PhD)

#### Agnieszka Kalinowski, MD, PhD

Leveraging Metabolomics and Genomics of Dopamine Regulation for Precision Medicine to Treat Psychiatric Disorders (with Jacob Ballon, MD, MPH, Laramie Duncan, PhD, Steve Ho, BS, Ruth O'Hara, PhD, and Alexander Urban, PhD)

#### Adam Miner, PsyD

Natural language processing to detect features of successful psychotherapy (with Stewart Agras, MD, Bruce Arnow, PhD, and Nigam Shah, MBBS, PhD)

#### FUNDED SMALL SCHOLARLY PROJECTS

#### Steve Adelsheim, MD

The Hope and Hype of Technology Ventures in Transforming Brain Health (with Nina Vasan, MD)

#### Belinda Bandstra, MD, MA

Recruitment and Retainment of Underrepresented Minority Faculty and Residents (with Mario Mercurio, Yasmin Owusu, MD, and Ripal Shah, MD, MPH)

#### Fiona Barwick, PhD

Student Sleep Health Pilot Project (with Kevin Lee, MD)

#### Ryan Matlow, PhD

Implementing Evidence-Based Mental Health Care in East Palo Alto Schools (with Flint M. Espil, PhD)

#### Lawrence McGlynn, MD

LGBTQ Mental Health: Opportunities for Research and Practice (with Ripal Shah, MD, MPH and Neir Eshel, MD, PhD)

#### Norah Simpson, PhD

Development and Evaluation of a Sleep Health Educational Resource for Stanford Student Athletes (with Scott Kutscher, MD)

#### Shannon Sullivan, MD

Home-Based Early Detection of Disrupted Sleep in Children with Risk Factors for Sleep Disordered Breathing (Michelle Cao, MD)

#### Mytilee Vemuri, MD, MBA

Addressing Cultural Factors Affecting Professional Fulfillment within the Department of Psychiatry Outpatient Clinics

## 2017 Department Innovator Grants Program Awardees

#### **FUNDED PILOT STUDIES**

#### Sarah Adler, PsyD

Analysis of Measurement Based Care Data to Inform Clinical Decision-Making: Building the Model

#### Cara Bohon, PhD

Abnormal Perceptual Processing as a Maintaining Mechanism of Body-Image Disturbance in Adolescents with Anorexia Nervosa: Identifying a Novel Treatment Target

#### Weidong Cai, PhD

Dynamic Brain States and Connectivity in Children with Attention-Deficit/Hyperactivity Disorder and Its Relation to Intra-Individual Variability and Clinical Symptoms

#### Erin Cassidy-Eagle, PhD

Activate! Training Primary Care Providers in Behavioral Activation Therapy for Older Adults with Depression

#### Grace Gengoux, PhD

Parent Training to Enhance Social Success for Children with Autism Spectrum Disorder

#### Hadi Hosseini, PhD

Integrating Virtual Reality and NIRS Neurofeedback for Improving Executive Function in ADHD

#### Debra Safer, MD

Assessing the Feasibility and Acceptability of a Parent-Based Intervention to Reduce the Risk of Obesity in Children of Weight Loss Surgery Patients

#### Ranak Trivedi, PhD

Determining the Interdependence of Stress and Physical Activity Among Patients and Their

#### FUNDED SMALL SCHOLARLY PROJECTS

#### Sepideh Bajestan, MD, PhD

Patient-Centered Clinical Neuroscience Training to Facilitate the Communication with Challenging Neuropsychiatric Patients

#### Victoria Cosgrove, PhD

Assessing Need for Psychosocial Support in Families with a Child Undergoing Treatment in the Bass Center for Childhood Cancer and Blood Diseases at LPCH

#### Christina Khan, MD, PhD

Integrating Mental Health into Primary Care in Rural Guatemala Through Task Shifting to Public Health Clinic Physicians

#### Philippe Mourrain, PhD

Pharmacological and Genetic Interrogation of Circuit Dynamics in the Parkinsonian Brain

#### Adam Miner, PsyD

Natural Language Processing to Detect Features of Successful Psychotherapy (with Stewart Agras, MD, Bruce Arnow, PhD, and Nigam Shah, MBBS, PhD)

#### Oxana Palesh, PhD, MPH and Ingrid Girvan, PhD, MPH

Does Improving Sleep Modify Potentially Relevant Clinical Biomarkers Among Breast Cancer Patients Undergoing Chemotherapy?

#### Jennifer Phillips, PhD

Development of a Measure of Social Motivation in Autism

## 2016 Department Innovator Grants Program Awardees

#### **FUNDED PILOT STUDIES**

#### Jacob Ballon, MD

Open Label, Flexible-Dose, Adjunctive Bromocriptine for Patients with Schizophrenia and Metabolic Dysfunction

#### Michele Berk, PhD and Moira Kessler, MD

Pilot Test of a DBT Parenting Intervention for Youth Who Have Recently Attempted Suicide

#### Kim Bullock, MD

Virtual Reality for Functional Neurological Symptom Disorder

#### Tamar Green, MD

The Brain in Noonan Syndrome: a Pilot Study

#### Manish Saggar, PhD

Deciphering "Ongoing" Cognition Using Concurrent Multimodal Neuroimaging and Continuous Multitask Paradigm

#### Nolan Williams, MD

Comparison of the Clinical Efficacy and Change in Resting State Functional Connectivity of Transcranial Magnetic Stimulation versus Theta-Burst Stimulation over Left DLPFC in Resistant Depression

#### **FUNDED SMALL SCHOLARLY PROJECTS**

#### Sarah Adler, PsyD

Addressing Perceived Barriers to Implementation of Measurement Based Care: A Pilot Feasibility and Acceptability Study

#### Erin Cassidy Eagle, PhD and Laura Dunn, MD

Older Adults Access to Quality Mental Health Services

#### Angie Chwen-Yuen Chen, MD

Safe Reduction of Chronic High Dose Opioid and Benzodiazepine Prescribing in the Primary Care Setting: Physician Support and Needs Assessment

#### Joseph Cheung, MD

Applying Wearable Technology and Genetics to Study Extreme Long Sleepers

#### FUNDED SMALL SCHOLARLY PROJECTS (continued)

#### Kate Hardy, ClinPsychD

Pilot Study Investigating the Impact of a Group-Based Worry Intervention Trial on Attenuated Psychotic Symptoms, Worry, and Distress in Adolescents At-Risk of Developing Psychosis

#### Christina Khan, MD, PhD

Improving Pediatric Behavioral Health Integration at a Federally Qualified Community Health Center in East Palo Alto, CA

#### Jane Kim, PhD

Development of Tailoring Guidelines for Personalizing Behavioral Intervention Technologies

#### Daniel Mason, MD & Katherine Eisen, PhD

Reading and Recovery Expectations: Developing a Bibliotherapy Group for an Acute Inpatient Psychiatric Unit

#### Diana Naranjo, PhD

Training Mental Health Care Providers in Diabetes Distress to Address Psychosocial Need in Youth and Young Adults with Type 1 Diabetes

#### Daryn Reicherter, MD & Ellie Williams, MD

Bringing Care to New Moms: Collaboration between the Gardner Packard Children's Health Center and the Stanford Department of Psychiatry for the Evaluation and Treatment of Postpartum Depression

#### Carolyn Rodriguez, MD, PhD

Building Community-Academic Partnerships for Evidence-Based Treatment of Hoarding Disorder

#### Yelizaveta Sher, MD

Quality Improvement Project on Screening, Monitoring and Timely Treatment of Delirium Immediately Post Lung Transplantation

#### Shannon Sullivan, MD & Michelle Cao, DO

Survey of Sleep Education Offered by US Medical Residency Training Program

#### Ellie Williams, MD & Julie Weitlauf, PhD

Women's Health and Wellness Advanced Clinical Didactic Workshop: Assessment and Treatment

## Enhancing Inclusion, Diversity, and Wellness



"As a preeminent academic medical center, Stanford Medicine is dedicated to improving human health through discovery and care. And at the heart of this enduring mission is a diverse group of Stanford Medicine faculty, students, trainees, and staff contributing immeasurably. That is why we at Stanford Medicine hold diversity and inclusion as core values, and why we continue to strive, in many different ways, to create a welcoming environment for all individuals, from all backgrounds. We have made significant progress, but we cannot be satisfied until we know that all individuals feel fully supported in achieving their potential." – Dean, Lloyd Minor



"We have moved the conversation from diversity to inclusiveness and authentic belonging - we are creating an academic home in which all people are truly valued." - Chair, Laura Roberts

Dr. Roberts is committed to practices and policies that ensure the hiring and promotion of robustly diverse faculty, staff, and trainees. She has worked on an ongoing basis to create an environment that is welcoming for all members of the department across the five missions of the department. The Department's Clinical Innovation and Science mission promotes programs that make patients feel welcome in our general and specialty clinics including our Muslim Mental Health Clinic and refugee initiatives. Our Advancing Science mission is demonstrated through

scholarly work, such as unbiased, systematic reviews, and Educational Excellence is demonstrated by co-directors of Grand Rounds, Drs. Alan Louie and Lawrence Fung, who have hosted a number of Diversity and Inclusion sessions each year; promoting diversity of speakers for continuing medical education and other training programing. The department also champions Community Engagement and Commitment, encouraging members of all races and ethnicities to share their life stories. Lastly, the Department strives to support Leadership in upholding our diversity and inclusion core values.



As a result of feedback from last year's departmental retreat, a Wellness Initiative was launched, and Dr. Belinda Bandstra was selected to chair a departmental Diversity and Inclusion Wellness Workgroup. With other faculty in our Department, including Drs. Rania Awaad, Neda Kharrazi, Ryan Matlow, Kelli E Moran-Miller, Yasmin Owusu, and Ripal Shah, Dr. Bandstra developed a comprehensive needs assessment that will be launched this upcoming year.

Diversity efforts are also being actively pursued within the psychiatry residency program. Several initiatives have been launched, including the formation of the Diversity and Inclusion Advisory Council (a resident-led group), sending representatives to the Student National Medical Association (SNMA) and Latino Medical Student

Association (LMSA) conferences, participating in the Stanford Clinical Opportunity for Residency (SCORE) program, creating several Diversity Recruitment Days during interview season to highlight the Psychiatry department's commitment to diversity and inclusion (these act in conjunction with the GME's Diversity Reception), training on implicit bias, holistic admissions review training, participating in the Leadership Education in Advancing Diversity (LEAD) program started by the pediatrics residency program, hosting a Diversity and Inclusion Grand Rounds, and incorporating themes and lesson plans around diversity and inclusion into weekly didactics.

Similarly, the T32 postdoctoral fellowship program continues efforts to expand the recruitment pipeline and develop relationships with existing programs both within Stanford and nationally that provide training and support to underrepresented minority students and trainees at all levels. T32 fellows for the past 5 years includes 59% Female; 35% URM; 35% POC.



Through the leadership of Dr. James Lock, the first LGBTQ + Faculty Networking Reception was launched in Fall 2018. In addition, Dr. Neir Eshel has been advancing LGBTQ initiatives within the residency and community through leading a Stanford-wide group for LGBTQ residents, working with inpatient psychologist Dr. Neda Kharrazi to implement transgender-affirming policies on the psychiatry unit and the rest of the hospital, setting up a resident clinic in LGBTQ mental health with Dr. Christina Khan.

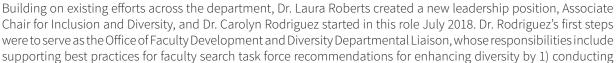
Dr. Lawrence Fung launched Stanford Neurodiversity Project (SNP), a movement supporting the strengths of neurodiverse individuals utilizing their talents to increase innovation and productivity of the society as a whole. One stepping stone has been the hiring of individuals with Autism Spectrum Condition to work within the School of Medicine and across campus. Dr. Fung is launching a Neurodiverse Student Support Program for neurodiverse Stanford students this summer.



Ongoing efforts led by Dr. Rebecca Bernert, include a Stanford School of Medicine survey, funded by the Diversity and Innovation Fund, evaluating the visibility and use of institutional family-friendly policies and their impact on faculty diversity and retention of early-career scientists. This work is jointly funded by the Diversity Cabinet, Vice Provost Office for Faculty Development and Diversity, and the SOM Dean's Office. Dr. Bernert is a 2019 Faculty Fellow within the Clayman Institute for Gender Studies, and has presented her work within a NIH-funded career development institute symposia, and recently co-moderated a panel to the SOM Faculty Senate on institutional and federal leave policies and its impact on faculty diversity and retention.



"We are enthusiastically committed to promoting diversity at Stanford by proactively implementing practices that create an inclusive, welcoming culture foundational to growing leaders in the field of medicine." -Dr. Carolyn Rodriguez





in-person presentations to each Department of Psychiatry and Behavioral Science search committee; 2) verifying and consulting on ways to expand the diversity of the applicant pool; 3) highlighting ways to bring unconscious bias to the attention of the committee through videos and other training materials; and 4) encouraging that criteria are developed prior to evaluation and applied equally across all applicants. This year, Dr. Rodriguez launched faculty, staff, and trainee lunch groups to maximize efforts across the department. She will next assemble key departmental stake-holders through a year-long Inclusion and Diversity Task Force Initiative, which will generate a roadmap of recommendations to be implemented by a standing committee.

#### DIVERSITY PERFORMANCE →

Within our department, we have made progress to date on diversity metrics that are measurable. This year, among the department leadership, 35% Female; 24% URM; 18% POC and across faculty, 61% Female; 9% URM; 26% POC.

The Department of Psychiatry and Behavioral Sciences exceeded External Benchmarks for female and under represented minority represented in 6 out of 8 categories and All Stanford School of Medicine Benchmarks in 7 out of 8 categories (2019 Diversity Dashboard).

		Stanford School of Medicine benchmark	Better or equal to external benchmark
Faculty n=184+	61% Female	/	1
	9% URM	1	1
Clinical Fellows n=29	62% Female	1	1
	7% URM	190	101
Postdocs n=103	51% Female	1	***
	10% URM	1	1
Residents n=50	58% Female	1	1
	18% URM	1	1

\*Faculty number includes Professoriate, Clinician Educations, & Instructors with 2:0.5 FTE.

2:10% All Stanford School of Medicine Benchmark, 16% External benchmark for Clinical Fellows

\*\* 64% External benchmark for Physicians

### Humanities and Medicine Initiative

The Humanities and Medicine Initiative, based in the Department of Psychiatry and Behavioral Sciences, is uniquely situated on an active university campus with scholars in humanities and social sciences at our doorstep. We have an immense opportunity to promote interdisciplinary work at the interface of medicine and the humanities at an exceptionally high level.

Many historians, anthropologists, philosophers, and literary scholars at Stanford have an intellectual and academic commitment to enlightening our community – and we are working to bring their insights and wisdom to the medical campus. We are proud to collaborate in this effort with our colleagues at the Stanford Humanities Center, Medicine and the Muse program, The Pegasus Physician Writers at Stanford, Medical Anthropology, and Presence. In our evolving efforts to enhance the academic and clinical interface between medicine and the humanities at Stanford, we have spent the last year participating in several activities with our colleagues around campus -- centered primarily around the yearlong campus-wide celebration of Mary Shelley's work, called Frankenstein@200.



The year 2018 marked the 200th anniversary of the publishing of Mary Shelley's book Frankenstein. The book has been described as one of the few truly modern myths, taking on as it does the interface of technology, medicine, and the dilemma of what is human and what is life. As part of Frankenstein@200, the Pegasus Physician Writers at Stanford, founded in 2008 by Audrey Shafer, MD Anesthesia, Irvin Yalom, MD Psychiatry, Larry Zaroff, MD, PhD, Cardiac Surgery, and Hans Steiner, MD Psychiatry, who is now the director of the group, hosted a reading curated by James Lock, MD, PhD, Psychiatry called "Becoming Frankenstein: Our Risky Aspirations," featuring poems and narratives related to this theme. The reading was held in January of 2018 and featured, among others, five writers from the Department of Psychiatry and Behavioral Sciences - Drs. James Lock, Nathanial Morris, John Van Natta, Nathan Szajnberg, Hans Steiner, and Daniel Mason.



Drs. James Lock and Hans Steiner

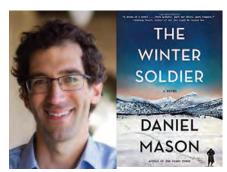
The department also sponsored Frankenstein GRID, an installation directed by Charlotte Thun-Hohenstein that was designed "to provoke reflection about the relationship of science and nature, and the ethical boundaries between the two." Frankenstein GRID took place over the course of six evenings in June of 2018.

The structure itself was a twenty-foot high lattice of green laser beams, perpendicular to the ground like a wall. The beams were made visible by a smoke machine, and the framework also featured a falling curtain of water, onto which video footage was projected. Four outdoor speakers were set up among the trees to create a surround sound environment for audience members



The Humanities and Medicine Initiative would also like to shine a special light on the publication of Dr. Daniel Mason's new novel, *The Winter Soldier*, which is a remarkable book about medicine, resilience, and hope. *The Winter Solider* has become a National Bestseller and is recognized as a Washington Post Best Book of 2018, a San Francisco Chronicle Best Book of 2018, and an NPR Great Read of 2018. Congratulations to the success of this new novel, on top of his other wonderful pieces!

It was a memorable year for the medical community at Stanford, full of thought-provoking and unforgettable events.



# Special Initiatives of the Chair

In pursuit of the five shared missions of the Department of Psychiatry and Behavioral Sciences, Chairman Dr. Laura Roberts has designated a number of projects as Special Initiatives of the Chair. These initiatives span a wide array of foci and scales, but are bound together by a shared capacity to grow the profile of the department while enhancing the public trust which makes all of our work possible.

Projects are designated as Special Initiatives in one of several ways: they may reflect strong ideas which need a foothold within the department in order to identify stakeholders and appropriate collaborators, they may embody ongoing efforts which exceed any one lab or unit, or they may represent a commitment to highlighting research which holds transformative promise for innovation. For more information on any of the Special Initiatives, please see pages 250-265.

#### ALLCOVE

Insprired by the headspace model, allcove was developed for young people ages 12-25 to access early mental health supports, along with school support and web-based connectivity. These programs improve young people's mental, social, and emotional wellbeing through the provision of high quality, integrated, age-appropriate care for teenagers, young adults, and their families who are facing early life challenges.



#### THE BELONGING PROJECT AT STANFORD

A sense of belonging is deeply important to emotional health and personal wellbeing. Individuals develop a sense of belonging when they feel that they are part of a larger community that they believe in - a community that welcomes them, a community that respects and represents their values, and a community that helps them to fulfill their aspirations. University activities that foster a sense of belonging promote mental and physical health and help individuals to flourish in all aspects of their lives.



#### **BRAIN-MIND INITIATIVE**

The BrainMind Summit is the flagship event of the BrainMind ecosystem, which brings together neuroscience institutions, researchers, entrepreneurs, and investors with the purpose of accelerating values-driven brain endeavors. Through the BrainMind ecosystem, participants in the BrainMind Summit will be engaged with how to answer the hardest and most urgent questions in the field for years to come.



#### BRAINSTORM: THE STANFORD LABORATORY FOR ENTREPRENEURSHIP IN MENTAL HEALTH

Mental illness is the greatest thief of human potential today. Brainstorm hopes to help return that potential to the 2 billion people suffering around the world by harnessing the power of medicine, entrepreneurship, and technology, . Brainstorm partners with entrepreneurs and tech companies to design and build products that have the potential to transform the way we view, diagnose, and treat mental health.



#### CLINICAL NEUROSCIENCE IMMERSION EXPERIENCE (CNI-X)

The Clinical Neuroscience Immersion Experience (CNI-X) at Stanford University is an intensive summer program following the sophomore, junior, or senior years in high school. Packed back-to-back are sessions and lab trips which demonstrate how creativity is visualized with brain waves, miniature human brains are grown in dishes, apps and virtual reality are treating eating disorders, cognition is studied in flight simulators, psychiatric testimony supports human rights at the World Court, and more.



# Special Initiatives of the Chair (continued)

#### CLINICAL NEUROSCIENCE RESEARCH EXPERIENCE (CNR-X)



The Clinical Neuroscience Research Experience (CNR-X) is an immersive residential summer program for high school students from China who are interested in advancing their knowledge in the fields of neuroscience, psychiatry, and psychology. Beyond the academics, CNR-X also offers international students an opportunity to experience life as an undergraduate on Stanford's campus. They live in shared dormitories, eat in the dining halls, and spend their free time exploring the campus and surrounding areas.

#### **COMMUNITY OUTREACH ACTIVITIES**



Community is defined broadly, ranging from our shared commitment to building academic collaboration and support among our own faculty and staff, to partnerships with international colleagues, to building behavioral health care systems for those with mental health needs across the globe. Our department has recently expanded community experiences for our own trainees in county and local agency settings, while also welcoming experts in community psychiatry administration to Stanford to build understanding and collaboration.

#### EDITOR-IN-CHIEF, BOOKS: AMERICAN PSYCHIATRIC ASSOCIATION



Dr. Laura Roberts is the Editor in Chief, Books for the American Psychiatric Association. In this capacity she works with the Publisher, Acquisitions Editor, Editorial Board, and other APA staff in overseeing the editorial development of print books and electronic products, preparing and implementing book program strategy and policy, driving content direction, soliciting and reviewing book proposals and manuscripts, reviewing backlist publications, and preparing new frontlist titles.

#### **EDITORIAL OFFICE: ACADEMIC PSYCHIATRY**



Academic Psychiatry is a bi-monthly, international academic medical journal sponsored by the American Association of Chairs of Departments of Psychiatry, American Association of Directors of Psychiatric Residency Training, Association for Academic Psychiatry, and Association of Directors of Medical Student Education in Psychiatry. Academic Psychiatry features original, scholarly work focused on academic leadership and innovative education in psychiatry, behavioral sciences, and the health professions at large.

#### FORENSIC PSYCHIATRY



Forensic Psychiatry is a subspecialty of psychiatry that works at the interface between the law and psychiatry. A forensic psychiatrist can provide evaluations for numerous legal purposes, including competency to stand trial and mental state opinions among others. The Program in Psychiatry and the Law at Stanford comprises a multidisciplinary team of world-class faculty who combine clinical experience and specialized knowledge and experience in medicine, mental health, and ethics.

#### HUMANITIES AND MEDICINE: GROWING THE HEART AND MIND OF MEDICINE

The physician-patient relationship is at the heart of medical practice. Developments in science, technology, and the economics of health care, while essential to medicine and the delivery of care, also pose significant challenges to the nature, quality, and maintenance of this relationship and to medicine as a discipline. Stanford Medicine sets itself apart from most medical schools by being located in an active university campus with scholars in humanities and social sciences at the doorstep, giving rise to an opportunities to promote interdisciplinary work at the interface of medicine and



#### INNOVATOR GRANTS PROGRAM

The Department of Psychiatry and Behavioral Sciences Innovator Grants Program, launched in 2015, promotes research and collaborative scholarly projects that advance the academic interests of our faculty and the strategic themes of our department. Projects across the full spectrum of science and scholarship are encouraged. The Innovator Grants Program has two offerings: Pilot Studies in novel scientific areas that have high potential to lead to competitive grant applications and Small Scholarly Projects related to areas including education, clinical care, community and health systems, and professional development.



#### LGBTQ MENTAL HEALTH

Lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals experience unique healthcare needs and face significant health disparities. Lack of cultural competence by healthcare providers contributes to these disparities by deterring LGBTQ individuals from seeking medical care, or by providing suboptimal care. This special initiative, founded by Dr. Lawrence McGlynn, aims to expand local resources for the LGBTQ community and train a new generation of providers.



#### LYME DISEASE WORKING GROUP

Lyme Disease is a serious and prevalent condition with physical, cognitive, and affective consequences. This condition and other tick-borne conditions are poorly understood and have received insufficient scientific attention. Our Lyme Disease Working Group is interested in developing more accurate diagnostic tests, improving medical understanding of the course of illness, evaluating the effectiveness of innovative therapies, expanding clinical services, and building greater knowledge and awareness of how to prevent illness.



#### MEDIA AND MENTAL HEALTH INITIATIVE

The Media and Mental Health Initiative strives to better understand and improve the impact of media on youth mental health through partnerships, outreach, research and projects aimed to enhance the prosocial, safe use of media in multiple forms (news, social, entertainment). Early work of the initiative has been the development of partnerships with media platforms and researchers in suicide prevention and child development to identify actionable ways in which the power of media can better support youth health and wellbeing.



# Special Initiatives of the Chair (continued)

#### PEGASUS PHYSICIAN WRITERS AT STANFORD



The Pegasus Physician Writers at Stanford are a group of academic and private practice physicians in various stages of career development who also are creative writers. The group has published almost 100 books over the past 10 years. Goals of the group are to bring the insights of humanistic arts to the practice of medicine, to inform creative writing by the practice of medicine, to educate medical students and young physicians in the humanistic dimensions of medical practice, and to celebrate the lives of patients through their writing.

#### PRECISION MENTAL HEALTH



The biomedical revolution, led by Stanford Medicine, will change the trajectory and impact of the biomedical sciences through precision health for individuals and for populations. The Department of Psychiatry and Behavioral Sciences has launched two major initiatives to advance precision health. We also initiated a new unit, the Division of Public Mental Health and Population Sciences, to harness the tremendous academic resources of Stanford University.

#### PROJECT CATALYST FOR MENTAL HEALTH



Mental disorders are the second leading cause of disability and premature mortality throughout the world and the first leading cause in economically established countries, and yet the profound consequences of these conditions remain underrecognized. Project Catalyst for Mental Health is a new effort of the Department of Psychiatry and Behavioral Sciences. The intent of Project Catalyst for Mental Health is to foster innovation to address and lessen the impact of mental disorders and related conditions.

#### REIMAGINING MENTAL HEALTHCARE



This special initiative seeks to bring together people and resources to dream into the future of mental healthcare through educational venues and forums, learning communities, and social networks. "Reimagining Mental Healthcare" challenges us to put aside what we know and to start from scratch – to reimagine mental healthcare and to then accelerate the translation of discoveries and ideas to our society with maximal impact.

#### SMALL SCOPE HIGH IMPACT PARTNERSHIPS (S<sup>2</sup>HIP)



S<sup>2</sup>HIP initiates collaborations with community partners to leverage departmental resources for high-impact results in underserved communities. These collaborations seek to build upon clinical and population health research observations about the need to engage community partners by deploying community participatory research principles such as mutualism, respect, and inclusion.

#### STANFORD CENTER FOR YOUTH MENTAL HEALTH AND WELLBEING



The Center for Youth Mental Health and Wellbeing is working with state and local partners to bring integrated youth mental health programs to Santa Clara County, the state of California and other communities across the nation. These "no wrong door" programs have proven effective internationally as sites for improving the access that young people have to mental health resources, as well as providing a comfortable and welcoming community context in which young people can thrive.

#### STANFORD MENTAL HEALTH TECHNOLOGY & INNOVATION HUB

Stanford Psychiatry and Behavioral Sciences continues to be on the cutting edge of innovation in the field of technology and mental health. Positioned in the heart of Silicon Valley, and with the vast array of technology partners across the Stanford campus, our Department brings cutting edge technological science together with clinical expertise to create an array of unique and innovative solutions for those facing mental health challenges.



#### STANFORD NEURODIVERSITY PROJECT

The Stanford Neurodiversity Project was established to promote neurodiversity, empower neurodiverse individuals, and maximize the potential of neurodiversity. Neurodiversity is a concept that regards individuals with differences in brain function and behavioral traits as part of normal variation in the human population.



#### SUICIDE PREVENTION THROUGH OUTREACH

Leaders across Stanford Medicine came together to found Suicide Prevention through Outreach (SPOt). This newly established program in the Department of Psychiatry will initially focus on two factors identified in the recently published report: better understanding the greater suicide risk experienced among young men, and the role of the media in the context of youth suicide.



#### WELLBEING AND SELF-CARE

Our mission to improve the health of individuals, communities, and populations begins with improvement of our own health. Wellbeing adds inspiration and creativity to the advancement of science, meaning and purpose to clinical innovation and service, and enduring integrity to educational excellence. With unwavering commitment to our own wellbeing and the wellbeing of those we love and those work with, we create a compelling pattern for others to emulate in our community engagement efforts.



#### WELLCONNECT

WellConnect is a confidential mental health referral and consultation program for residents and fellows that was created to address three main objectives: 1) mental health and wellbeing of residents and fellows, 2) educational needs that align with the Accreditation Council for Graduate Medical Education requirements, and 3) administrative support and guidance associated with health issues.



#### YOGAX

YogaX is a Stanford project integrating science and spirituality to inspire individual and community health and wellbeing. Its mission is the integration of therapeutic yoga in health and allied healthcare settings. The project has three aims: 1) Certification to prepare care providers and students to become concurrent yoga professionals, 2) Education to offer innovative workshops, online activities, and retreats about health and wellbeing-related topics, and 3) Providing continuing education credits and deep learning for yoga teachers, therapists, practitioners, and teachers.



Veteran Mental Illness Research Education and Clinical Center





Clinic Director Jerome Yesavage, MD

Associate Director Ruth O'Hara, PhD



Co-Associate Director Kaci Fairchild, PhD

Led by Director, Dr. Jerome Yesavage, Associate Director, Dr. Ruth O'Hara, and Co-Associate Director, Dr. Kaci Fairchild, the mission of the Sierra-Pacific MIRECC has been to build an integrated system of clinical, research, and educational programs designed to improve the clinical care for Veterans with dementia and with PTSD both in VISN 21 and system-wide. By using recent advances in clinical neuroscience, we plan to help prepare the VA Health Care System take care of a deluge of older Vietnam Era Veterans suffering from dementia and PTSD.

Our approach is to define risk factors for cognitive decline in older Veterans, and then to develop and implement novel countermeasures to minimize this decline. Our strong translational research programs are helping to ensure that the unique physical and mental health care needs of all older Veterans are met. This work is increasingly important as Vietnam Veterans grow older and more susceptible to significant cognitive decline. We bring together the efforts from applied neuroscience to clinical trials, utilizing technological advances for both understanding the pathophysiology of these disorders, and for treatment delivery. Here is a brief overview of some of our efforts in these domains this past year.

Dr. Yesavage and other MIRECC investigators have conducted large scale traditional pharmacological trials relevant to the treatment of dementia and associated behavioral disturbances, e.g., the use of citalopram to treat agitation in Alzheimer Disease (AD). Another large-scale co-operative study of repetitive transcranial magnetic stimulation (rTMS) was completed in depressed Veterans. Dr. Michelle Madore is directing a VA pilot project built upon the cooperative study to evaluate the clinical effectiveness of rTMS in 40 VA hospitals nationwide.

With advances in noninvasive brain modulation, the center is leveraging imaging and biomarkers to direct stimulation to critical brain substrates and study the effects. NIH Pioneer Award winner Dr. Amit Etkin is using advanced brain mapping techniques to guide rTMS treatments in patients with PTSD. His strategies involve the use of rTMS to augment the effectiveness of current evidence-based psychotherapies for PTSD. Drs. Jauhtai Joseph Cheng and Joy Taylor using repetitive transcranial magnetic stimulation (rTMS) to treat MCI and mild AD patients.

Dr. Allyson Rosen has been using imaging to make brain stimulation more precise leading to improved effectiveness in clinics where neuroimaging is typically unavailable. Finally, Dr. M. Windy McNerney investigates how magnetic brain stimulation can improve neurotrophic factor signaling in Alzheimer's disease. She has collaborations with numerous researchers within the VA aiming at comparing proteomic and genomic factors related to cognitive function, treatment response, and brain imaging.

The study of lifestyle interventions is a strong focus for MIRECC. Dr. O'Hara is examining sleep biomarkers of cognitive impairment in both PTSD and Dementia. Dr. Lisa Kinoshita has developed several novel interventions for sleep disturbances that are common co-morbidities in PTSD patients. MIRECC Sleep Core leader Dr. Andrea Goldstein-Piekarski is examining how improving sleep through treatments such as Cognitive Behavioral Therapy for Insomnia also improves mood, cognition, and brain function. MIRECC Chronobiology Core leader Dr. Jamie Zeitzer is conducting several studies on the effects of resetting circadian rhythms using bright light. Finally, investigators have begun innovative clinical trials to determine if changes in brain nerve growth factors may affect cognitive decline. One example is the work of Dr. Kaci Fairchild who is examining the biological impact of physical exercise on these biomarkers in several integrated studies.

The MIRECC leverages advances in precision medicine to help transform diagnosis using biological markers. Dr. Leanne Williams, in collaboration with VISN 21 MIRECC investigators, is leading projects funded under priority NIH Human Connectomes Related to Disease and Science of Behavior Change initiatives. These projects are advancing a new framework for precision medicine in mental health, using biologically valid measures to classify subtypes of PTSD and commonly comorbid mood and anxiety disorders, and identifying new targets for precise therapeutic strategies.

MIRECC extends its broad reach in dementia and PTSD through telehealth and telemedicine. Dr. Blake Scanlon has developed several telemedicine and mobile health interventions for Veteran AD patients and caregivers in partnership with the State of California's Alzheimer Center on site at VA Palo Alto. A recent trial led by Dr. Craig Rosen tested whether telephone care management (TCM) improved Veterans' retention in outpatient PTSD care. Dr. Rosen is now the Acting Director of the Education Branch of the National Center for PTSD. This ensures close collaboration between the MIRECC and the National Center for PTSD.



Jauhtai Joseph Cheng, MD, PhD



Amit Etkin, MD, PhD



Lisa Kinoshita, PhD



Michelle Madore, PhD M. Windy McNerney, PhD Allyson Rosen, PhD







Craig Rosen, PhD



Blake Scanlon, PhD



Joy Taylor, PhD



Julie Weitlauf, PhD



Leanne Williams, PhD



Jamie Zeitzer, PhD

Women's health is an understudied area in Veterans and the focus of work in PTSD by Dr. Julie Weitlauf. She has addressed ways in which PTSD and related mental health conditions may interfere with women Veterans' timely receipt of preventive healthcare. These studies have provided a strong empirical foundation for trauma-informed women's health care in VA and were used extensively by the American Congress of Obstetrics and Gynecology's guiding documents (Committee Opinion of the Committee on Underserved Populations) related to evidence-based women's health care for Veterans.

## YogaX

#### PROGRAM OVERVIEW

YogaX in the Department of Psychiatry and Behavioral Sciences is committed to the integration of science and spirituality in service of individual and communal health. We seek to inspire, support, and implement scientifically informed yoga training and therapeutic yoga services that support the wellbeing of individuals and communities. YogaX is grounded in modern neuroscience research and a clear set of values (based in yoga psychology) reflected in all program components. These underlying values are:

- Integration and Holism: YogaX is committed to understanding, honoring, and working toward the integration of the psychological, biological, social, and cultural backdrops and contexts of all individuals serving in or being served through the program in all types of healthcare systems.
- Growth: YogaX is committed to facilitating personal and communal growth for the purpose of transcending non-optimal ways of personal and institutional responding, behaving, relating, and creating.
- Community: YogaX is committed to creating connection at the intrapsychic, individual, relational, and community level, acknowledging and honoring human and systemic interdependence and interbeing.
- Service: YogaX is committed to skillful action toward a greater good, rooted in our belief that we and the systems in which we work must act on behalf of others and in service of a greater purpose.
- Accessibility and Inclusivity: YogaX is committed to be inviting for everyone through skillful action, ongoing work on self-awareness, cultural consultation, cultural humility, and the embracing of diversity.
- Inspiration: YogaX is committed to remain inspired to inspire through honoring a wisdom tradition rooted in ancient yoga psychology and modern neuroscience, as well as through lifelong learning.



#### TEACHER TRAINING PROGRAM

With growing scientific evidence to support its use in healthcare settings, yoga has become a powerful complementary and alternative treatment to improve the health and wellbeing of patients in integrated, conventional, and allied healthcare settings. Patients who may benefit from yoga include those receiving general medical care, mental health treatment, physical therapy, occupational therapy, and primary care, to name but a few.

YogaX will train healthcare providers from diverse disciplines either to supplement their ongoing patient services with yoga or to serve as yoga professionals in a variety of healthcare and allied healthcare settings, providing yoga classes, therapeutic yoga interventions, and yoga therapy. YogaX will also retrain extant yoga teacher to become skillful in the application of yoga services in healthcare and allied healthcare settings. Graduates from the YogaX teacher training program will work interprofessionally and collaboratively with other healthcare providers on behalf of their patients, and will be committed to helping facilitate an integrated and continuous healthcare experience for their clientele and within their medical settings.

#### CONTINUING EDUCATION PROGRAM

Recent findings from the Yoga in America Study reflect growing numbers of individuals who are turning to yoga as a complementary and integrative health and wellness practice. The number of individuals practicing yoga has increased by 50% (up to 36 billion from 20.4 billion) since 2012. The expansion in yoga services sought by the general population and by individual with healthcare needs has resulted in increased pressure on the continuing education system to offer specialized ongoing education for registered yoga teachers and healthcare professionals in yoga and therapeutic yoga interventions.

YogaX targets its continuing education efforts to yoga teachers who need continuing education to maintain certification as a teacher or yoga therapist and who want to expand their scope of practice; yoga practitioners who want to deepen their practice; and healthcare providers who seek to enhance their extant services through integrating therapeutic yoga strategies. YogaX offers workshops, seminars, online activities, and retreats about a range of health and wellness-related topics.

These training opportunities are delivered throughout the year for the express purpose of bringing yoga-based wellness practices to yoga teachers, therapists, and practitioners, as well as those who might benefit from a yoga practice but have not yet been introduced to it.

#### SERVICE PROGRAM

Research has amply documented that university faculty and graduate students are at risk for a variety of health and mental health challenges due to the rigorous demands and unique characteristics of academic environments. Professionals in healthcare programs have been demonstrated to be at particular risk for burnout. Medical and graduate students and faculty in the health professions are vulnerable in this manner due to high workloads, financial strain, and many competing demands created by the required integration of academic learning, clinical practice, and research. Imposter feelings and a lack of belongingness compound the perception of stress, adding further challenge to an already difficult endeavor. Despite the fact that studies have demonstrated that self-care strategies, such as mindfulness and yoga, can be effective in ameliorating the effects of stress in academe, professionals across academic disciplines generally do not proactively engage in such practices and organizational constraints fail to integrate positive self-care into the daily life of workers, academics, and students



The YogaX service program emphasizes the necessity of integrated and ongoing self-care, actively incorporating the teaching of self-care strategies and approaches into graduate training, and facilitating the development of personal, sustainable self-care practices for current and future health professionals. This YogaX work underscores Stanford's commitment to students, staff, and faculty, through training resilient professionals capable of maintaining their own wellness in service of long-term quality of care to others. With initial exclusive focus on members of the Department of Psychiatry and Behavioral Sciences, YogaX provides yoga and mindfulness-based wellness offerings – delivered in readily accessible formats and locations, advertised in a non-stigmatizing manner, free of charge or at highly affordable rates, tailored for the development of a sense of community and belonging, and framed as a springboard for integrating healthful and efficient self-care practices into participants' daily lives.

### Youth Resilience

By investigating the sequela of stress in the development of the child, the Early Life Stress and Resilience team has made significant advances in the field. The environment at Stanford and our Department has propelled vital collaborations that help elucidate the biological, psychological and social sequelae of experiencing traumatic stress. This information has helped us develop novel psychosocial interventions that help forestall posttraumatic symptoms and increase resilience through the development of new coping mechanisms and supportive systems of care.

Current investigations highlight this ecological approach. As principal investigator, Dr. Victor G. Carrion has assembled a team of novel thinkers in their longitudinal study investigating the science of wellness. Three school districts participate in a study assessing the effectiveness of a yoga and mindfulness curriculum at schools. In collaboration with Dr. Ruth O'Hara, sleep architecture and quality is being investigated through polysomnography. A key cornerstone of this study is understanding the ramifications of how improvement in sleep can promote the healthy processing of stress. In collaboration with Dr. Vinod Menon, tasks assessing executive function and emotion regulation are being investigated through functional Magnetic Resonance Imaging. The curriculum is demonstrating critical brain activities that suggest improvement in these functions which, as demonstrated by Dr. Carrion's earlier work are compromised by chronic stress.

Briefly, the lab has identified that youth with significant posttraumatic symptoms have disproportionate high levels of pre-bedtime cortisol. These cortisol levels have been associated with decreases on hippocampal and pre-frontal cortex volumes. Alterations in amygdala volume have also been identified. Functional studies have shown abnormalities on memory tasks, executive function tasks and emotional regulation tasks. The lab believes that with the appropriate preventive interventions and treatments most of these deficits can be prevented and resilience restored.









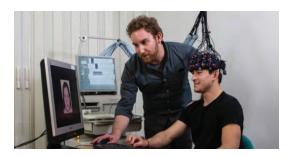








Listed Alphabetically: Victor Carrion, Flint Espil, Hilit Kletter, Ryan Matlow, Vinod Menon, Ruth O'Hara, Elizabeth Reichert, and Allan Reiss



Biological investigations merge with clinical outcome in a clinical trial in Sacramento and San Francisco assessing the effectiveness of Cue-Centered Therapy, a treatment developed by Dr. Carrion, Trauma-Focused Cognitive Behavioral Therapy, developed by our collaborator, Dr. Judith Cohen, and treatment as usual. Beyond the usual symptomatic parameters, in collaboration with Dr. Allan Reiss and Dr. Flint Espil, the study is conducting longitudinal assessments of pre-frontal cortex function via functional near infrared spectroscopy (fNIRS). fNIRS captures hemodynamic responses associated with neuronal activity. This work is providing vital information for treatment selection upon clinical presentation.

Expedient translation of our work is one of the main imperatives is one of the main missions of the Early Life Stress and Resilience team. To this effect; three significant efforts are highlighted. First, the supervision of embedded clinicians at three sites in East Palo Alto by Dr. Ryan Matlow and the Tipping Point team. Second, Drs. Matlow and Espil training of ambassadors of health at One East Palo Alto. A training that anchors on a module treatment approach to address the clinical presentations of youth with key pediatric mental health symptoms. Finally, through our Science and Service Initiative Drs. Matlow and Hilit Kletter train therapists working in communities affected by disasters (e.g.; Ponce, Puerto Rico; Santa Rosa, California) on the assessment and treatment of traumatized youth. Needs assessment investigations are also part of this Initiative.

Previous work in New Orleans after Katrina, in Australia after the Victoria bushfires, and in Haiti after the earthquake, has informed our approach in Puerto Rico after Hurricane Maria and Sonoma after the fires. Collaborating with local teams that have been trained on our interventions informs the cultural adaptations of these programs.

Collaborations with Stanford computer scientists are exemplified by two ongoing efforts. First, Dr. Hilit Kletter and Dr. Selma Tanovic are developing our on-line training program for Cue-Centered Therapy (CCT). Cue-Centered Therapy is an integrative approach combining elements from cognitive, behavioral, psychodynamic, expressive, and family therapies to address four core domains: cognition, behavior, emotions, and physiology. The primary goal of CCT is to build strength and resilience by empowering the child through knowledge regarding the relationship between their history of trauma exposure and current affective, cognitive, behavioral, or physiological responses. Youth and caregivers are taught how to recognize and effectively manage maladaptive responses that occur in response to traumatic cues.



Second, Dr. Carrion and Travis Bradley, PhD candidate, in consultation with Dr. Lisa Medoff, learning specialist, are developing an educational platform; Bridge to Learning, that helps identify approaches to teach extreme learners. This state of the art platform will be a resource for teachers and a quick dissemination of knowledge for our team on our neuroscientific and cognitive findings. It has been informed by researching limitations on current socio-emotional learning trainings for teachers and conducting focus groups with teachers. Extreme learners usually are quickly diagnosed, but seldom receive the appropriate educational interventions they need. Bridge to learning aims to close this gap by facilitating education on how to identify extreme learners and how to best support them.



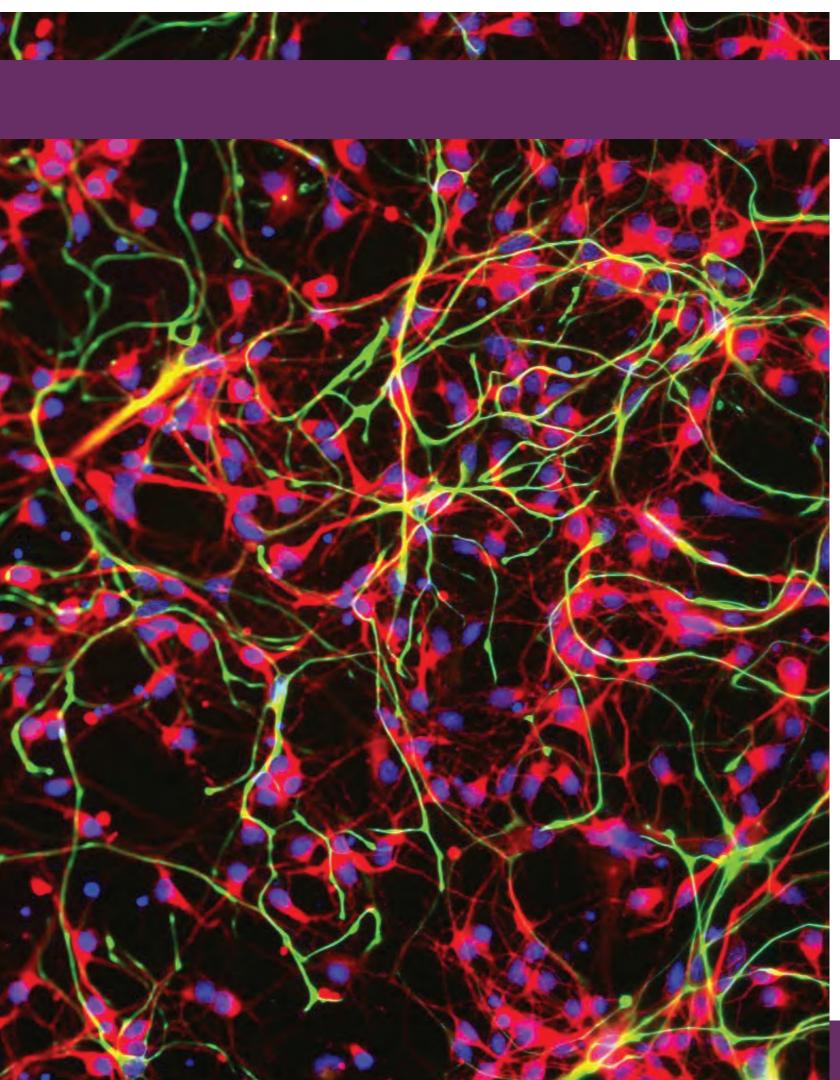


Travis Bradley and Lisa Medoff

Clinical translation of our work has a direct path unto the Pediatric Anxiety Clinic, directed by Dr. Elizabeth Reichert, utilizes known approaches and novel and promising efforts by our team. Clinical trials and assessment and treatment outcome studies are designed to help develop much needed treatment algorithms for children who experience stress and trauma. Patients are invited to participate on a structured assessment that utilizes standardized diagnostic instruments to assess for diagnoses and function.

The longitudinal, multi-method, interdisciplinary approach of the early life stress and resilience team helps build knowledge on the biological, psychological and social impact of stress, trauma and resilience. Ecological approaches that are founded on this knowledge get disseminated through our involvement in state and national policy.





# Advancing Science

The Department's world-class faculty are defining new approaches to treatment and prevention, seeking to cure psychiatric disorders and to foster overall health, wellbeing, and resilience.

One in four individuals will suffer from mental illness during their lives. In terms of individual and societal costs, the burden of mental illness greatly exceeds that of any other class of illness. The research conducted by our faculty aims to advance the practice of psychiatry and create innovative platforms for promoting mental health throughout the world

Through collaborations across the University, Silicon Valley, and the world, our researchers are working on linking the biology of addiction and decision-making to innovations in clinical care and public policy as well as redefining autism and illuminating novel paths for prevention, diagnosis, and intervention.

We are also translating neuroscience insights into novel, personalized circuit-based interventions for depression, anxiety, trauma, OCD, pain, and other life-limiting conditions in addition to connecting neurobiology and behavior to develop and globally scale effective therapies for people suffering from eating disorders.

In support of a digitally driven agenda, our department is building out and integrating digital technology across all department missions. With the launch of the Mental Health Technology and Information Hub, we are utilizing many tools including web-based programs, mobile health apps and sensors, education, ethics, precision psychiatry, and virtual reality to achieve the vision of a world where mental and emotional health and wellbeing is within reach, wherever you are.

Researchers in our department are transforming mental health research and mental illness treatment globally. We are driving some of the most exciting advances in neuroscience and psychiatry achieving a global influence through discovery, innovation, translation, and implementation.

225

active sponsored research funding projects in CY18

Our department is inspired.

780+

publications by faculty in CY18

Advancing science is integral in creating and preparing the way for a better future.

7

faculty in top 1% of world's most cited researchers in CY18 by Clarivate Analytics

# Advancing a Continuum of Science

## Major Laboratories: Interdisciplinary Exemplars

By harnessing advances in the neurosciences the major laboratories and clinical and translational neurosciences incubator are changing the way we understand and treat mental illnesses. Working together in an interdisciplinary manner, fundamental and clinical neuroscientists are explaining the building blocks of the brain and how disruptions in the brain form the experiences of particular mental illnesses. To explain the complexity of these building blocks, the major labs bring together leaders in understanding fundamental neurobiology, genetic and environmental factors. These expertise are fused with leaders in clinical neuroscience who deploy neuroscience insights to understand which therapeutics are of benefit and why, to enhance the targeted delivery of therapeutics and to develop novel interventions. Across the major labs we are united in our belief that, through understanding based in science, we can help remove the painful stigma around mental illness.

We have achieved major progress in understanding the pathophysiology of illnesses encompassing psychoses, mood disorders, anxiety and stress disorders, autism and disorders of addiction and sleep. Foundational pillars in achieving this progress are our technology platforms, our computational innovation, the strength of our bench in fundamental discovery and our commitment to completing the translational cycle from discovery through application at the front lines of care. We have led the way in platforms for molecular, optogenetic, anatomical, genomic, stem cell, human imaging and neuromodulation technologies. Through computational innovation we have uncovered new methods for peering inside the circuits of the human brain and for scaling our models of care through digital health

Stanford neuroscience and clinical translational research is distinguished by its focus on the integration of its foundational pillars. We focus on rapid translation of novel diagnostics and interventions, requiring the linking of technologies, discovery and clinical application. Traditionally, advances in technology, discovery and clinical translation have been pursued in isolation – a purposeful focus on integration is the essential ingredient in the collaborative and interdisciplinary environment at Stanford.

In the past year, the Major Laboratories and Clinical Translational Neurosciences Incubator has facilitated the Department's mission to develop outstanding leaders in discovery science and in the translation of scientific insights for clinical excellence. In order to serve its leadership functions, the incubator engages faculty experts with extensive track records in mentorship and in directing clinical and translational neuroscience programs. The Incubator, with its faculty experts, serves as a source of guidance for early career investigators and scholars. Together, expert members of the Incubator also develop scientific themes that continue to distinguish our Department as a national and international leader. These themes integrate paradigm shifts in precision mental health and translational psychiatry. They focus on special and vulnerable populations and harness the interdisciplinary strengths of our campus and our labs.

Together, Stanford scientists leading our major laboratories and clinical and translational neuroscience incubator are creating a "living laboratory" that catalyzes both scientific and clinical advances. The range and impact of the work at Stanford is illustrated below through the work of several of the many faculty members whose efforts are critical for success of this mission.



Amit Etkin, MD, PhD, Associate Chair - Research Strategy and Oversight and Chair of the Steering Committee for the Major Laboratories and Clinical Translational Neuroscience Incubator. Dr. Etkin's work is forging a bridge between fundamental research on brain circuit function and the development of novel circuit-targeting interventions in patients with mood, anxiety and trauma disorders. He focuses on non-invasive brain stimulation technologies. He is funded as an NIH pioneer to advance a feedback loop for rapid clinical translation by which neuroscience and clinical insights are conceived into novel clinical interventions. This feedback loop is tested within an "experimental medicine" framework that in which interventions are refined by lessons derived from both clinical and neuroscience outcomes.

#### VICTOR CARRION, MD



Dr. Victor Carrión, Vice-Chair of the Department, has dedicated the past twenty-five years to understanding the impact of stress and trauma in the developing brain and the role of resilience. Under his direction, the Early Life Stress and Pediatric Anxiety Program, has helped develop the field of developmental traumatology. Through interdisciplinary work, longitudinal studies and multi-method approaches, the laboratory has identified biological markers of stress in the developing brain. The Cue-Centered Therapy, developed at this laboratory, helps decrease anxiety, depression and posttraumatic symptoms in youth and their caretakers. Most recently, Dr. Carrion is investigating the physiological, psychological, academic and behavioral outcomes of a yoga and mindfulness curriculum at schools.

#### SUNDARI CHETTY, PHD



The overarching goal of Dr. Chetty's research program is to understand the mechanisms regulating human pluripotent stem cell (hPSC) differentiation, particularly in relation to neuropsychiatric disorders. With this understanding, scientists will be able to more effectively change hPSCs into desired cell types for cell replacement therapy and disease modeling and potentially identify novel therapeutics. Current work in the Chetty lab focuses on understanding the role of the neuroimmune system in psychiatric disorders, such as autism and schizophrenia.

#### LUIS DE LECEA, PHD



Major advances in new technology platforms have been led by Luis de Lecea, PhD, a Professor in the Department. In his lab, Dr. de Lecea is advancing new technology platforms for molecular, optogenetic, anatomical and behavioral methods. He deploys these methods to identify and manipulate the neuronal circuits underlying brain arousal, sleep and wakefulness. Through these discoveries he is uncovering the neural mechanisms of disorders characterized by hyperarousal, including stress and drug addiction.

#### LARAMIE DUNCAN, PHD



Laramie Duncan, PhD, Assistant Professor and founder of the Integrative Mental Health Laboratory (IMHL), applies computational approaches to genetic, neurobiological, and clinical data. Focused primarily on schizophrenia and post-traumatic stress disorder (PTSD), Dr. Duncan leads genetic analysis efforts for international consortia. Through this work and her other initiatives, Dr. Duncan selects projects that are built upon reliable research findings, and which are appropriately structured to generate reliable and valid results.

#### JULIE KAUER, PHD



Dr. Kauer's Lab is interested in understanding how different parts of the nervous system take advantage of rapid alterations in synaptic strength for diverse adaptive and non-adaptive responses to the environment. Drugs of abuse and stressful experiences produce rapid and persistent changes in brain function, and in recent years we have begun to explore how synaptic and intrinsic properties of neurons and circuits are altered by even a single exposure to drugs or acute stress.

# Advancing a Continuum of Science

## Major Laboratories: Interdisciplinary Exemplars

#### DOUGLAS LEVINSON, MD



Douglas Levinson, MD directs the Program on the Genetics of Brain Function in the Department of Psychiatry and Behavioral Sciences. The program investigates the genetic basis of psychiatric disorders (schizophrenia and major depressive disorder), using genetic association, linkage and resequencing methodologies. In collaboration with Dr. Alice Whittemore, Dr. Levinson is also actively engaged in statistical methods testing and development for genetic research.

#### ROBERT MALENKA, MD, PHD



Robert Malenka, MD, PhD, serves as the Associate Chair - Scientific Discovery. He works with scientists across the Department and the University, and he also serves as the Deputy Director of the Wu Tsai Neurosciences Institute at Stanford. In these roles, he advances fundamental neuroscience from the platform of the Nancy Friend Pritzker Laboratory and the Department more broadly. In his work, he uses animal models to advance fundamental discoveries about how specific neuronal populations underlie both adaptive and maladaptive behavior. His focus on reward behaviors has achieved important new insights into adaptive social interactions and into maladaptive blunted reward responses relevant to depression and maladaptive excessive responses relevant to addiction.

#### VINOD MENON, PHD



Vinod Menon, PhD, a Professor in the Department leads a lab advancing state-of-the-field computational approaches to investigate the functional and structural architecture of cognitive networks in the human brain. He uses these computational approaches in clinical populations to characterize how disruptions in specific brain circuits impact behavior, cognition, emotion and learning in children and adults with autism, ADHD, schizophrenia and learning disabilities.

#### KAREN PARKER, PHD



Karen Parker, PhD, an Associate Professor in the Department, directs the social neurosciences research program. She is advancing our understanding of the biology of social functioning using an integrative, translational approach. She translates insights from primate models through to application in clinical populations. Her discoveries are informing the understanding of social functioning impairments in autism and informing the development of novel interventions.

#### KILIAN POHL, PHD



The foundation of the laboratory of Associate Professor Kilian M. Pohl, PhD, is computational science aimed at identifying biomedical phenotypes improving the mechanistic understanding, diagnosis, and treatment of neuropsychiatric disorders. The biomedical phenotypes are discovered by unbiased, machine learning-based searches across biological, neuroimaging, and neuropsychological data. This data-driven discovery currently supports the adolescent brain research of the NIH-funded National Consortium on Alcohol and NeuroDevelopment in Adolescence and the Adolescent Brain Cognitive Development (ABCD), the largest long-term study of brain development and child health in the US.

#### NIRAO SHAH, MD, PHD



Nirao Shah, Ph.D, a Professor in the Department, has made breakthroughs in the understanding of how our brains generate social interactions that differ between the sexes. He has identified genes and neurons that control different aspects of social interactions, including neurons that govern gender recognition. His discoveries have provided insights into how our brains enable social interactions in health, and they are relevant to understanding mechanisms underlying behavioral manifestations of autism, mood disorders, and PTSD.

#### DAVID SPIEGEL, MD



David Spiegel's research interests involve stress and health: cognitive control over somatic functions, including cancer progression, the response to traumatic stress, and the perception of pain and anxiety. He is currently conducting a large scale study of the relationships among sleep disturbance, diurnal stress hormone patterns, and breast cancer survival, sponsored by the National Cancer Institute. This work is based upon earlier evidence from Dr. Spiegel's laboratory that loss of circadian variation in cortisol, indicative of HPA dysfunction, predicts early mortality with breast cancer.

#### EDITH SULLIVAN, PHD



Edith Sullivan, PhD, a Professor in the Department, is leading the translational application of neuroimaging modalities to identify mechanisms disrupted in alcoholism. Structural and functional imaging technologies are applied in animal models of alcoholism in parallel with the human studies. Dr. Sullivan leads multi-site efforts that are characterizing the development of the adolescent brain and how initiation of hazardous drinking and consumption of other drugs of abuse alter the normal trajectory of brain structure and function.

#### ALEXANDER URBAN, PHD



Alex Urban, PhD, has developed and applied state-of-the-art and emerging genomics and epigenomics technologies in human cells and human cell culture systems. Dr. Urban deploys these technologies to advance discoveries related to the molecular effects of large genome variants during neuronal development and their application in the new horizons of precision health.

#### LEANNE WILLIAMS, PHD



Leanne Williams, PhD served as the inaugural Associate Chair - Research Strategy and Oversight. She has pioneered a neuroscience-based precision psychiatry taxonomy for mood and anxiety disorders. This taxonomy advances a new way to subtype mood and anxiety disorders based on high definition brain imaging of the brain circuits that govern human functions of self-reflection, emotional expression and cognitive control. These circuit-based subtypes are related to profiles of genetic expression, behavior, and symptoms and their guide tailored intervention choices. Grounded in this taxonomy, she has launched the world's first biotype-guided trials for mood disorders. With this approach, she has accelerated the translation from lab to real-world clinics. The translational application of this approach has formed the basis of a discovery clinic and partnership with the residency training program.

## **Professoriate Faculty**



Bruce Arnow, PhD
Treatment of Mood Disorders

Dr. Bruce Arnow's research interests include:

1) treatment outcome in depression; 2) predictors and moderators of outcome in the treatment of depression, including psychotherapy, pharmacotherapy and combined treatment; 3) epidemiology of chronic pain and depression; and 4) relationships among child maltreatment and adult outcomes including health and psychiatric illness, use of health care services, and response to both psychological and pharmacological treatment.

Dr. Arnow is author on more than 95 peer-reviewed publications, one book, and numerous book chapters, invited papers and presentations at national meetings.



John Barry, MD Sepideh Bajestan, MD, PhD Stanford Neuropsychiatry Research Program

Neuropsychiatry focuses on diagnosis and treatment of the frequently seen co-morbid psychiatric illness in patients with neurological disorders. Cognitive dysfunction is also a commonly observed phenomenon in this population but is often difficult to treat for fear of exacerbating the underlying illness. The Program is focused on multidisciplinary research on prevention, diagnosis, and treatment of neuropsychiatric disorders in addition to researching innovative approaches for community engagement.

The Stanford Neuropsychiatry Research Program has recently completed a double blind, randomized, crossover study examining the effects of methylphenidate on cognition and seizure control in patients with epilepsy compared to healthy controls. In addition, Functional Neurological Disorders are seen commonly in neurology clinics. We have focused on the evaluation of a variety of interventions for this patient population including a recently published CBT trial and an ongoing group DBT and psychodynamic interventions clinical trial. The group is also establishing a pilot partial hospitalization treatment program with a standardized intervention.

The Program has also launched research on innovative clinical neuroscience modules to facilitate clinicians' communication with neuropsychiatric patients in order to foster community engagement.



Michele Berk, PhD
Treatment of Suicidal Behavior in Adolescents

The focus of Dr. Michele Berk's research is on psychotherapy approaches for treating suicidal behavior in adolescents. Suicide and suicide attempts are significant public health problems among teens. Despite the fact that suicide is currently the second leading cause of death among 10-24 year-olds in the United States (CDC, 2016), there is surprisingly little research on effective psychosocial treatments for these youth. Dr. Berk's research focuses in particular on Dialectical Behavior Therapy, the only well-established treatment for youth at high risk for suicide.

Current projects, in collaboration with other investigators in the Department of Psychiatry and Stanford University include: the development of a DBT-based parenting intervention, testing ways to augment DBT response rates by adding insomnia treatment, comparing the effectiveness of outpatient versus intensive outpatient care for decreasing suicide risk and understanding the development of a sense of purpose in life in suicidal adolescents.

Dr. Berk also recently edited *Evidence-Based Treatment Approaches for Suicidal Adolescents: Translating Science Into Practice* which combines state-of-the-art research and treatment development with clinical descriptions of evidence-based and evidence-informed treatment strategies for adolescents struggling with suicidality and self-harm.



Rebecca Bernert, PhD
Suicide Prevention Across the Lifespan

Dr. Rebecca Bernert directs the Suicide Prevention Research Laboratory, and co-chairs a Departmental initiative to develop a multidisciplinary center for premature mortality. She has collaborated with NIH, DOD, DARPA, and the White House on suicide prevention initiatives, and recently addressed the CA State Assembly regarding emerging best practices. Her program utilizes cognitive, biological, and behavioral testing paradigms, with an emphasis on translational therapeutics.

Dr. Bernert is a suicidologist, with subspecialty in clinical trials and standardized suicide risk assessment. She has subspecialty expertise in behavioral sleep medicine and circadian physiology. Her program aims to identify novel therapeutic targets and treatment development of rapid-action, low-risk interventions for suicide. This includes suicide prevention clinical trials, funded by NIH and DOD, testing efficacy of a non-pharmacologic insomnia treatment on suicidal behaviors. These aim to examine biomarkers of response that may inform the pathogenesis of risk and treatment innovation. An overarching mission is to harness new technologies in suicide prevention, including Al/machine learning, to aid risk detection and triage, with pilots focused on pediatric emergency department screenings and enhanced data monitoring.

A separate line of research centers on faculty diversity and inclusion, with several grants investigating the impact of federal and institutional family-friendly policies on recruitment and retention in academic medicine. Dr. Bernert is a Faculty Fellow at The Clayman Institute for Gender Research, and recently co-moderator a panel focused on leave-related policy to the School of Medicine Faculty Senate.

# **Professoriate Faculty**



Cara Bohon, PhD
Eating Disorder Neuroscience Program

The Eating Disorder Neuroscience Program focuses on brain and behavioral markers of eating disorders. With the overarching goal to improve our ability to help people recover, Dr. Cara Bohon's research is uncovering links between emotion regulation, reward, and cognitive function underlying eating and weight disorders.

Because current one size fits all approaches to treating disordered eating has been insufficient, it is important to understand individual differences in brain function that may help guide treatment plans.

Recent studies have included investigations of brain response to tastes of chocolate milkshake in children, adolescents, and adults who exhibit different eating behaviors, as well as studies examining individual differences in emotion regulation among patients with binge eating.

The lab is also interested in the effects of nutrition on brain structure and function during treatment for eating disorders and obesity and is currently collecting data on brain change over the course of family-based treatment for anorexia nervosa. The Eating Disorder Neuroscience Program has received funding from NIMH, Davis Foundation, Brain and Behavior Research Foundation, and other private and philanthropic organizations.



Victor Carrion, MD
Early Life Stress and Pediatric Anxiety Program

Dr. Victor Carrion's research is focused on improving understanding of the biological, psychological, and behavioral correlates of early life stress and trauma, and developing and evaluating interventions that promote wellness and resilience for those facing adversity.

Under Dr. Carrion's leadership, Stanford's Early Life Stress and Pediatric Anxiety Program (ELSPAP) utilizes comprehensive, multi-method designs to evaluate interventions and to inform policy. ELSPAP researchers and collaborators supplement evidence-based assessment of psychosocial functioning with advanced, cutting-edge measurement of neurobiological markers including magnetic resonance imaging (sMRI and fMRI), functional near infrared spectroscopy (fNIRS), ambulatory polysomnography, and endocrine assays. Current research projects aim to develop and evaluate interventions including Cue-Centered Treatment, a manualized therapy protocol for youth exposed to chronic adversity; yoga and mindfulness-based health education; mental health consultation and wellness programming; and therapy services delivered in outpatient care.

Dr. Carrion and his team seek to disseminate results regarding promising, efficacious practices in order to inform and have impact on institutional, state, and national policies that address the needs of children and families exposed to trauma and adversity.



Sundari Chetty, PhD Chetty Lab

The Chetty lab is interested in understanding the mechanisms regulating human pluripotent stem cell (hPSC) differentiation. Pluripotent stem cells have great therapeutic potential because they can in theory differentiate into any specialized cell type of the body.

However, unlocking this vast potential of stem cells has proven to be challenging in practice. The overarching goal of the Chetty Lab's research program is to understand these mechanisms to more effectively differentiate hPSCs into desired cell types for cell replacement therapy and disease modeling.

Current projects focus on using hPSC lines from individuals with psychiatric disorders (e.g. autism and schizophrenia) to model and understand the underlying cellular and molecular mechanisms. Knowledge gained from these studies will be applied to identify drug targets for the treatment of neuropsychiatric disorders.



Luis de Lecea, PhD Neurobiology of Brain Stress

Research in Dr. Luis de Lecea's group focuses on defining the arousal construct using modern neuroscience methods. Their group has discovered several neurotransmitter systems involved in sleep and wake transitions and in hyper arousal conditions including anxiety and addiction. During the past two years, they have demonstrated that dopaminergic neurons in the reward center of the brain have a critical role in the control of sleep wake cycle.

Dr. de Lecea's group has also shown that neuronal connections between the extended amygdala and the hypothalamus drive emotional behaviors of opposite valence. While they continue to investigate the neuronal circuitry underlying changes in brain states, current research aims at determining the role of sleep in tumor growth, immune function during aging and neurodegenerative conditions.

## **Professoriate Faculty**



Charles DeBattista, MD, MPH
Depression Research Clinic

Dr. Charles DeBattista's current research interests focus on treatment resistant depression, developing novel biological interventions in the treatment of mental illness, studying antiglucocorticoid drugs in the treatment of mood disorders, and augmentation strategies in the treatment of depression.

He serves as an Investigator on several studies. The International Study to Predict Optimised Treatment - in Depression is aimed to identify genetic, physical and psychological markers that predict specific response to a range of antidepressants treatment in patients diagnosed with major depressive disorder.

Functional MRI Before and After Treatment for Depression aims to understand how depression changes brain activity and how this relates to mood, anxiety, and cognitive functions like memory, and to develop a brain-imaging test that will predict either before or within two weeks of starting a medicine whether the treatment will work. Radiosurgical Neuromodulation for Refractory Depression aims to evaluate the safety and effectiveness of an investigational procedure for treating people with treatment resistant bipolar depression. Ropinirole Controlled Release (CR) as an Adjunctive Agent in the Treatment of Major Depression studies patients who are currently taking antidepressant medication but not fully responding.



Karl Deisseroth, MD, PhD
Deisseroth Lab

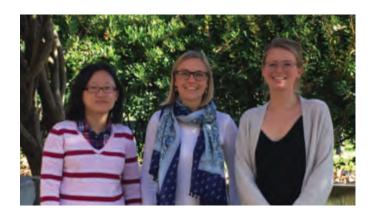
Dr. Karl Deisseroth is the DH Chen Professor of Bioengineering and Psychiatry at Stanford, and Investigator of the Howard Hughes Medical Institute. A neuroscientist and bioengineer, he also completed his psychiatry residency at Stanford, and continues as a board-certified psychiatrist specializing in affective and autism-spectrum disorders. He received his AB from Harvard, MD from Stanford, and PhD from Stanford in 1998.

He launched his lab at Stanford in July 2004, where he and his team created and developed 1) optogenetics with microbial opsin genes, 2) hydrogel-tissue chemistry (which includes methods such as CLARITY), and 3) a broad range of enabling methods. He also launched (and directs) the undergraduate Bioengineering degree program at Stanford.

For his discoveries, Deisseroth has received awards that include the NIH Director's Pioneer Award (2005), Zuelch Prize (2012), Perl Prize (2012), BRAIN Prize (2013), Pasarow Prize (2013), Breakthrough Prize (2015), BBVA Award (2016), Massry Prize (2016) and Harvey Prize from the Technion in Israel (2017).

Deisseroth was also the sole recipient (for optogenetics) of the 2010 Koetser Prize, 2010 Nakasone Prize, 2013 Lounsbery Prize, 2014 Dickson Prize in Science, 2015 Keio Prize, 2015 Lurie Prize, 2015 Albany Prize, 2015 Dickson Prize in Medicine, 2017 Redelsheimer Prize, 2017 Fresenius Prize, and 2018 Eisenberg Prize.

He was elected to the US National Academy of Medicine in 2010 and National Academy of Sciences in 2012.



Laramie Duncan, PhD Integrative Mental Health Lab

The Integrative Mental Health Lab, led by Dr. Laramie Duncan, recognizes that there are multiple valid ways of understanding disorders like schizophrenia and PTSD. They currently use large-scale genetics studies (encompassing hundreds of thousands of participants) to identify the precise genetic risk factors for mental health conditions. The next step will be to link genetic findings with neurogenetic data (including single-cell sequencing data), in order to find brain regions and cell types involved in schizophrenia and other psychiatric disorders.

This year, the lab completed the world's largest genetic study of PTSD, and identified sex differences in genetic risk for this condition. They received funding from the Women's Health and Sex Differences in Medicine (WHSDM) Center to further this work, which is designed to reveal the ways in which genetic risk for PTSD may be modified by hormonal context, yielding mechanisms which are both causal and modifiable. The Lab is also undertaking a multi-site investigation of PTSD phenotypes, designed to determine if there are systematic differences in symptoms between women and men diagnosed with PTSD.

Efforts to expand genetic studies to non-European populations are at the forefront of modern genetics research, and they recently completed a comprehensive evaluation of polygenic risk score performance in global populations.

As well, Dr. Duncan founded a Special Interest Group within the international Psychiatric Genomics Consortium, which is dedicated to Cross-Population analyses. This effort brings together global investigators for monthly video calls and collaborative projects.



## Laura Dunn, MD Erin Cassidy-Eagle, PhD Geriatric Psychiatry Program

Dr. Laura Dunn is Professor of Psychiatry and Behavioral Sciences, Section Chief of Geriatric Psychiatry, and Director of the Geriatric Psychiatry Fellowship Program at Stanford. She conducts research in several areas, including: enhancing care for older adults with psychiatric conditions; examining ethical issues in clinical research, particularly in populations considered potentially "vulnerable" in the research context; and understanding the symptom experience of cancer patients.

Dr. Cassidy-Eagle is Clinical Associate Professor of Psychiatry and Behavioral Sciences and Psychologist in the Geriatric Psychiatry Outpatient Clinic. Her research focuses on sleep, cognition and mental health in older adults.

In addition to providing specialty mental health care to older patients and their families, Drs. Dunn and Cassidy-Eagle have collaborated on several additional projects. They have conducted an assessment of current practices and barriers related to older adults' ability to access mental health care as part of their effort to expand accessible mental health care. Subsequently, they conducted trainings of primary care providers utilizing targeted behavioral activation implementation materials treatment guides, symptom tracking and instructional videos to enhance the ability of front line providers to treat older patients presenting with mild to moderate depression prior to specialty care referral. Their edited book, entitled "Practical Strategies in Geriatric Mental Health: Cases and Approaches," articulates effective approaches and tools in an accessible, real-world, case-based manner to support providers in other disciplines who are increasingly presented with the growing geriatric population in their practices.

## **Professoriate Faculty**



Timothy Durazzo, PhD
BRain Alcohol Stimulation Studies Lab

The mission of the Durazzo BRain Alcohol Stimulation Studies (BRASS) Lab is to better understand how the interplay between biomedical, psychological and social factors influences treatment outcome in Veterans and civilians seeking treatment for alcohol and substance use disorders. To accomplish this mission, the Lab's multidisciplinary team integrates information from advanced neuroimaging, cognitive assessment, genetic profiling and psychodiagnostic methods to identify the biopsychosocial factors associated with relapse and sustained sobriety.

The ultimate goal of the BRASS Lab's multidisciplinary research program is to promote the development of more effective biomedical and behavioral treatments for alcohol and substance use disorders through consideration of the brain biology, psychology and social circumstances of each individual.



Amit Etkin, MD, PhD

Etkin Lab

Building on his 2017 NIH Director's Pioneer Award, Dr. Amit Etkin has opened up multiple new avenues of inquiry aimed at realizing his Pioneer vision entitled "Circuits-First" Platform for Personalized Neurostimulation Treatment'. This includes developing novel machine learning methods for characterizing brain function in individual patients using electroencephalography, creating field-leading datasets and analytic methods for understanding how non-invasive brain stimulation alters brain function, and beginning computer simulation efforts that can help unlock far greater power to create changes in brain function through neurostimulation.

Dr. Etkin has also kicked off his innovative "Brain Vitals" program, in collaboration with several other Stanford faculty, which seeks to characterize fluctuations in the brains of healthy and ill individuals over time for the purpose of mapping dysfunction and establishing targets for therapeutics — akin to how vitals and routine lab tests are monitored at each doctor's visit today.

In recognition of his innovative research, Dr. Etkin also received the Joel Elkes Clinical Research Award in 2018 from the American College of Neuropsychopharmacology.



Cheryl Gore-Felton, PhD
Psychology and Biobehavioral Sciences Lab

The Stanford Psychology and Biobehavioral Sciences Lab is dedicated to understanding the psychological, behavioral, social, and physiological challenges as well as sources of resilience associated with chronic illnesses. Scientists in the lab conduct research that focuses on model development to understand factors that decrease morbidity and mortality associated with chronic diseases, as well as test novel interventions to reduce psychiatric symptoms, and enhance adaptive behaviors associated with diseases that are debilitating and often life threatening.



Christian Guilleminault, MD Obstructive Sleep Apnea

Dr. Christian Guilleminault's research has investigated the oral cavity changes that can be associated with pediatric sleep-disordered-breathing. Some of the changes are related to very early in life abnormal sucking, swallowing, chewing, speech and nasal breathing. Dr. Guilleminault has also focused on understanding the progression of sleep-disordered-breathing from very early childhood to adulthood and to find very early indicators of chronic abnormal breathing during sleep from clinical signs to polysomnographic findings.

Remedy of these functional problems may decrease occurrence of obstructive-sleep apnea. A problem that could be remedied at birth and is rarely systematically checked is the presence of a short lingual frenulum, a defect that "runs in families". It is a common phenotype in children with OSA and it impacts the maxillary and mandibular development, increasing the risk of upper airway collapsibility during sleep.

Dr. Guilleminault and his team have also been investigating therapeutic interventions that could be applied to resolve the risk-factors recognized early in life to avoid the development of obstructive sleep apnea. These therapeutic interventions had to be adjusted for the age of the subject and the degree of evolution of the recognized risk-factors. They have obtained very promising results both in defining new polysomnographic criteria and applying new therapeutic approaches to deal with the progressing over-time risk factors.

## **Professoriate Faculty**



Scott Hall, PhD
Translational Applied Behavior Analysis Lab

Led by Dr. Scott Hall, the Translational Applied Behavior Analysis (TABA) Laboratory is dedicated to improving our understanding of the neuropathology and social-environmental causes of severe problem behaviors, such as aggression, self-injury, and social skills deficits, commonly shown by children and adults diagnosed with autism and intellectual and developmental disabilities (IDD). The TABA lab utilizes state-of-the art neuroimaging and behavioral assessments based on the principles of applied behavior analysis to investigate genetic conditions that cause intellectual impairment and autism-like symptoms, such as fragile X syndrome, Prader-Willi syndrome, and Cornelia de Lange syndrome, among others, which provide valuable study models.

The primary goals of the lab are to determine how environmental and biological factors affect the development of aberrant behaviors, and to develop targeted clinical interventions, including the testing of telehealth based assessments and treatments. Other key studies include the integration of social skills training, state-of-the-art eye tracking, and multimodal brain imaging. Our lab has received research grant funding from NIMH, NICHD, the National Fragile X Foundation, the Foundation for Prader-Willi Research, the Simons Foundation, the John Merck Fund, and the Stanford Child Health Research Institute.



Joachim Hallmayer, MD, Dr med Genetics, iPSCs, and Neurodevelopmental Disorders

The focus of the research in the Hallmayer lab is to find genetic variations that impact the development of Autism Spectrum Disorders (ASD) and other neuropsychiatric disorders. Through the work from his lab and others we now know that a substantial proportion of genetic risk for ASDs resides in rare variants associated with high odds ratios for risk. Further, by paralleling molecular studies, the Hallmayer lab employed a twin study design approach that demonstrated that the susceptibility to develop autism has moderate genetic heritability and a substantial shared twin environmental component.

During the past several years the Hallmayer lab, in collaboration with a team of investigators (Drs. O'Hara, Pasca, Urban, Bernstein), has become one of the first groups to study neurons derived from induced pluripotent stem cells (iPSCs) with the goal of understanding the mechanisms by which common and rare variants increase the risk for developing ASD. Using this approach, they have identified cellular and molecular phenotypes for rare but highly penetrant forms of autism, which were rescued by treatment with specific pharmacologic agents acting on identified molecular targets. More recently they started to characterize neurons derived from iPSCs from patients with 22q11 deletion syndrome (or Velocardiofacial Syndrome). They are also extending this research to idiopathic forms of autism by establishing iPSC lines from 200 children with an ASD and 100 age and gender matched control subjects



Antonio Hardan, MD
Autism and Developmental Disorders
Research Program

The Autism and Developmental Disorders Research Program (ADDRP), led by Dr. Antonio Hardan, focuses on the examination of the neurobiology of autism spectrum disorder (ASD), and on the development of innovative treatment for individuals with developmental disorders.

Over the years, the research team developed collaborations with several investigators at Stanford and across the country. The tools used by ADDRP to examine the neurobiology of ASD have involved multiple modalities including state-of-the-art imaging methodologies and novel approaches to develop blood-based biomarkers. ASD is a heterogeneous group of disorders, and the main goals of these investigations are to identify subgroups that will share common pathologic pathways. Additionally, the ADDRP team has been working on the development of several innovative interventions. They include the assessment of the safety and efficacy of novel molecules, such as N-acetylcysteine, pregnenolone, oxytocin, and vasopressin, in targeting the core deficits as well as associated features. Furthermore, the group has focused on the investigation of behaviorally - and developmentally-based interventions for very young children with ASD, with particular interest in targeting those with limited language abilities.

Finally, and more recently, the ADDRP investigators have been working on the development and use of objective measures (e.g., eye tracking, structured laboratory observation) that are sensitive and valid to be used in clinical trials since existing measures are overly subjective.



David Hong Hong Lab

Dr. David Hong's lab is affiliated with the Center for Interdisciplinary Brain Sciences Research, and focuses on two major domains: (1) examining sex-specific determinants of neurodevelopment, including investigation of sex chromosome influence on brain anatomy and function, as demonstrated by sex chromosome aneuploidies.

Utilizing genomic, neuroimaging and cognitive-behavioral methods he investigates mechanisms by which differential gene expression from the sex chromosomes may influence social cognition and executive functions.

He has recently extrapolated this work by studying how genetic factors interface with sex steroid influence, particularly in the modulation of brain development during the dynamic period of adolescence in transgender youth. (2) Dr. Hong also investigates neural correlates of executive function, a complex cognitive ability that is affected in a number of disorders. His recent research aims to deconstruct the significant heterogeneity associated with these deficits, using childhood attention deficit hyperactivity disorder as a model. He currently serves as Director of the Executive Function Clinic in the Division of Interdisciplinary Brain Sciences.

## **Professoriate Faculty**



Hadi Hosseini, PhD Computational Brain Research and Intervention

Dr. Hadi Hosseini is an Assistant Professor in the Department of Psychiatry, a member of the Stanford Neuroscience Institute, Child Health Research Institute and Bio-X, and the Director of Computational Brain Research and Intervention (C-Brain). He is one of the pioneers of connectome research in psychiatry.

The research in his lab focuses on finding connectome-level signatures of psychiatric conditions and translating those findings for developing noninvasive, brain-focused interventions to enhance the affected brain networks in an organic way. Using a computational neuropsychiatry approach, Dr. Hosseini's research leverages advanced multimodal neuroimaging and computational techniques to investigate alterations in the organization of structural and functional brain networks across brain disorders.

Ongoing studies in Dr. Hosseini's lab include:

- Neuromonitoring guided cognitive augmentation for children with ADHD.
- Network-level effect of cognitive augmentation in older adults at risk for developing Alzheimer's disease.
- Developing a low-cost, wearable brain imaging system for personal and population-based functional neuroimaging and neuro-intervention.
- Noninvasive optical imaging for monitoring of functional stroke recovery.
- Virtual reality (VR) for cognitive assessment and intervention.



Keith Humphreys, PhD Addictions and Health Policy

Dr. Keith Humphreys' research team has focused in recent years on three areas:

- (1) Health services research on interventions for people with substance use disorders,
- (2) The exclusion of individuals from clinical research and its clinical, ethical and scientific implications, and
- (3) Public policies regarding addiction and mental illness.

Area (1) has included studies of treatment quality and access measures, integration of substance use disorder care into other health care settings (e.g., liver clinics) and studies of self-help organizations (e.g., Humphreys, Blodgett & Wagner, 2014). Area (2) has been pursued by a team of VA and Stanford colleagues who completed reviews of the degree of exclusion in many disease areas including schizophrenia, major depression, anxiety disorders, bipolar disorder and neurological disorders. This also included a study of the exclusion of people with psychiatric disorders from medical research that documented its prevalence and assessed its ethical implications (Humphreys, Blodgett & Roberts, 2015). Area (3) has been a mixture of scholarly reviews (e.g., Strang et al., 2012) and direct work with public policy makers at the local, state, national and international level.

Most recently this included Humphreys being a senior editor for the Surgeon General of the United States' recent landmark report on addiction. Humphreys has also worked extensively with mentees and colleagues to expand their capacity to participate in the public policy process by helping them prepare legislative testimony, write newspaper editorials and interact with elected officials

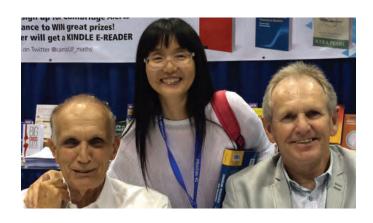


James Jacobs, MD, PhD
Vaden Health Center

Dr. James Jacobs became the executive director of Vaden Health Center and associate vice provost for Student Affairs in March 2016. At a previous University, Dr. Jacobs conducted research in the Department of Anesthesiology and taught in the School of Engineering. His areas of research included clinical pharmacology and mathematical modeling.

Vaden is dedicated to the health and wellness, both physical and mental, of Stanford students. Vaden is the first stop for diagnosis and treatment of illness, injury and ongoing conditions, as well as for preventive counseling and education. Other Vaden services include counseling and wellness resources, pharmacy, physical therapy, insurance, travel clinic, the Confidential Support Team and the office of Alcohol Policy and Education (OAPE). Vaden also offers Cardinal Care, the university-sponsored student health insurance plan.

Dr. Jacobs was heavily influenced by a year spent as a visiting scholar at the U.S. Department of Homeland Security. He is board certified in emergency medicine and is a fellow of the American College of Emergency Physicians. His clinical interests in college health include urgent care, wound care and men's health. His academic interests include emerging young adults, biosecurity and intelligence analysis.



Booil Jo, PhD
Biostatistics

Dr. Booil Jo is an Associate professor in the Department of Psychiatry and Behavioral Sciences with an emphasis on biostatistics. Dr. Jo has been at the lead in developing pragmatic statistical methods based on the intersection of causal inference and latent variable modeling.

Over the past decade, Dr. Jo has published on various methodological topics such as treatment noncompliance, handling of nested data such as from cluster randomized trials, causal mediation, missing data, propensity scores, and longitudinal heterogeneity.

Her current program of research is focused on developing statistical methods that jointly utilize latent variable modeling, causal inference, and machine learning approaches with the goal of improving the quality in personalized medicine. She is also actively involved in biostatistics education, consulting, and collaborative work in various fields of psychiatry/mental health research.

## **Professoriate Faculty**



Shashank Joshi, MD School Mental Health and Community-Based Participatory Research

The Stanford / LPCH School Mental Health Program, has studied 3 primary areas: 1) School-based suicide prevention, 2) The interaction of culture, stigma, and help-seeking among diverse youth and their families, and 3) Process considerations based on the principles of therapeutic engagement with students, school staff, families, and communities.

Dr. Shashank Joshi and his team have implemented and evaluated peer-led (and adult-mentored), culturally adapted mental health interventions for several communities affected by suicide clusters. Since starting this work in 2011, the schools they have engaged with have reported a significant increase in referrals made by peers to get help for their friends in distress, and many teen lives have been saved because a peer acted on their behalf. This year, over 5,600 students in the SF Bay are involved in this school-based suicide prevention approach, known as Sources of Strength. The social messaging and mentor guided peer-to-peer activities that are part of this program have led to more students being able to name trusted adults they would go to when seeking help for themselves or for peers.

In the upcoming year, they will be studying classroom teacher self-efficacy in student mental health, by utilizing a virtual classroom interaction platform in school districts within Santa Clara and San Mateo Counties. They will also continue our study of cultural factors that act as either enhancers or barriers to help-seeking in adolescents, especially for those from immigrant families.



Clete Kushida, MD, PhD Center for Human Sleep Research

The Center for Human Sleep Research, led by Dr. Clete Kushida, focuses on conducting large-scale clinical studies in sleep medicine and developing the electronic network informatics infrastructure to support these studies. They are currently conducting studies focused on new therapies for obstructive sleep apnea (OSA), narcolepsy, and restless legs syndrome; development of a statistical predictive model for adherence to treatment in OSA patients; the effects of continuous positive airway pressure (CPAP) on recurrence of atrial fibrillation in OSA patients post-cardiac ablation; testing of a new device to predict depression through electroencephalographic analysis during sleep; and evaluation of wearable devices for estimating sleep-wake cycles.

The Center is currently analyzing data for our PCORI-supported Sustainable Methods, Algorithms, and Research Tools for Delivering Optimal Care Study (SMART DOCS). This study was designed to develop and test a new patient-centered outcomes and coordinated-care management (PCCM) approach for sleep medicine in 1,806 patients. They also continuing further analyses on our AHRQ-supported Comparative Outcomes Management with Electronic Data Technology (COMET) Project, in which we repurposed and expanded the electronic infrastructure and tools we developed during our NHLBI-supported Apnea Positive Pressure Long-term Efficacy Study, to conduct a comparative effectiveness trial with cardiovascular endpoints on two treatments for OSA patients.



Laura Lazzeroni, PhD
Interpreting Biomedical Research from
the Perspective of Statistical Epistemology

A major theme in Dr. Laura Lazzeroni's research is the search for better understanding of the impact on biomedical research of fundamental properties of statistics, such as power, bias, and p-values. The results from Dr. Lazzeroni's group provide surprising new insights into the large, high-throughput studies that are common in genomics and into the problem of replication. The research demonstrates that high-throughput studies that examine very large numbers of genetic predictors can maintain very good power to reject the null hypothesis, with relatively moderate increases in sample sizes.

However, such studies provide almost no resolution for comparing or ranking the relative strength of competing genetic predictors. To aid in the interpretation of research findings, the group has provided new solutions for quantifying the uncertainty embedded in observed p-values. One method, in particular, provides explicit confidence intervals for the power of a replication study, based on a p-value from prior or pilot data. Very large sample sizes are needed to ensure good power for replication unless the p-value of the initial study is extremely small.

Other work has demonstrated a flaw in a commonly used application of the sign test in genomics and led to a new algorithm for estimating heritability in twins. Many heritability estimates, especially those from smaller studies, are biased upward, contributing to the well-known "missing heritability" problem. The new algorithm removes this bias, yielding smaller, more realistic assessments of the genetic contributions underlying a trait.



Anna Lembke, MD
Addiction Medicine Initiative

The mission of the Addiction Medicine Initiative is to improve clinical care, teaching, and research in the area of substance use disorders and other addictions. Dr. Anna Lembke and her team have expanded our clinical offerings by increasing the number of psychotherapy groups for the treatment of addiction, led by Dr. Alexis Ortiz

They are collaborating with the Stanford Cancer Center to improve smoking cessation, led by Dr. Matt Kendra. Their social worker, Tracy Chesler, has secured grant funding to incorporate peer counselors in care delivery. Dr. Amer Raheemullah is leading our brand new inpatient Addiction Medicine Consult Service, a thriving service to help hospitalized patients with substance use disorders. They also continue their buprenorphine group, to improve care for those struggling with opioid addiction. We are working with colleagues in the Child Division to launch the Youth Addiction Program, made possible through a generous grant from the Taube Foundation.

In the area of teaching, they have collaborated with partners in the School of Medicine and Ed Tech to create and implement a brand new addiction medicine curriculum for medical students. They have expanded the Stanford University Addiction Medicine Fellowship, which is now ACGME accredited, allowing them to partner with the VA under the direction of Dr. Smita Das.

Dr. Lembke and her team continue to pursue research with partners in basic science, epidemiology, health services, and public policy, to improve addiction treatment at the individual, local, state, and national levels.

### **Professoriate Faculty**



Douglas Levinson, MD
Program on the Genetics of Brain Function

The Program on the Genetics of Brain Function (GBF) includes the labs of Drs. Douglas Levinson and Alex Urban. They investigate genetic sequences and mechanisms with relevance to the etiology of psychiatric disorders.

The Levinson Lab is currently involved in the following projects:

1) Large-scale meta-analysis of genome-wide association study data for psychiatric disorders (major depressive disorder, schizophrenia, anorexia nervosa, posttraumatic stress disorder, cross-disorder analyses) carried out by the Psychiatric Genomics Consortium and other consortia (Levinson, Duncan).

- 2) Synaptic, genomic and morphological effects of genetic mutations association with high risk of schizophrenia, as part of an NIMH National Cooperative Reprogrammed Cell Research Group (NCRCRG) (Levinson, Südhof, Wernig, Aronow, Pang, Swanson, Dage).
- 3) Large-scale study of association of schizophrenia with DNA sequence variation in the HLA region of chromosome 6 (Levinson, Mignot, Mindrinos, Fernandez-Vina).
- 4) Detection of somatic mutations of mobile elements (retrotransposon sequences) in the brain, using whole genome sequencing (Levinson, Urban, Snyder).
- 5) Psychopathology and genetics of early-onset schizophrenia (Laurent-Levinson and Levinson)



Steven Lindley, MD, PhD
Transforming Mental Health Care Delivery

The overall goal of Dr. Steven Lindley's efforts is to advance population heath through innovations in health care delivery that will improve access to and quality of mental health care. Dr. Lindley serves as Director of Outpatient Mental Health for the VA Palo Alto HCS, a setting that affords an excellent opportunity to accomplish this goal – part of the country's largest publicly funded health care system, which excels at translating best practices into clinical care.

Dr. Lindley's efforts include advancing transforming team-based primary care/mental health care by bringing together innovative building design, lean management principals, and fully integrated primary care/mental health care teams. He is currently investigating ways to advance continuous quality improvement through the implementation of measurement-based mental health care to inform treatment decisions and engaging providers in data-driven, quality improvement decisions through their use of computer modeling to improve patient care. He and his team are also investigating how peer support enhances mental health care access and quality and enhancing dissemination of telemental health through residency education.



James Lock, MD, PhD
Eating Disorders Research Program

The Eating Disorder Clinic and Research Program, led by Dr. James Lock, is engaged in advancing all the missions of the Department of Psychiatry and Behavioral Sciences. Their current research efforts are focused on improving psychological and behavioral treatments for the full range of eating problems including anorexia nervosa, bulimia nervosa, binge eating disorder, avoidant/restrictive food intake disorders, overweight and bariatrics. Specific research studies currently underway include adaptive treatment for adolescent Anorexia Nervosa for non-responders to family-based treatment, family therapy for avoidant/restrictive food intake disorder, evaluation of on-line training programs to increase access to care to patients with eating disorders, use of phone apps to treat eating disorders, and testing of guided self-help for parents with children with eating disorders.

In addition, their research is focused on neuro-cognitive markers and neural correlates of eating disordered behaviors and cognitions. Their clinical programs are evidence-based evaluation and treatments for the full range of eating disorders across the age span. They also have an inpatient medical stabilization service of children, adolescents, and young adults at LPCH. They are also active in the educational and training mission through collaborations with Children's Health Council, LPCH, and the Department to train psychology interns. Further, child psychology post-docs and child psychiatry residents are trained in their clinical and research programs through case work, didactics, online training, and supervision. They are also active in the community through numerous presentations at local, regional, national, and international venues that highlight their clinical and research programs.



David Lyons, PhD
Behavioral Neuroscience

A major focus of Dr. David Lyons' work follows from the discovery that mild, but not minimal nor severe stress, exposure promotes subsequent coping and emotion regulation as described by U-shaped functions. Temporal aspects of stress exposure also contribute to the development of vulnerability versus resilience

Chronic stress leads to vulnerability whereas intermittent stress exposure provides repeated opportunities to learn, practice, and improve coping with subsequent gains in emotion regulation and resilience.

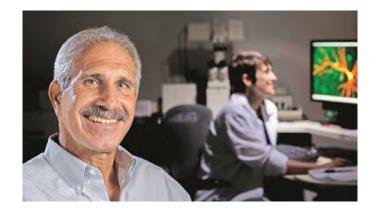
Recently, Dr. Lyons and his team extended the generality of their findings from monkeys to mice in order to exploit molecular genetic tools for dissecting causal mechanisms that mediate experience-dependent links between behavior and brain.

### **Professoriate Faculty**



Jose Maldonado, MD, FAPM, FACFE Consultation Liaison Psychiatry & Neuropsychiatry

Dr. Jose Maldonado's research and scholarly interests include Neurobiology and Management of Delirium; Neuropsychiatric Sequelae of Medical Illness and its Treatment; Psychosocial Assessment & Neuropsychiatric Complications of Organ Transplantation; Functional Neurological Disorder; Application of Hypnosis in Psychiatry and Medicine; Neuropsychiatric Sequelae of Traumatic Brain Injury; Pathophysiology and Management of Alcohol Withdrawal; Factitious Disorder & Munchausen's Syndrome; Cultural Diversity in Medical Care; Diagnosis and Treatment of Dissociative Disorders; and Forensic Psychiatry.



Robert Malenka, MD, PhD Nancy Friend Pritzker Laboratory

The Nancy Pritzker Laboratory under the direction of Dr. Robert Malenka, uses state-of-the-art tools to understand the molecular mechanisms of brain plasticity and how pathological plasticity contributes to the development of prominent neuropsychiatric disorders.

Recent work is delineating the pathological brain mechanisms underlying some of the most prominent symptoms of autism, depression and addiction in animal models.

The lab works closely with clinical colleagues studying patients with the goal of using the knowledge gained from the lab's basic science approaches to advance the diagnosis and treatment of patients suffering from a variety of psychiatric disorders.



Rachel Manber, PhD Sleep Health & Insomnia Program

The Sleep Health & Insomnia Program (SHIP) aims to improve sleep of individuals suffering from insomnia disorder through non-pharmacological means. The lab conducts clinical research to answer questions with immediate clinical implications for diverse populations including those with comorbidities, ethnic minorities (Latinos), and women at different phases of life. In addition to assessing impact of cognitive behavioral therapy for insomnia (CBTI) on insomnia and sleep, SHIP researchers also evaluate other health and wellbeing outcomes, including depressive symptom severity, vigilance, hypnotic medication use, and CPAP adherence.

The following two current research initiatives are focused on increasing access to care: (1) A randomized controlled study (RCT) of the effectiveness of a stepped care model of CBTI for patients with a dual diagnosis of insomnia and obstructive sleep apnea (open to enrollment) (2) RCT of the effectiveness of a decision algorithm to guide a stepped care model of CBTI in primary care using online and therapist delivered therapies.

Other ongoing work include analyses of archival data from two of our completed projects: An RCT to improve perinatal insomnia and an RCT of CBTI for insomnia comorbid with depression.

The SHIP lab also collaborates with researchers at Stanford (Department of Psychology, the Pain Center, Primary Care, and Obstetrics and Gynecology) and at other institutions in the United States, Australia, and Israel. Collaborative research include the study of emotion regulation in bruxism, perimenoposal insomnia, mindfulness for insomnia, and perinatal depression and insomnia.



Mark McGovern, PhD
Center for Behavioral Health Services and
Implementation Research

The overarching mission of the Center for Behavioral Health Services and Implementation Research (CBHSIR) is to ensure that the most effective treatments are available to the people with the greatest need. To accomplish this mission, they use the methods and metrics of implementation science. This emerging science is the study of strategies to integrate evidence-based health interventions into clinical and community settings—in order to improve patient outcomes and benefit population health.

The CBHSIR project portfolio is funded by the National Institutes of Health (NIDA, NIAAA, NIMH), SAMHSA/HRSA, the VA, the California Health Care Foundation, and Stanford Healthcare. All of their work involves the adoption, implementation, sustainment, and scale-up of: integrated behavioral health in primary care systems; medications for addiction in routine medical and specialty care settings; and evidence-based mental health prevention and treatment services in specific locations (e.g. the Wildfire Project—post-disaster response in Sonoma County California), regionally (e.g. the Health Care Authority of the State of Washington), and nationally (e.g. the National Coordinating Office of the Mental Health Technology Transfer Centers). Operational and system-wide targets for their activities are at national, state, county, organization, individual provider, patient and family levels. Committed to the academic mission, they are building intellectual and social capital in implementation science across the Stanford School of Medicine through network development, interest groups, teaching/ training, and mentoring/serving on faculty grant applications from pediatrics to oncology.

### **Professoriate Faculty**



Vinod Menon, PhD
Cognitive and Systems Neurosciences Laboratory

The overarching goal of the research of Dr. Vinod Menon and his team is to investigate the functional architecture of human brain circuits and to determine how disruptions in specific brain networks impact behavior, cognition, emotion, and learning in normal healthy individuals and in individuals with psychiatric and neurological disorders including learning disabilities, autism, ADHD, anxiety and mood disorders, and schizophrenia. They are also involved in quantitative BIG DATA science initiatives with open-source data to advance clinical and translational neuroscience in fundamentally new ways.

They aim to drive human cognitive neuroscience forward by: (1) Investigating large-scale architecture and wiring of the adult human brain in health and disease, (2) Elucidating the large-scale architecture and wiring of the developing human brain, (3) Developing advanced computational tools for dynamic brain network analysis, (4) Characterizing aberrancies in the human connectome in neurodevelopmental disorders and learning disabilities, (5) Developing new frameworks and computational models for linking brain connectomics and dynamics, and (6) Using systems neuroscience approaches for identifying biomarkers of neurodevelopmental disorders and learning disabilities in children, and for tracking developmental change and predicting clinical outcomes in affected children.

This work will lead to fundamental discoveries in human brain science, with wide ranging implications for elucidating fundamental biological and disease mechanisms at the systems level.



Emmanuel Mignot, MD, PhD Center for Sleep Sciences and Medicine

The Mignot laboratory uses proteomics and genetics to further the understanding of human sleep and sleep disorders, notably narcolepsy. In one part of the laboratory, they are focusing on the generation and analysis of data generated from a study called the Stanford Technology Analytics and Genomics of Sleep (STAGES). In the STAGES study, they are collecting actigraphy, 3D facial morphometry, neurocognitive testing, subjective sleep questionnaire data and objective sleep EEG studies in 30,000 participants together with genetic and protein biomarker data. Analyses involve classic statistics and machine learning of polysomnography, clinical and biological data.

In the second part of the laboratory, they are focusing on more targeted clinical, pathophysiological and genetic studies of sleep disorders involving excessive daytime sleepiness, such as narcolepsy, hypersomnia and Kleine Levin syndrome. Narcolepsy studies, in particular, are the most advanced and are focusing on the autoimmune basis of type 1 narcolepsy through the study of T cell biology.

In their newest work, the Mignot Laboratory, and fellow collaborators, published the following articles: "Neural network analysis of sleep stages enables efficient diagnosis of narcolepsy" in Nature Communications and "Autoimmunity to hypocretin and molecular mimicry to flu in Type 1 narcolepsy" in PNAS (Proceedings of the National Academy of Sciences of the United States of America).

Dr. Mignot also makes contributions to Thrive Global, where he discusses his cutting-edge science of narcolepsy and education regarding sleep disorders.



Philippe Mourrain, PhD Genetics, Neurobiology, and Computational Analysis of Sleep and Associated Behaviors

Sleep is ubiquitous, it has been described across the entire animal kingdom from octopi to elephants. Evolutionary conservation lends support to the hypothesis that sleep serves a fundamental physiological need yet to be identified. At the very least sleep is known to be important to consolidate memories and prepare the brain for the day to come supporting a role at the synapse. Consistently, sleep is disrupted in most if not all neurodevelopmental and neurodegenerative disorders and is believed to be part of the etiology of these synaptopathies.

One major goal of the Mourrain lab is to elucidate the function of sleep at the synapse and to identify the core synaptic endophenotypes affected by sleep in Fragile X syndrome, autism spectrum disorders and Alzheimer's disease. With the development of whole brain imaging methods such as light sheet imaging and array tomography allowing the comparison of two distant vertebrate sleep models, such as mouse and zebrafish, the Mourrain lab aims to define sleep for all vertebrates based on the dynamics of conserved networks in subcortical brain regions and to identify the circuits and synapse classes regulated by different sleep features (NREM continuity, slow wave sleep, REM).

The Mourrain lab also investigates how sleep/circadian cycle and the newly identified miR-9/TLX/Onecut posttranscriptional-transcriptional pathway differentially control brain and retina regeneration in mouse and zebrafish. Reprogramming of endogenous neural stem cells is a critical step to develop safe and effective methods to replace damaged or dead neurons in many psychiatric disorders including synaptopathies.



Ruth O'Hara, PhD
Lifespan Approaches to Neuropsychiatric
Disorders Program

The core focus of Dr. Ruth O'Hara's lab is to characterize the reciprocal relationship between neurocognitive abilities and neuropsychiatric disorders, and to identify the factors that influence these relationships.

Building upon her work demonstrating how affective systems interact with cognitive impairment, her lab has increasingly investigated the overlapping neurocircuitry of cognitive and affect processing. Her group has led the field in demonstrating the role of cognitive impairment in precipitating dysregulated affective and emotional processing in late life. Her work, among others, has led to an increased recognition of the contribution of early developmental processes to psychiatric disorders in mid to late life.

Over the years she has brought together a team of outstanding collaborators, including Drs. Hallmayer, Pasca, Etkin, and Beaudreau, to implement a translational, interdisciplinary program that considers genetic moderators and physiological mechanisms of cognitive and affective outcomes across the lifespan.

### **Professoriate Faculty**



Maurice Ohayon, MD, DSc, PhD Sleep Epidemiology Research Center

Dr. Maurice Ohayon's research focuses on the epidemiology of sleep disorders and their comorbidity in the general population. Public mental health and public policy issues are actively investigated through epidemiological studies of the general population in order to promote and prevent sleep and mental disorders and help their recognition and treatment. Dr. Ohayon and his team are pursuing this effort through a longitudinal study of the American general population started in 2001. Every four years, they interview the subjects of this cohort on their sleep habits, sleep quantity, and quality of sleep in relationship with their medical and psychiatric conditions. This longitudinal study is now in its fourth wave.

Narcolepsy is another pole of interest of this group. Recently, they have added a very focused research on the family members of narcoleptic patients. In an effort to diversify their interests in the domain of public health, they have instigated studies to explore the negative feedbacks between sleep and gastroesophageal acid reflux in the US and European populations. They have conducted several studies to exploit the European data on GERD to show how chronic GERD can be better defined by its sleep components. Dr. Ohayon and his team have developed collaborations with the Academy of Applied Myofunctional Sciences. Their goal is to assess the prevalence of oromiofunctional disturbances and their impacts on sleep.

Finally, in collaboration with NASA, the data accumulated in their epidemiological studies are being used to evaluate the impact of the proliferation of artificial nighttime lights and electromagnetic fields on sleep and mood.



Michael Ostacher, MD, MPH, MMSc Bipolar and Depression Research Program

The VA/Stanford Bipolar and Depression Research Program is the department's mood disorders research lab at the VA Palo Alto Health Care System. The program's mission is to study clinical and translational neuroscience critical to people, especially veterans, with bipolar disorder, depression, and other co-morbid disorders

The program focuses on four critical areas: (1) Clinical trials of psychopharmacologic, psychotherapeutic, neurotherapeutic, device-based, and web-based interventions in both veterans and civilians with mood disorders, including those with substance use and other comorbidities, including PTSD. (2) The development, dissemination, and implementation of evidence-based guidelines for the treatment of mood disorders. (3) Understanding the pathophysiology and neurophysiology of bipolar disorder and major depressive disorder. (4) The study of exploratory therapeutics for treatment of mood disorders.

The program is participating in a nationwide, 29-site CSP study of lithium compared to placebo for suicide prevention in veterans (while leading an effort to use telemental health to engage participants in this research), two studies of web-based interventions for bipolar disorder, and a clinical trial studying the efficacy of suvorexant for treatment-resistant insomnia in patients with bipolar disorder. The lab is also embarking on new approaches to treat PTSD for our veteran population, including a trial of a tablet-based device to moderate breathing by measuring and monitoring expired CO2 that has already led to FDA clearance of the device for the treatment of PTSD.



Oxana Palesh, PhD Cancer Survivorship Research Lab

Dr. Oxana Palesh's Cancer Survivorship Research Lab at Stanford University investigates the impact of cancer treatments on various functions of overall wellbeing. Their research looks at sleep, fatigue, cognition, and neuronal changes associated with quality of life. They focus on understanding the etiology and psychophysiology of treatment side effects in cancer patients and survivors with the goal of developing and testing novel therapeutic approaches to improve clinical outcomes and reduce symptoms, premature aging, and mortality.

Dr. Palesh's ongoing clinical research includes testing novel behavioral interventions as well as innovative delivery approaches for management of sleep, cancer related fatigue, circadian rhythm disruption, cancer related cognitive impairments, and health-related quality of life functioning during and subsequent to cancer treatment.

Dr. Palesh and her team are interested in developing interventions that can also be delivered widely in community oncology settings across the United States, and we are therefore testing the efficacy of these interventions in such settings.



Sergiu Pasca, MD Cellular Mechanisms of Neuropsychiatric Disorders Laboratory

A critical challenge in understanding the intricate programs underlying development, assembly and dysfunction of the human brain is the lack of direct access to intact, functioning human brain tissue for detailed investigation by imaging, recording, and stimulation.

Dr. Sergiu Pasca's Lab is using pluripotent stem cells derived non-invasively from human individuals to generate in a dish specific regions of the human brain in a functional 3D preparation we have developed. They are using months to years long 'brain-a-dish' cultures, also known as brain region-specific organoids or spheroids, to understand how neurons find their final position in the brain and how they mature functionally.

To investigate how different brain regions talk to each other in normal and diseased states, Dr. Pasca's Lab introduced a new approach for in vitro assembly of neural circuits, also known as brain assembloids. They employ state-of-the-art stem cell biology, genome engineering, imaging and neuroscience approaches to identify the dynamical processes that go awry in neural cells derived from patients with neuropsychiatric disorders, such as autism or schizophrenia, and what should be therapeutically targeted in these conditions.

### **Professoriate Faculty**



Kilian Pohl, PhD Computational Neuroscience

Dr. Kilian Pohl's research is founded on computational science aimed at identifying biomedical phenotypes improving the mechanistic understanding, diagnosis, and treatment of neuropsychiatric disorders. Detecting biomedical phenotypes requires connecting a target disorder to subtle differences in myriad data, which generally consist of diverse and complex information, such as large numbers of imaging, clinical, and genetic measurements. To account for increased data complexity in recent years, Dr. Pohl and his team have been creating a discovery platform that complements findings based on standard, expert-driven analysis through unbiased, machine learning-based searches across biological, neuroimaging, and neuropsychological data. The discovery platform is currently supporting data consolidation and analysis of the NIH-funded National Consortium on Alcohol and NeuroDevelopment in Adolescence (NCANDA) and the Adolescent Brain Cognitive Development (ABCD), the largest long-term study of brain development and child health in the US. In addition to studying adolescent brain development and the impact of alcohol on the brain, Dr. Pohl is investigating brain patterns specific to human immunodeficiency virus (HIV) and HIV-associated neurocognitive disorders (HAND). Dr. Pohl's data-driven discovery has also advanced the understanding of a variety of other diseases including glioma, schizophrenia, Alzheimer's disease, and aging of the brain.

The research of Dr. Pohl is currently supported by the National Institute on Alcohol Abuse and Alcoholism, National Institute of Mental Health, National Institute on Drug Abuse, and National Heart, Lung, and Blood Institute.



Natalie Rasgon, MD, PhD Center for Neuroscience in Women's Health

The Stanford Center for Neuroscience in Women's Health (SCNWH), directed by Dr. Natalie Rasgon, comprises four faculty members (Dr. Katherine Williams, Dr. Tonita Wroolie, and Dr. Thalia Robakis), one graduate student, and three research assistants. This year, members of the group published 11 papers in journals including PNAS, JAMA Psychiatry, BMJ, and Journal of Psychiatric Research, including a paper on acetyl-L-carnitine deficiency in patients with major depressive disorder that garnered attention from media sources across the nation. Members of the team presented data, participated on panels, and chaired symposia at national conferences including ACNP, APA, and SOBP.

Dr. Rasgon is currently conducting a study on insulin resistance and accelerated cognitive aging funded by the NIH. This study explores the developmental trajectory of cognitive and neural biomarkers across the spectrum of metabolic dysfunction in overweight adults. Dr. Thalia Robakis is investigating the effects of maternal attachment insecurity on infant and child development, and identifying associations between DNA methylation markers in infants and the attachment styles of their mothers. Her work is currently funded by the Stanford Maternal Child Health Research Institute (MCHRI), the Stanford Precision Health and Integrated Diagnostics center (PHIND), and by a departmental Innovator grant from the Department of Psychiatry and Behavioral Sciences.



Allan Reiss, MD Center for Interdisciplinary Brain Sciences

Dr. Allan Reiss is the Director of the Division of Interdisciplinary Brain Sciences. He participates in the clinical activities described for the division and supervises/mentors many early career scientists and clinicians. Dr. Reiss participates as a member of the cardiology-based multidisciplinary clinical team focused on children, teens and young adults with connective tissue disorders such as Williams syndrome, Marfan syndrome, Loeys-Dietz syndrome, Ehler-Danlos syndrome, and 22q11 deletion and duplication syndromes. NIH funded clinical research projects include investigation of brain and cognitive-behavioral development in girls with fragile X syndrome, boys with Klinefelter syndrome and young children with type 1 diabetes.

In collaboration with other Center for Interdisciplinary Bran Sciences Research (CIBSR) and affiliated faculty, Dr. Reiss also conducts work focused on developing and utilizing advanced imaging and related research methods to improve our understanding of the neural basis of cooperation among two or more individuals, the neural response to unexpected events or distractions while driving, the effect of cycling exercise on attention and learning in children with ADHD, the effects of different treatment approaches to childhood anxiety, and the neuroscience and neurodevelopment of creativity and humor across the lifespan. He is principal investigator on an NIH-funded postdoctoral (T32) research training grant.



Laura Roberts, MD, MA Roberts Ethics Laboratory

The Roberts Laboratory is a multidisciplinary team of scholars engaged in empirical and analytic study of issues of ethical salience across research, clinical, education, and policy domains. Dr. Laura Roberts is an internationally recognized scholar in bioethics, psychiatry, medicine, and medical education. She has received extensive scientific peer-reviewed funding from the National Institutes of Health, the Department of Energy, and private foundations to perform empirical studies of modern ethical issues in research, clinical care, and health policy, with a particular focus on vulnerable and special populations. Her work has led to advances in understanding of ethical aspects of physical and mental illness research, societal implications for genetic innovation, the role of stigma in health disparities, the impact of medical student and physician health issues, and optimal approaches to fostering professionalism in medicine. Dr. Roberts was awarded the MacLean Prize in Ethics in 2015 from the University of Chicago in recognition of this work.

In 2017, the Stanford team received a BRAIN Initiative grant to examine ethical issues and decision making in innovative brain research. Dr. Roberts, who serves as Principal Investigator of the project, will work with colleagues at Stanford to identify novel ethical issues that are emerging in the context of innovative neuroscience research and to understand influences on research participation decisions of people living with mental illness and addiction. The collaborative team includes coinvestigators Laura Dunn, Jane Paik Kim, Casey Halpern, assistant professor of neurosurgery and, by courtesy, of neurology and psychiatry and behavioral sciences, and Mildred Cho, professor of pediatrics.

### **Professoriate Faculty**



Carolyn Rodriguez, MD, PhD
Translational Therapeutics Rodriguez Lab

The mission of the Translational Therapeutics/Rodriguez Lab is to improve the lives of people with severe mental illness. Dr. Carolyn Rodriguez and her team seek to rapidly translate scientific discoveries into new treatments by pursuing circuit-based, neuroscience driven and computational approaches to clinical research. Dr. Carolyn Rodriguez and her interdisciplinary team have conducted landmark clinical trials that pioneered a new direction in rapid-acting treatments for Obsessive Compulsive Disorder (OCD).

Other studies focus on understanding the brain mechanisms involved in hoarding disorder and how these differ from normal collecting behaviors. In addition, work in the lab has established novel methods for mapping brain circuit dysfunction by combining magnetic resonance spectroscopy (MRS), functional magnetic resonance imaging (fMRI) and electroencephalograpy (EEG). We partner with Stanford experts and others worldwide in genetic, computational, and basic neuroscience to leverage the impact of these brain circuit discoveries.



Craig Rosen, PhD
National Center for PTSD Dissemination and
Training Division at VAPAHCS

Dr. Craig Rosen is involved in national efforts to increase use of best mental health practices for PTSD and to advance implementation science. Although many VA and military clinicians are trained in effective evidence-based psychotherapies (EBPs) for PTSD, few veterans or receive members receive these treatments

Dr. Rosen recently completed a VA study which identified organizational factors that facilitate wider use of EBPs. Dr. Rosen and Carmen McLean now lead a large Department of Defense study testing a strategy for making organizational changes to increase use of EBPs in eight military clinics.

Dr. Rosen also collaborated with RAND to evaluate VA efforts to implement measurement-based care (i.e., use of standardized outcomes measures in clinical decision-making). Dr. Rosen teaches two courses to Stanford PsyD students. He mentors other researchers and educators as Acting Director of the National Center for PTSD Dissemination and Training Division at the VA Palo Alto Health Care System.



Debra Safer, MD
Eating and Weight Disorders

Dr. Debra Safer and the members of her research team are collaborating on several projects currently. Recently, she and her Stanford colleagues received an award from the National Eating Disorders Association (NEDA) to adapt virtual reality interventions for eating disorders in "real-world" clinical settings to improve outcomes. Other ongoing projects include a study examining whether Qsymia (phentermine-topiramate), a medication that has been FDA approved for obesity, can be effectively repurposed to target symptoms of binge eating and purging. They are writing up the results of a double blind randomized controlled trial using a crossover design.

In addition, through a multi-site R01 with researchers in North Dakota, they are studying the problem of weight regain after bariatric surgery using ecological momentary assessment (EMA) to understand the role of loss of control eating. In a study with important departmental implications, Dr. Safer and her team are assessing the acceptability and feasibility of measurement based care in "real world" clinic settings. She and her team are also interested in improving access to eating disorder treatment through investigating the use of self-help and guided self-help approaches.

Additional research collaborations involve improving body image among middle age women, improving satisfaction after orthognathic surgery, and evaluating the feasibility and acceptability of an intervention to reduce the risk of obesity among children whose parents underwent bariatric surgery in the past year.

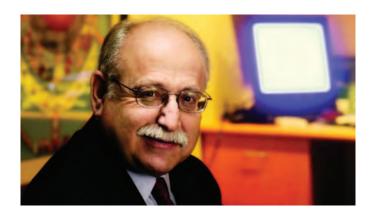


Manish Saggar, PhD
Brain Dynamics Lab

The Brain Dynamics Lab is a computational neuropsychiatry lab founded by Dr. Manish Saggar in 2017. The overarching goal of the lab is to develop computational methods that will allow for extracting insights about brain's overall dynamical organization in healthy and patient populations.

How the brain dynamically adapts to perform different tasks is vital to understanding the neural basis of cognition. Understanding brain's dynamical organization can be crucial for augmenting human performance (e.g., during creative thinking) as well as for developing and tracking treatments for mental illnesses. The brain's inability to dynamically adjust to environmental demands and brain's aberrant dynamics have been previously associated with disorders such as schizophrenia, bipolar disorder, depression, and dementia. The high spatiotemporal dimensionality and complexity of neuroimaging data make the study of whole-brain dynamics a challenging endeavor. Researchers and clinicians alike demand novel methods aimed to distill such complex data into simple yet vibrant and behaviorally relevant—representations that can be interactively explored to discover new aspects of the data. Ideally, such representations could also be quantified to allow statistical inferences and provide the basis of future biomarkers and treatment response factors for mental disorders at the single subject level. With these goals in sight, The Brain Dynamics Lab is dedicated to developing computational methods that can generate useful mechanistic insights about the "transitions" (or lack thereof) in underlying neural processes during ongoing cognition. To achieve these goals, they employ algorithms from a wide range of fields, including Applied Mathematics, Econometrics, Machine Learning, Biophysics and Network Science.

### **Professoriate Faculty**



Alan Schatzberg, MD Mood Disorders Center and Depression Research Clinic

Studies funded by the Pritzker Foundation have been ongoing and have included investigation in both rodents and man. The research includes several projects. In one, Dr. Schatzberg and his team have been exploring the pharmacological properties of FGLs, an allosteric compound that binds to fibroblast growth factor receptors that appear to be involved in the pathophysiology of depression. They have also explored pharmacokinetic and blood brain barrier penetrance with the compound. In another trial, they have performed genome wide sequencing of a cohort of patients with major depression with psychotic features and healthy controls. The sequencing is complete and they are in the process of obtaining a replication cohort of subjects. In another study, they have begun to transform stem cells from late life depressives into neurons and will explore their reactions to challenge with stress hormones. Last, they are collecting cohorts of severely ill major depressives with and without psychotic features and healthy controls in an effort to explore innovative biomarkers for suicidal and psychotic behavior.

Dr. Schatzberg and team have recently completed a study of the opioid properties of ketamine as an antidepressant. The study was conducted in refractory depressed patients. A parallel study was conducted in mice. Supported by Janssen Pharmaceuticals, they have also participated in biomarker predictor study of depression relapse and are completing the follow up. They have also collaborated with Nolan Williams on his accelerated theta burst r-TMS for depression protocols as well as with Lea Williams on pharmacogenetics predictors of antidepressant response and Dr. Keith Sudheimer on his studies of the effects of cortisol infusions on specific brain region activity.



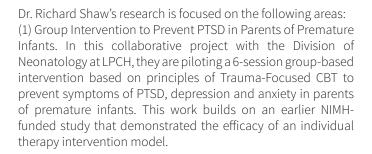
Nirao Shah, MD, PhD
Biological Basis for Gender Differences
in Behavior

Dr. Nirao Shah's research focuses on understanding how the brain becomes gendered. He developed this research program as a Jane Coffin Childs and Burroughs Wellcome Fellow in Nobel laureate Richard Axel's laboratory at Columbia University. Evolutionary pressures have selected for the development of neural circuits that innately distinguish between males and females, thereby allowing individuals to effectively compete for mates, resources, protect progeny, and engage in meaningful social interactions. However, the identity of these neural circuits has remained mysterious.

Over the past year at Stanford, Dr. Shah and his team have discovered how the brain encodes sex of other individuals. They used genetic approaches to identify a circumscribed neural circuit that recognizes sex of other individuals and then guides all ensuing social interactions. This neural pathway is highly conserved, and they are now excited to explore the function of this neural circuit in humans.



Richard Shaw, MD
Stanford Pediatric Psychosocial Optimization Tool



- (2) Intervention to Address Vulnerable Baby Syndrome in Parents of Premature Infants In this collaborative project with Dr. Katie Hoge at UT Southwestern Medical Center, they are developing a intervention to help reduce symptoms of Vulnerable Baby Syndrome in parents of premature infants. This intervention consisted of 3 sessions administered in the neonatal intensive care unit and 2 sessions in the high-risk follow-up clinic in the Division of Neonatology.
- (3) Psychosocial Screening of Pediatric Solid Organ Transplant Recipients. In this collaborative project with the Division of Pediatric Cardiology, the team is working to develop a psychosocial pretransplant rating instrument to help screen potential solid organ transplant recipients.
- (4) App Development for Hypnosis in the Pediatric Medical Setting. The team is in the early phase of developing an application to help deliver hypnosis to pediatric patients at LPCH to assist with the management of symptoms of nausea, pain and distress. The project is funded by the Women's Auxiliary at LPCH.



Manpreet Singh, MD, MS Stanford Pediatric Mood Disorders Program

The Stanford Pediatric Mood Disorders Program promotes healthy brain development through a deeper understanding of how children adapt to mood symptoms and stress. Their bold vision is to prevent chronic mood outcomes and improve the mental health of children, adolescents, and families through fully integrated, globally recognized research, education, and innovation. Inspired to educate the next generation of clinicians, educators, and scientists in the field, Dr. Singh edited the first Clinical Handbook on the Diagnosis and Treatment of Pediatric Mood Disorders, to be published by the American Psychiatric Press this Spring.

Using clinical and neuroscience based assessments, Dr. Singh and her team investigate risk and resilience factors for unipolar and bipolar mood disorders to understand how mood disorders evolve and interact with other aspects of heath. To accelerate discovery in novel therapeutics for childhood onset mood disorders, Dr. Singh's team is testing the safety and efficacy of new drug and non-drug (e.g. psychotherapies, Transcranial Magnetic Stimulation) alternatives in youth. The program's research is multidisciplinary and supported by the National Institutes of Health, private foundation, and industry partnerships, bringing together experts from the fields of psychiatry, psychology, neuroscience, computer science, biostatistics and genetics to seek answers for complex questions related to brain-behavior-environment relations in developing youth with and at risk for mood disorders.

### **Professoriate Faculty**



David Spiegel, MD Center on Stress and Health

Dr. David Spiegel is Willson Professor and Associate Chair of Psychiatry and Behavioral Sciences at Stanford University School of Medicine. He directs the Stanford Center on Stress and Health and Center for Integrative Medicine. Dr. Spiegel is one of United States' most respected experts in research on the brain basis of and clinical uses of hypnosis.

Dr. Spiegel's current research program involves psychooncology and hypnosis.

1) Impact of Affect Reactivity and Regulation on Breast Cancer Treatment Decisions. This NCI-sponsored UO1 involves using fMFRI to examine the contribution of affect management mechanisms to initial surgical treatment decisions. To understand the neurobiological and affective determinants of the choice of regarding bilateral mastectomy (BLM), and thereby identify future opportunities for new interventions, Dr. Spiegel is examining the relationship between affect reactivity and regulation and women's decisions after initial diagnosis of breast cancer.

2) rTMS Augmentation of Hypnotic Analgesia. Dr. Spiegel, in collaboration with Nolan Williams, M.D., is utilizing repetitive transcranial magnetic stimulation to enhance hypnotic analgesia for the treatment of fibromyalgia syndrome. This work is based upon his earlier findings of specific brain regions involved in hypnosis.

3) Using Alexa to deliver self-hypnosis treatment for smoking cessation. Dr. Spiegel has developed an interactive app ("Alexa hypnosis stop smoking") that replicates the in-office experience and is evaluating its effectiveness. He has developed a pain treatment Alexa program and will begin evaluating it in 2019.



Edith Sullivan, PhD
Neuroscience of Addiction Laboratory

Alcohol use disorder remains a leading cause of morbidity and mortality in the U.S. and is a major comorbid factor in numerous medical and psychiatric disorders, including HIV infection and depressive, psychotic, and anxiety disorders. A rising problem among college-age youth is extreme binging, which is coincident with ultimate stages of brain structural and functional brain development. Dr. Edith Sullivan's clinical and basic alcohol research group represents a grass-roots evolution of a multidisciplinary team, whose work has been at the forefront of the neuroscience of alcohol misuse and use disorder for 3 decades. The resulting research has contributed significantly to identifying consequences of hazardous drinking on brain structure and function and recognizing its dynamic course of relapse and recovery.

Dr. Sullivan's research themes include: Brain and behavioral consequences of hazardous drinking across the lifespan, from adolescence to senescence; Co-occurring health conditions, including HIV and hepatitis C infections; Factors of resilience and vulnerability of acquired motor fragility and cognitive dysfunction exacerbated by aging. Parallel, in vivo animal models of alcohol exposure using high-field MRI and optogenetic approaches enable pursuit of mechanisms underlying neural disruption and opportunities for recovery.

Support: National Institute on Alcohol Abuse and Alcoholism and the Moldow Women's Hope and Healing Fund



Trisha Suppes, MD, PhD
Exploratory Therapeutics Laboratory

Dr. Trisha Suppes' work in the development of treatments for mood disorders and her experience of the success and limitations of current treatments led to the founding of the Exploratory Therapeutics Laboratory. During this early phase of development, the lab will study both the potential of psychedelics to provide relief in mood disorders and the potential to use these substances to treat subsyndromal depression and anxiety and to enhance wellness. The lab is initially focusing on the use of psilocybin, a substance that has been shown in early controlled trials and case series to be well-tolerated, with few negative effects. Additionally, this substance has well-studied impacts on brain chemistry that are consistent with the possibility that it will be helpful in mood disorders. Dr. Suppes' current research focus addresses the following areas on the use of psychedelics:

- 1) Use of moderate dose psilocybin for treatment-resistant depression. Dr. Suppes, in collaboration with Sheppard-Pratt investigators, has developed a protocol to explore psilocybin in patients with depression poorly responsive to standard treatments.
- 2) The lab is developing an exploratory dosing protocol for psychedelics, psilocybin and LSD. Questions of interest include what is a therapeutic dose; what occurs in a placebo-controlled administration of small vs. expected dosing level of psychedelics in so-called "microdosing"; and what changes does the brain show through neuroimaging with different doses. The lab will explore whether it is feasible to induce similar states without the use of drugs, potentially through mechanisms of biofeedback, meditation, and other approaches.



Ranak Trivedi, PhD
Framily and Patient Mental Health Lab

The mission of the Framily and Patient Mental Health Lab is to improve the health and well-being of both patients and their family and friends—"Framily"—who support patients and experience stress from their caregiving roles. Dr. Ranak Trivedi and her team use mixed methods to understand the socio-behavioral and physiological basis of relationships between patients and their framily, and the unmet needs of framily who are informal caregivers. They use these insights to develop family centered self-management programs to enhance communication, collaboration, and empathy within the patient-framily unit; enhance quality of life in patient and framily; empower the framily to advocate for patients in clinical encounters; and improve the early detection and treatment of psychiatric distress among patients and framily. Their programs are both in person and technology enabled, and has focused on enhancing outcomes among patients with heart disease, pulmonary disease, diabetes, end-stage renal disease, cancer, and depression.

Their work has focused on newly funded national center of excellence, Elizabeth Dole Center for Veteran and Caregiver Research, will pilot technology enabled tools to improve knowledge of and access to home and community based services. They also conduct quantitative studies using Veterans Health Administration administrative data to examine predictors of poor outcomes among patients with psychiatric conditions, with the goal to improving outreach and access to these vulnerable populations.

### **Professoriate Faculty**



Alexander Urban, PhD
The Program on the Genetics of the Brain Function

The Program on the Genetics of Brain Function (GBF) includes the labs of Drs. Douglas Levinson and Alex Urban. We investigate genetic sequences and mechanisms with relevance to the etiology of psychiatric disorders.

The Urban lab is investigating the effects of DNA sequence variation in human genomes on normal and abnormal brain development and function. They develop and use nextgeneration sequencing based methods to carry out functional genomic and epigenomic studies along several interrelated trajectories of investigation: Detection and characterization of genomic sequence variation associated with neuropsychiatric disorders such as schizophrenia, autism spectrum disorders, depression, bipolar disorder, and Tourette syndrome. Copy number and structural variants (CNV/SVs) in the human genome DNA sequence: their detection, exact mapping and their effects on multiple levels of molecular control and regulation (DNA methylation, chromatin conformation, gene expression patterns), using iPSC stem cell model systems. Somatic genome and transcriptome variation, i.e. genomic mosaicism: its detection, characterization and the elucidation of its functional consequences, in stem cell model systems and primary tissue samples.

The Urban lab is also affiliated with the Department of Genetics and is part of the Program on Genetics of Brain Function as well as a member of (and located in) the Stanford Center for Genomics and Personalized Medicine. Dr. Alex Urban is a Tasha and John Morgridge Faculty Scholar of the Stanford Child Health Research Institute.



Leanne Williams, PhD
Williams PanLab for Precision Psychiatry and
Translational Neuroscience

To change lives Dr. Leanne Williams and the 30 members of the PanLab are developing and testing a radical new taxonomy for understanding and treating mental disorders. They focus on mood, anxiety, and attention disorders that contribute disproportionately to the global burden of illness and, all too often, suicide. Dr. Williams and her team focus on high definition imaging of large-scale brain circuits, integrated with genetics, psychophysiology, sensor technologies, clinical history and behavior. Breakthroughs from the PanLab include the identification of novel biotypes, characterized by specific disruptions in brain circuits, and that cut across traditional diagnoses. These biotypes promise to help guide more precise diagnoses and matching of patients with the right treatment, quickly. Their approach is possible through harnessing the power of big data sets, cutting-edge computational approaches and integrated data pipelines. They have launched several new studies, one developing human brain connectome signatures of mood disorders, funded under the NIH Human Connectomes Related to Disease initiative, another using drugs such as ketamine to probe brain circuits, funded by NIDA, a Stanford Biomedical Innovation Clinical Translation Award targeting interventions based on brain circuit biotypes and a Catalyst for Collaborative Solutions award with engineering collaborators, integrating biotypes with innovative wearables for quantifying physiology.

Catalyzing this interdisciplinary program is the new Center for Precision Mental Health and Wellness. One of the first Center initiatives is the launch of a research outreach program building collaborations in artificial intelligence and machine learning for mental health, leveraging existing rich datasets available through the PanLab.



Nolan Williams, MD Stanford Brain Simulation Lab

Dr. Nolan Williams currently serves as the Director of the Stanford Brain Stimulation Laboratory (SBSL). The SBSL utilizes novel brain stimulation techniques to probe and modulate the neural networks underlying neuropsychiatric diseases/disorders in an effort to develop new models and novel treatments. They focus on utilizing neurostimulation to probe the neural elements involved in control of conflict regulation within the human brain. The mission of the SBSL is to utilize cutting edge neuroimaging techniques in an effort to develop new hypotheses regarding proposed dysfunction within the neural networks involved in neuropsychiatric diseases/ disorders. With this information, the team utilizes neuromodulation strategies to assess whether our proposed brain-behavior theories are accurate. The SBSL offers research study treatments for numerous neuropsychiatric diseases/disorders.

Currently, the SBSL has several active studies examining topics such as treatment-resistant depression, chronic pain, suicide, and obsessive-compulsive disorder. SBSL studies utilize novel brain stimulation techniques, novel psychopharmacological approaches and neuroimaging methods.



Shannon Wiltsey-Stirman, PhD Fidelity, Adaptation, Sustainability, and Training Lab

In many mental health (MH) treatment settings, few if any, evidence-based psychosocial treatments (EBPs) are available. Dr. Shannon Wiltsey-Stirman's lab attempts to determine how to facilitate high-quality delivery of EBPs in public sector MH settings. Their focus includes therapist training and consultation, treatment fidelity and adaptation, and the identification of strategies that promote the long-term implementation of EBPs.

In 2018, they continued recruitment and data collection for our NIMH study that compares two strategies for supporting therapists and clinics in improving and sustaining the use of Cognitive Processing Therapy (CPT) for PTSD in three diverse MH systems.

Some of their other NIMH-funded work aims to identify new methods to assess and support CPT skill and quality. Additionally, they have begun to adapt a promising strategy for VA mental health that involves training and supporting clinic leaders as they work to ensure that their organization can successfully implement evidence-based interventions.

Finally, they have partnered with other Stanford and VA investigators to help the Wildfire Mental Health Collaborative of Sonoma County evaluate their efforts to support mental health recovery in their community.

### **Professoriate Faculty**



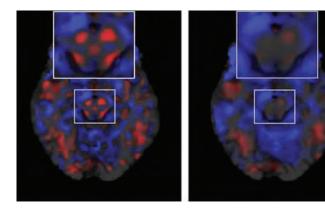
Jerome Yesavage, MD

Mental Illness Research Education and
Clinical Center

The Mental Illness Research Education and Clinical Center (MIRECC) is a national resource for the Department of Veterans Affairs (VA) focused on the cognitive and emotional challenges of Vietnam War Era Veterans. Its civilian branch is the Aging Clinical Research Center (ACRC) funded by the National Institute on Aging, the National Institute of Mental Health, and the Department of Veterans Affairs. These Centers are located at the Palo Alto Veterans Health Care System in Palo Alto adjacent to the Stanford campus. Experienced investigators from many disciplines of medicine and neuroscience lead a variety of clinical, research, and educational programs, with the aim of improving the lives of older adults affected by Alzheimer's Disease, and other cognitive and emotional challenges.

A major thrust of these programs is to investigate the complex nature of Alzheimer Disease, its progression over time, its response to treatments, and problems patients and caregivers experience in dealing with the changes that occur. These MIRECC and ACRC programs are closely affiliated with the State of California Alzheimer Disease Center also based at the VA. Investigators also conduct studies that look at changes which occur over the course of normal aging and a variety of risk factors for developing dementias.

Finally, several MIRECC investigators are actively researching important factors associated with preserving cognitive function in older Veterans and civilians. Most recently, studies have focused on the effects of Transcranial Magnetic Stimulation on treating depression, dementia, and mild cognitive impairment.



Jong Yoon, MD Yoon Lab

The Yoon Lab focuses on the discovery of brain mechanisms of psychosis and schizophrenia using cutting edge in vivo human neuroimaging. Highlights of the past year include the initiation of a new study which will be one of the first direct tests of the synaptic pruning hypothesis of schizophrenia. With funding from Stanford's SPARK program and the Weston Havens Foundation, this study will utilize a newly available PET tracer for neural synapses to determine if there is reduced synaptic density in schizophrenia. The demonstration of a reduction would pave the way for the development of a new class of treatments for schizophrenia targeting excess synaptic pruning in schizophrenia.

The Yoon Lab was the recipient of a new NIMH/NIH R21 award to develop a novel approach for measuring in vivo GABA deficits in schizophrenia. While the GABA deficit hypothesis remains one of the most promising theories on the neural basis of schizophrenia, in vivo studies have been inconsistent in their ability to detect GABA deficits. All past in vivo studies have utilized magnetic resonance spectroscopy of subjects while at rest. The new study will measure task-evoked changes in GABA levels and determine if this measure will reveal more robust deficits in GABA in schizophrenia.



Jamie Zeitzer, PhD Zeitzer Lab

The Zeitzer lab has a wide variety of interests all under the umbrella of sleep and circadian physiology. They are leaders in the area of human centric lighting. That is, the use of lighting (artificial and natural) to improve physical and mental health. Stemming from an understanding of the neurobiologic principles of brain physiology, they have both laboratory and community-based projects examining both basic physiology and applied disease research in areas such as delayed sleep in teens, jet lag, shift work, deep space exploration, risk of nocturnal falls in elderly, and cognitive decline.

Dr. Jamie Zeitzer and his team are also pioneering new forms of data collection and analysis of real-time biologic signals (accelerometry, EKG, EEG, hormones) that are being used for predictive modeling of psychiatric disease states (e.g., bipolar disorder, cognitive decline, depression) and optimized monitoring and treatment of sleep disruptions. They work both within the lab and collaboratively with labs around the world to meet the goals of improving the human condition through better science.

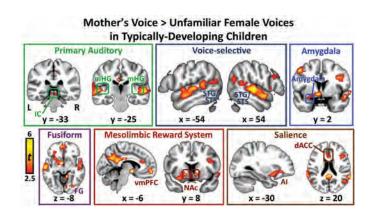
#### Clinician Educators



Elias Aboujaoude, MD, MA Compulsivity and Impulsivity

Dr. Elias Aboujaoude's interests span the compulsivity-impulsivity spectrum. Within obsessive-compulsive disorder, a specific focus has been the compulsive use of technology and its downstream effects on the individual, the family unit and culture at large. As such, his recent scholarly and general-audience writings have focused on cyberbullying; the role of the Internet in rising suicide rates; the effects of digital technology on cognitive life; the mental health case for safeguarding privacy; and the online nurturing of certain personality traits.

On the other side of the technology and psychology interface, Dr. Aboujaoude has studied ways to use digital technology to promote access to treatment, increase cost-effectiveness and as a cornerstone of "global health", including via such technology-enabled interventions as virtual reality therapy, "serious games" and online video-based therapy.



Daniel Abrams, PhD
Brain Systems for Speech Perception in
Children with Autism Spectrum Disorders

Speech is a critical communication signal for social skill acquisition, however children with autism spectrum disorders (ASD) often "tune out" from the voices in their environment, which is thought to impact their social development. This program's primary research goal is to understand the brain bases of voice perception impairments and their relationship to pervasive social communication deficits in children with ASD.

Their recently published results are the first to identify the brain network underlying perception of mother's voice in typically developing children, and a submitted work shows that mother's voice elicits aberrant activity within this network in children with ASD.

Dr. Daniel Abrams and his team have extended this research to examine developmental changes in voice-processing networks as children progress into adolescence, as well as brain processing of the vocal cues that signal emotional content in speech, known as affective prosody, in children with ASD. Their work will provide new information regarding the contribution of speech perception impairments to social communication abilities in children with ASD, and may provide critical insight into the remediation of social communication deficits in this population.



Steven Adelsheim, MD
Early Intervention for Child/Adolescent
Mental Health Issues

Dr. Steven Adelsheim is a child/adolescent psychiatrist and Director of the Center for Youth Mental Health and Wellbeing, as well as Vice Chair for Community Engagement. His research focuses on developing early identification and intervention systems for mental health support and wellness across the continuum of care for young people and their families.

The team at the Center has been focused recently on programs related to youth suicide prevention with particular attention to media issues, including journalism, social media and entertainment media. These efforts have included surveying journalists about their perception and use of media guidelines when writing about youth suicide. In addition, the team is piloting an internet based mental health screening tool with several schools around the country.

The Center team is also working with international partners to develop a data and evaluation system for the integrated youth mental health models being initiated in Santa Clara County and hopefully in other sites across California and the US. In addition, the team continues to host PEPPNET, the national network for early psychosis clinical programs, supporting the implementation of evidence-based services in the rapidly expanding world of early psychosis intervention. The Center is also partnering with tribal members in Humboldt County to expand youth suicide prevention efforts and support school mental health linkages.



Sarah Adler, PsyD Adler Lab

Dr. Sarah Adler and her colleagues work to increase access to behavioral health care using technology and new models of care delivery. Dr. Adler and Dr. Jane Kim are currently designing software for using AI to personalize smart watch messages promoting adherence behaviors, a study funded by the Center for Digital Health and Apple, Inc. Drs. Adler and Kim are also investigating how Machine Learning can be used to predict patient outcomes, using data collected software developed by the lab. The lab is investigating how Virtual Reality can improve the treatment of eating disorders, funded by the National Eating Disorder Association led by Dr. Cristin Runfola.

A SPARK Spectrum funded study examining the effect of Qsymia (phentermine-topiramate), on binge eating and purging has been completed by Dr. Adler and Dr. Debra Safer. Other projects include using the BIPAS, a pre-bariatric evaluation developed by the team, to predict poor outcomes after bariatric surgery. Lianne Salcido, MS the lab's senior RA, led a study testing EATT, a video-based intervention targeting patients at high-risk for weight re-gain after bariatric surgery.

Additionally, Dr. Adler and colleagues are completing data analysis investigating the role of alternative thyroid hormones on weight plateau. Future directions include furthering the existing research program, and investigation of how VR can target implicit biases.

#### Clinician Educators



Rania Awaad, MD
The Muslim Mental Health Lab
and Wellness Program

The Muslim Mental Health Lab and Wellness Program is dedicated to creating an academic home for the study of mental health as it relates to the Islamic faith and Muslim populations. The lab aims to provide intellectual resources to clinicians, researchers, trainees, educators, and community and religious leaders working with or studying Muslims.

Current lines of research include: historical representations of mental health in the Muslim world, psychometric scales specific to Muslims, Refugee mental health, Islamophobia and social justice, including the preparation of an upcoming volume entitled "Islamophobia and Psychiatry" Springer, 2019. The lab has produced several landmark publications on these topics that have resulted in international recognition and awards; such as Dr. Rania Awaad being honored with the 2018 Islamic Psychology Researcher of the Year Award. Clinically, the SMMH Lab's Muslim Wellness Program is reflected in Dr. Awaad's work in the Diversity Clinic. The lab is also partnered with the Khalil Center- a spiritual community wellness center advancing the practice of professional psychology rooted in Islamic principles.

The lab hosts a monthly meeting for Bay Area Muslim Mental Health Professionals (BAMMHP), the Bay Area Muslim Mental Health Community Advisory Board (CAB) and a Crisis Response Team (CRT) for the Bay Area Muslim community. In recognition of its efforts, the lab was recently awarded the Stanford Outstanding Community Partnership Award.

Other notable accomplishments include an invitation by President Obama to a convening at the Department of Health in DC to discuss matters relating to Muslim Mental Health.



Jacob Ballon, MD, MPH
INSPIRE Clinic

INSPIRE is an innovative interdisciplinary client-centered resource providing respectful evidence-based care to support people to achieve meaningful recovery from psychosis through collaborative partnership with individuals and their families while advancing knowledge and training for a new generation of providers. As a research clinic, they are focused on collaborating with multiple disciplines throughout the university to conduct clinical and basic science research including functional imaging, clinical trials, basic pathophysiology, and genetics.

Dr. Jacob Ballon maintains an interest in understanding the connections between the brain and the rest of the body as relates to the manifestation and treatment of people who experience psychosis. He co-chairs a diverse working group that brings together researchers from throughout the university and technology community to investigate these connections and look at innovative ways to combine large-scale data to elucidate new strategies for developing pathways to prevention or treatment of psychosis. He has active projects investigating the metabolic implications of schizophrenia and of psychiatric medication including the association of antipsychotic medication with weight gain and insulin resistance.

In understanding the whole-body impact of psychiatric illness, Dr. Ballon also has an active interest in the role that exercise can play in psychiatric treatment. He co-chairs Brain-Ex, a multidisciplinary research partnership of clinical research, neuroscience, exercise physiology, and prevention medicine to build the capacity to study the impact of physical exercise on brain response, reward pathways, neuroprotection, and prevention of psychiatric disorders.



Fiona Barwick, PhD Sleep Education

Dr. Fiona Barwick's research interests focus on expanding sleep education, improving sleep health, and treating sleep disorders in populations where developmental, medical, psychiatric and cultural factors intersect. She and Dr. Kevin Lee, from Stanford's Counseling and Psychological Services, are currently completing an online survey of Student Sleep Habits and Health that was funded by a departmental grant last year. Survey results will inform the development of a cognitive-behavioral treatment protocol that will help students address sleep problems and manage sleep health.

Dr. Barwick is also collaborating with Dr. Heather Poupore-King, at Stanford's Pain Management Center, to develop an integrated treatment protocol for improving sleep and chronic pain. With the protocol now complete, Drs. Barwick and King plan to run the six-session group throughout 2019, collecting pre-treatment, post-treatment and follow-up data to analyze outcomes.

Dr. Barwick is currently working with Drs. Yishan Xu and Chenyu Li, to develop an integrated "East-West" protocol combining principles of Cognitive Behavioral Sleep Medicine (CBSM) with Traditional Chinese Medicine (TCM). Online and in-person groups that deliver CBSM to Mandarin speakers just started, and data will be collected during 2019 in collaboration with Chongqing Traditional Chinese Medicine Hospital.



Mahendra Bhati, MD Interventional Neuropsychiatry

Dr. Mahendra Bhati serves as the Section Chief of Interventional Psychiatry at Stanford and works with colleagues within and outside the department to develop and deliver innovative, device-based treatments.

He oversees the Stanford electroconvulsive therapy (ECT) and transcranial magnetic stimulation (TMS) clinical services and has additional expertise in deep brain stimulation (DBS) for obsessive compulsive disorder (OCD) and depression.

His efforts include advancing the use and application of neuromodulatory interventions for a range of neuropsychiatric disorders. Dr. Bhati is active in a number of research trials including responsive neurostimulation to detect and inhibit fear and impulsivity, electroencephalography-synchronized TMS for treatment of depression, deep TMS for post-traumatic stress disorder, TMS-evoked potentials as biomarkers in psychiatric disorders, augmented-reality guided TMS (pictured), and highintensity focused ultrasound for treatment-refractory OCD and depression.

Dr. Bhati's goal is to collaboratively develop and provide innovative, effective, device-based technologies to ameliorate a range of neuropsychiatric disorders. He has a joint appointment with the Stanford Department of Neurosurgery and is a member of the Wu Tsai Stanford Neurosciences Institute.

#### Clinician Educators



Kim Bullock, MD
Virtual Reality Immersive Technology

Dr. Kim Bullock's current studies focus on the use of immersive technology and perceptual illusions to improve mental and behavioral health. She is dedicated to exploring and innovating new ways of enhancing and delivering care using technology. Through interdisciplinary collaborations she develops novel treatments and educational interventions in a multitude of immersive environments within Stanford's Neurobehavioral Clinic and Virtual Reality & Immersive Technologies (VRIT) program.

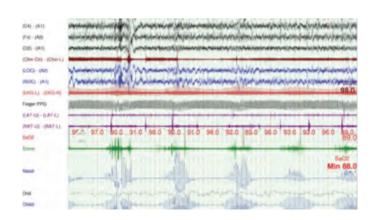
Currently, Dr. Bullock's principal research is focused on examining the feasibility of mirror visual feedback and exposure-based therapy delivered using virtual reality. This research is examining patients with somatic related symptoms, primarily those diagnosed with functional neurological disorder (FND) and whether perceptual illusions can be used in motor and affective reprogramming. In addition, she is testing the use of a measurement based care model of cognitive behavior therapy in the community using a web-based electronic tool.



Weidong Cai, PhD Human Brain Mechanism in Cognitive Control

Dr. Weidong Cai's research is focused on understanding how brain networks support cognitive control, how cognitive control systems develop from childhood to adulthood, and how functional networks are disturbed in neurodevelopmental disorders, such as ADHD.

In 2018, Dr. Cai and colleagues investigated dynamic brain mechanisms in human cognitive control using sophisticated computational methods and fast growing "big" neuroimaging data. They developed a novel computational model and methodology to identify unique patterns of dynamic brain circuit activity and applied the innovative algorithm on Human Connectome Project to uncover task-optimal latent brain states associated with working memory and decision-making. The analytic approach developed in the study enables researchers to understand dynamic brain features that had not been discovered before. With the hope that the novel algorithm can be used to discover brain circuit mechanism and failures in psychiatric disorders, Dr. Cai has applied it to study dynamic brain mechanism in childhood ADHD. He found that dynamic features of latent brain states can predict inhibitory control ability in children with ADHD. These findings shed new light into understanding dysfunctional brain mechanism underlying cognitive control deficits associated with ADHD and other disorders



Michelle Cao, DO
Central Sleep Apnea and Respiratory Assist
Devices for Sleep Apnea Treatment

Dr. Michelle Cao's expertise includes breathing disorders in neuromuscular disease, central sleep apnea, and home mechanical ventilation. Her research focuses on sleep disordered breathing in neuromuscular disease and advanced positive airway pressure devices for complex breathing disorders.

In addition, Dr. Cao is interested in advancing sleep education. Along with Dr. Shannon Sullivan, she is conducting a study evaluating the state of sleep education across primary residency and fellowship training programs in the US.



Danielle Colborn, PhD Adolescent Eating Disorders

Dr. Daneille Colborn's research interests include treatment development for adolescent eating disorders, neurocognition in adolescent eating disorders, adolescent bariatric surgery , and pediatric obesity. She has conducted research on executive functioning inefficiencies in adolescent anorexia and bulimia nervosa, and has been involved in treatment studies seeking to enhance and expand Family Based Therapy for anorexia nervosa as well as research on alternative applications of Family Based Therapy for adolescent eating and weight difficulties.

#### Clinician Educators



Victoria Cosgrove, PhD
Prevention and Intervention Lab

The Prevention and Intervention (PI) Laboratory, housed in the Division of Child and Adolescent Psychiatry, investigates the etiology and treatment of affective psychopathology across the life span and within families.

The lab's mission is focused on two overarching aims: (1) to examine, using multilevel analysis (i.e., behavioral, genetic, immunological, etc.), stress-related etiological phenomena involved in the emergence of affective psychopathology in youth and adults within a diathesis stress framework, and; (2) to develop and test the efficacy of evidence-based psychosocial and pharmacological interventions that promote arousal regulation and decreased inflammation in youth and their families.

The PI Lab recently received funding from the Child Health Research Institute at Stanford to study the biology of bullying in adolescents as well as a Stanford Teaching and Mentoring Academy Innovation Grant to develop an interdisciplinary training program for work with complex family systems.

Dr. Cosgrove continues active collaborations with Deakin University in Australia and the University of Toronto in Canada to investigate internet-based psychosocial interventions and anti-inflammatory medication treatments, respectively, for adults with bipolar disorder.



Sallie De Golia, MD, MPH Medical Student Support

Medical students have higher rates of depression, anxiety, and burnout compared to age-matched samples and the general population.

In response to these statistics, the program developed a novel resident-led reflection group, an IRB-approved intervention to enhance resilience and protect against burnout among first and second-year Stanford medical students. Residents receive 7 hours of training prior to group initiation and receive bi-weekly group supervision throughout the intervention period.

The Medical Student Support Program is assessing group efficacy through pre and post-intervention medical student surveys as well as group cohesion and resident training efficacy. The group is working on two manuscripts based on preliminary findings.



Jennifer Derenne, MD Adolescent Eating Disorders

Dr. Jennifer Derenne is a Clinical Associate Professor of Psychiatry and Behavioral Sciences in the Division of Child and Adolescent Psychiatry at Stanford University School of Medicine. She has clinical expertise in treating anxiety, depression, and eating disorders across the lifespan, with particular interest in treating college age students.

She is currently the Psychiatric Director of the Comprehensive Care Unit for Eating Disorders at Lucile Salter Packard Children's Hospital at Stanford, where she has clinical and administrative responsibilities and serves as the rotation director for child and adolescent psychiatry fellows in their first year of training.

In addition to her clinical practice, she is active in medical education and serves as the co-chair of the American Academy of Child and Adolescent Psychiatry Transitional Age Youth and College Mental Health Committee.



Emmanuel During, MD Sleep Medicine

Dr. Emmanuel During is a neuropsychiatrist specializing in sleep medicine. His research focuses on REM sleep behavior disorder (RBD) and wearable sleep monitoring/modulating devices.

He is running an investigator-initiated clinical trial studying the effect of sodium oxybate on refractory RBD, a condition often associated with Parkinson's disease that can result in injurious dream enactment. This study also evaluates the utility of actigraphy to measure RBD behaviors in the patient's home environment night after night and in response to therapy. In addition, he is the co investigator in a multicenter study characterizing the natural history of RBD to evaluate the utility of autonomic testing and skin biopsy in the risk prediction of future conversion to Parkinson's disease or other neurodegenerative diseases.

Dr. During has also been conducting research on wearable sleep devices that track and record sleep stages and obstructive sleep apnea (OSA) and potentially can enhance slow wave sleep via auditory closed-loop stimulation. He is particularly interested in using such devices to measure the night-afternight variability of OSA in the home environment, as well as their utility for monitoring RBD.

His other research interests include restless leg syndrome (RLS) and its relationship with iron. He is currently conducting a study investigating the role of the gut microbiome with regards to iron absorption and RLS symptoms.

#### Clinician Educators



Flint Espil, PhD
OCD and OC-Related Disorders

Dr. Flint Espil's research focuses on the etiology and treatment of tic disorders, including Tourette's, Obsessive-Compulsive Disorder (OCD), and OC-related disorders, including hair pulling (Trichotillomania) and skin picking (Excoriation). He is primarily interested in how the interactions among psychosocial factors, the environment, and underlying brain circuitry impact outcomes for individuals seeking treatment for these disorders.

To this end, Dr. Espil is currently conducting a study using functional near-infrared spectroscopy (fNIRS) to examine cortical correlates of treatment response among youth with Tourette's. He is also collaborating with Dr. Nolan Williams and the Stanford Brain Stimulation Laboratory on a study using transcranial magnetic stimulation to augment behavior therapy for adults with treatment refractory tics.

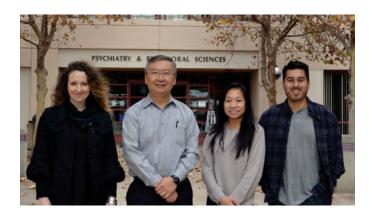
Dr. Espil is also involved in exploring ways to disseminate research findings and adapt and implement evidence-based approaches in community settings. Working alongside Dr. Ryan Matlow within the Early Life Stress and Pediatric Anxiety Program (ELSPAP), he is the PI on a study examining the feasibility of training paraprofessionals to implement modular mental health interventions in East Palo Alto schools.



Katie Fracalanza, PhD Anxiety and Related Disorders

Dr. Katie Fracalanza's research interests involve testing and refining current evidence-based treatment strategies for anxiety and related disorders. Her current research focus is on testing whether a psychotherapy strategy, called imaginal exposure, which improves anxiety in individuals with generalized worry and obsessive compulsive disorder, can be extended to help individuals with hoarding disorder. This line of inquiry is funded by a NARSAD Young Investigator Grant, and will be carried out in collaboration with Dr. Carolyn Rodriguez's Translational Therapeutics Laboratory.

Although cognitive behavioral therapy often reduces hoarding symptoms, a high proportion of people refuse this treatment option, as it involves in-home decluttering which can feel overwhelming. To help such individuals, Dr. Fracalanza will test the alternative therapy strategy of imaginal exposure, in which people with hoarding disorder imagine discarding possessions as a way of becoming acclimated to the idea, and learning about their ability to tolerate the emotions associated with discarding. Her team predicts that imaginal exposure will improve hoarding symptoms as well as two psychological experiences linked to the condition: intolerance of uncertainty and emotional avoidance.



Lawrence Fung, MD, PhD Fung Lab

The Fung Lab strives to advance the understanding of neural bases of human socio-communicative and cognitive functions by using novel neuroimaging and bioanalytical technologies, and devise and implement novel interventions to improve the lives of neurodiverse individuals by maximizing their potential and productivity. They recently completed an investigation which examined the GABAergic system of the brains of individuals with autism spectrum disorder (ASD) by simultaneously measure GABAA receptor binding densities by positron emission tomography and GABA levels by proton magnetic resonance spectroscopy (1H-MRS).

Currently, the Fung Lab is conducting pilot studies to investigate (1) the neural bases of perfect pitch in individuals with ASD, (2) social behaviors of young adults with ASD through smartphone technologies, and (3) the efficacy of artificial intelligence (AI)-driven technologies to reduce core symptoms of ASD.

The Fung Lab is the base of the Stanford Neurodiversity Project (SNP), a special initiative of the Department of Psychiatry and Behavioral Sciences. The mission of the SNP is to maximize the potential of neurodiversity through education, service, research, and advocacy. Through the SNP, they are running a Neurodiversity Awareness Program, and developing the Neurodiverse Student Support Program, Neurodiversity at Work Program, and Adult Neurodevelopment Clinic.



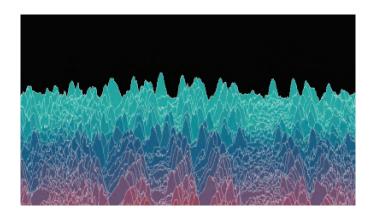
Grace Gengoux, PhD, BCBA-D Effective Interventions for Autism Spectrum Disorder

Dr. Grace Gengoux is Director of the Autism Intervention Clinic and leads an autism intervention research program focused on developing and evaluating promising behavioral and developmental treatments for Autism Spectrum Disorder (ASD). These programs are designed to inform improvements to clinical care and dissemination of evidence-based practices to parents and professionals.

Over the past year, Dr. Gengoux's program has focused on several clinical trials investigating a Developmental Reciprocity Treatment program and parent training models for delivering Pivotal Response Treatment (PI: Hardan). In partnership with the community agency, Abilities United, Dr. Gengoux also leads an innovative inclusive social skills research program (PI: Gengoux) focused on teaching parents how to expand peer networks and on improving peer initiations made by children with ASD.

Several pilot research projects are also underway, including investigation of video-based telehealth delivery of Pivotal Response Treatment and a novel group program using evidence-based strategies (Acceptance, Mindfulness, Optimism, Resilience; AMOR) to reduce parent stress and improve wellbeing. Plans are also in place with Drs. Kirsten Willar and Jennifer Phillips for expansion to additional group models for treatment of challenging behavior and social deficits, as well as for development of an intensive early intervention research program for preschool children with ASD.

#### Clinician Educators



Andrea Goldstein-Piekarski, PhD Computational Psychiatry, Neuroscience, and Sleep Laboratory

Dr. Andrea Goldstein-Piekarski directs the Computational Psychiatry, Neuroscience, and Sleep Laboratory (CoPsyN Sleep Lab) as a Clinical Assistant Professor in the Department of Psychiatry and Behavioral Sciences and as a PI within the Sierra-Pacific Mental Illness Research, Education and Clinical Center (MIRECC) at the Palo Alto VA.

Dr. Goldstein-Piekarski's research program harnesses findings from trans-disciplinary clinical research and leverages her unique background in human brain imaging, computational methods, clinical psychology, and sleep research to improve the way we diagnosis and treat psychiatric disorders. The themes of her work include (a) examining the role of sleep physiology in the development, maintenance, and treatment of psychopathology across the life span, (b) identifying transdiagnostic subtypes of dysfunction that are linked to brain function, and (c) identifying objective biomarkers that predict general and medication-specific responses to pharmacological and psychosocial treatments for insomnia, anxiety, and depression.

Dr. Goldstein-Piekarski is currently leading a VA merit award and an NIMH R01 award focused on identifying predictors in Cognitive Behavioral Therapy for Insomnia (CBT-I).



Kate Hardy, ClinPsychD
Psychosocial Interventions for Psychosis

As part of the INSPIRE clinic, the goal of this lab is to broaden the development, dissemination, and application of psychosocial interventions for psychosis.

Dr. Kate Hardy is an internationally recognized expertin Cognitive Behavioral Therapy for psychosis (CBTp) and researches novel applications of this approach including training family members in key CBTp skills, integrating Virtual Reality technology to augment traditional therapy interventions. The INSPIRE clinic is a pilot site for Pear Therapeutics testing Thrive – an adjunctive app supporting the self-management of psychotic symptoms. In addition, the lab is supported by students from the PGSP-Stanford PsyD Consortium who are committed to conducting their dissertation research in line with the lab's goals.

Examples of dissertation studies conducted by PGSP-Stanford Consortium students include a pilot trial of a group based worry intervention for individuals with early psychosis; examination of burnout in staff working in the forensic mental health system; and self-perceived barriers to recovery for women diagnosed with a psychotic disorder.



Rona Hu, MD
Communication Health Interactive for
Parents and Others

A 2015 suicide cluster among Palo Alto teenagers made national news, but few reports mentioned that all four suicides were Asian. Nationally, Asian-American youth are at higher suicide risk, citing family acculturation mismatches as especially stressful.

The Department responded with the Communication Health for Interactive Parents and Others (CHIPAO) which hosted interventions for teens; they talked with parents who discussed cultural differences, but also requested role-modeling. They immediately planned a series of theatrical performances for Bay Area schools. Faculty and trainees drew on our academic, clinical, and personal experiences, writing scripts and acting, depicting scenarios like arguing about grades, dating someone "unsuitable", and embarrassment over a parent's accent.

CHIPAO performs each scene first one way, pause for input, then perform it again, but "better". The response: coverage from front page news, television and radio, to national and international invitations to perform for schools, communities, and professional meetings. Even more gratifying: parents who realize they are not alone, and talk about their struggles.

Responding to requests, we are expanding: vignettes for South Asians and Latinos, outcomes research, and video programs supplementing the live performances. As doctors, CHIPAO has found a "treatment" without side effects, that may save lives.



Agnieszka Kalinowski, MD, PhD Translational research in Schizophrenia

Dr. Agnes Kalinowski is a physician-scientist conducting translational research as a Postdoctoral Scholar under the guidance of Drs. Alexander Urban and Ruth O'Hara in the Department of Psychiatry, aimed at revealing the etiology of psychosis in order to inform more effective treatments for serious mental illness. She is also a Clinical Instructor, diagnosing and treating patients with schizophrenia in the INSPIRE Early Psychosis Clinic

Currently, she is working on an observational clinical trial in patients early in the course of schizophrenia to molecularly characterize a subset of patients who appear to have an inflammatory phenotype. The work is in collaboration with the Department of Medicine, where she is funded by the Translational Research and Applied Medicine program.

Dr. Kalinowski is also investigating patients with 22q11 Deletion Syndrome, who often have psychiatric co-morbidity, both clinically and in the laboratory where she uses patient-derived pluripotent stem cells to study their genomic organization and functional ability to process neurotransmitters. This work is funded by the Department of Psychiatry Innovator Grants Program.

#### Clinician Educators



Makoto Kawai, MD Sleep, Cognition, and Aging

Dr. Makoto Kawai is a board-certified sleep specialist and physician scientist within the Division of Sleep Medicine. His work focuses on using simultaneous Near-Infrared Spectroscopy and polysomnography to measure the impact of sleep on cognitive and affective function in older adults. His goal is to identify potential sleep biomarkers to investigate the mechanism of progression from normal aging to Mild Cognitive Impairment (MCI) or dementia. He also investigates the impact of sleep on cognitive/affective function or behavior abnormality in various neurodevelopmental and neurodegenerative disorders across life-span.

His research has been supported by National Institute on Aging, American Sleep Medicine Foundation, Brain and Behavior Research Foundation, and The Mosbacher Family Fund for Autism Research.

Dr. Kawai and his team collaborate extensively with the Lifespan Approaches to Neuropsychiatric Disorders Program and Stanford/VA Alzheimer Research Center (ARC) located in the Palo Alto VA Health Care System directed by Dr. Ruth O'Hara.



Jennifer Keller, PhD
Empowerment and GBV Prevention Lab

The long-term sequela of interpersonal violence is clear, and this has led to Dr. Jennifer Keller's evolving interests in the prevention of gender-based violence (GBV). Her work includes evaluating GBV prevention programs for boys and girls, as well as the development of healing and empowerment programs for victims of interpersonal violence.

Activities include implementation of prevention programs, training within community organizations who implement these programs, and the adaptation of the base program to various settings. Results on the impact of a violence prevention program for high school boys in Nairobi, Kenya, have been published.

Most recently, Dr. Keller and her team have developed the Building Empowerment and Resilience Program (BEAR) as a therapeutic intervention for women living in homeless shelters, most of whom have experienced much trauma. This past fall, the first 40-hour training program was implemented with LifeMoves, our community partner, and currently, clinical psychology practicum students are implementing the program within several transitional housing shelters.

In addition, a recent seed grant is allowing Dr. Keller to investigate the complexity of GBV in India. In working with a global partner, they are culturally adapting the BEAR program for implementation with adolescent girls in Gujarat, India.



Matthew Kendra, PhD
Stanford Tobacco Cessation Program

Tobacco treatment within the Addiction Medicine and Dual Diagnosis Clinic continues to grow. Program Director and Psychologist Dr. Matthew Kendra completed a Clinical Effectiveness Leadership Training program with a team from Psychiatry and Primary Care, resulting in an automated referral from all tobacco users within Stanford Primary Care to our tobacco cessation program. This new initiative, combined with previous funding from Stanford Cancer Center Clinical Innovation Fund, serves as a platform to provide effective and accessible tobacco treatment to Stanford Cancer Center patients and family members.

Our team has partnered with the research lab of Dr. Jodi Prochaska, as well as Stanford Health Education, Engagement and Promotion Programs, and was recently awarded P30 Supplement grant funding from the National Cancer Institute (NCI) Cancer Moonshot program to expand tobacco treatment capacity across Stanford Cancer Center. This prestigious award affords our team the opportunity to implement tobacco treatment at Cancer Center with telemedicine, medication management, free counseling, and then to spread this model to the rest of Stanford Hospital and Clinics.



Christina Khan, MD, PhD
THRIVE Lab

THRIVE is a trauma and recovery program focused on the rehabilitation and empowerment of individuals who experience adversity. Those who may benefit include people and communities that are disadvantaged or marginalized by immutable factors such as minority status, poverty, trauma, and exploitation. This includes economically disadvantaged populations, those affected by ethnic or racial discrimination, LGBTQ+, and health services professionals.

Clinical services are personalized through an integrative and strengths-based approach, building on resources available within existing primary medical and community systems of care. Current sites include Ravenswood Family Health Center in East Palo Alto as well as communities in rural Guatemala and Zimbabwe. Activities include trainings for primary care clinicians and community health workers, development of culturally-tailored diagnostic tools and brief interventions, and the integration of digital tools such as passive sensors, mobile-based interventions and population-based tracking.

The research arm of the laboratory is focused on implementation research related to the above clinical activities and development of tools to better quantify risk and resilience for transdiagnostic markers of distress in vulnerable populations.

#### Clinician Educators



Jane Paik Kim, PhD
Statistical Methods for Public Mental Health

Dr. Jane Kim's research goal is to develop and apply statistical methods to ensure that the most appropriate methods are being used to improve public mental health. Dr. Kim's research topics include statistical methods for the optimization of interventions delivered through mobile or wearable devices, as well as empirical ethics work to enable and safeguard innovative neuroscience research.

She is a co-Investiagator on a Neuroethics R01 (PI: Roberts), "Enabling ethical participation in innovative neuroscience on mental illness and addiction", which aims to better enable ethical participation in brain research. She is also involved as a co-Investigator and biostatistician in other ongoing grants in the department, in the areas of sleep, eating disorders, and maternal and child health



Hilit Kletter, PhD Childhood Trauma

Dr. Hilit Kletter directs the trauma program within the child/ adolescent outpatient anxiety clinic. She provides assessment, consultation, and treatment for youth with a wide range of traumas. She is the master trainer for Cue-Centered Therapy (CCT), an intervention for youth exposed to chronic trauma. She provides training and supervision to students and clinicians, and within the community. She is currently working on a formal certification program for CCT and dissemination worldwide.

Dr. Kletter is involved in a randomized controlled trial taking place at Stanford Youth Solutions in Sacramento and UCSF Child/Adolescent Services. The study examines three treatment conditions for traumatized youth: CCT, TF-CBT, and treatment as usual. The purpose of the study is to determine what child characteristics predict treatment outcomes, which phases of treatment are most effective, and to identify neuro-markers that may be predictors of treatment outcome. Collaborators include Drs. Allan Reiss (neuroimaging consultant), Judy Cohen (TF-CBT consultant), and Carl Weems (statistical consultant).

In addition, Dr. Kletter is part of the Clinical Outcomes Study which aims to gain an understanding of the patient population coming into the anxiety clinic as well as evaluating changes in symptom severity and functioning across treatment.



Lynn Koegel, PhD and Robert Koegel, PhD
Pivotal Response Treatment

Drs. Robert and Lynn Koegel developed Pivotal Response Treatment (PRT) for autism spectrum disorder (ASD). PRT is an empirically validated, efficient and effective behavioral intervention, which has proven to be a breakthrough in improving the core areas of autism, resulting in very widespread improvements to both the individual symptoms of autism as well as to the entire condition of the disorder.

They are working on programs to disseminate their research findings and intervention procedures throughout the world through trainer-of-trainers and parent education models. Thus their work is both helping individual children and is also addressing the severe shortage of services for this population.

Their publications have included treatments for a wide age range, from infancy through adulthood, and are addressing communication, disruptive behavior, socialization, academic performance, and other areas. Pivotal Response Treatment (PRT) targets key areas thought to be central to the disorder of autism by improving motivation, social initiations, self-control, empathy, and responsiveness to multiple cues.



John Leikauf, MD Disruptive Behaviors in Adolescents

Dr. John Leikauf's research interests include defining the interrelationships between symptoms and objective markers of behavior and brain function in order to personalize treatment. His recent work has focused on youth with Attention-Deficit/ Hyperactivity Disorder and associated cognitive and learning differences, as well as anxiety disorders and trauma.

Dr. Leikauf has identified multivariate profiles of cognitive function in youth with ADHD and explored treatment response profiles across a variety of biomarkers. He is also actively working on development of measurements from consumer electronic devices to improve characterization of behavior in real-world settings and relate these to cognitive measures used in controlled laboratory settings.

### Clinician Educators



Juliana Lockman, MD Neurological Disorders

Dr. Juliana Lockman is a Clinical Assistant Professor in the Department. Her clinical activities include providing pharmacologic and behavioral care for clients with psychiatric and behavioral conditions in the context of neurological illness, including epilepsy, stroke, movement disorders and others. She also teaches and supervises Stanford residents and fellows in Neuropsychiatry. Her consultation-based practice includes outpatient and inpatient work.

Dr. Lockman has a Stanford-based relationship with La Selva's state-of-the-art residential and partial hospitalization (PHP) programs in Palo Alto. In collaboration with La Selva staff, she has designed and implemented an evidence-based treatment program for patients with Functional Neurologic Symptom Disorder (FND). Since its inception in April 2018, the FND Track has gained nationwide status as one of only a few intensive treatment programs for FND, with referrals from all over the country. Development of a clinical research protocol for the program is underway.



Daniel Mason, MD
Psychiatry and Humanities

Dr. Daniel Mason's research interests are in the intersection between psychiatry and the humanities, with a particular focus on the practical application of history, literature, and art to clinical practice.

Most recently Dr. Mason and his team have used historical and literary sources to present the first working criteria for verbigeration (speech catatonia); studied Enlightenment botanical texts to critically explore the historical basis of contemporary classification; and used literary sources to propose novel ways of approaching the phenomenology of psychosis.

In addition, Dr. Mason continues to teach a pair of undergraduate courses in psychiatry and the humanities, in the hope of teaching students to better understand the experience of mental illness, while inspiring them to reach out across disciplinary boundaries as they move forward in their careers.



Ryan Matlow, PhD Addressing Childhood Exposure to Stress, Trauma, and Adversity

Dr. Ryan Matlow's research focuses on the development, implementation, and integration of mental health services and interventions in community settings. Dr. Matlow's efforts emphasize programs that address childhood exposure to stress, trauma, and adversity in communities and populations that have been historically marginalized, under-resourced, and/or experienced human rights violations.

Dr. Matlow seeks to address the long-term neurodevelopmental impact of childhood trauma exposure through activities that provide psychoeducation, skill development and capacity-building, clinical intervention, and advocacy. These projects engage multidisciplinary collaboration, community participatory methods, and restorative justice practices to inform program development, evaluation, and systems change.

Current research projects include the implementation and evaluation of school-wide yoga and mindfulness programs, trauma-focused psychotherapy (i.e., Stanford's Cue-Centered Therapy), integration of mental health service and consultation in community-based organizations, training in evidence-based mental health service delivery for school-based community ambassadors, and psych-legal collaboration in human rights advocacy.



Lawrence McGlynn, MD LGBTQ Health Center

LGBTQ individuals have unique healthcare needs and face significant health disparities. The Health Trust of Santa Clara County is in the process of completing a feasibility study looking at the creation of an LGBTQ Health Center to serve the South Bay and Peninsula.

The Center received a small grant award from Stanford to survey students, residents, and faculty about their knowledge and comfort taking care of LGBTQ patients as well as their interest participating in a new LGBTQ health clinic forming in San Jose. As they move forward, they will use this data to guide resource management and program development, and help define Stanford's role in health center.

Dr. Lawrence McGlynn is also coming onboard as an investigator with Drs. Edith Sullivan and Adolf Pfefferbaum in their work studying the effects of alcohol in the brain, particularly in older individuals with HIV disease.

### Clinician Educators



Mitchell Miglis, MD
Neurology & Neurological Sciences
and Sleep Medicine

Dr. Mitchell Miglis' current research involves skin biopsy biomarkers to assess risk of progression to Parkinson's disease in patients with REM-sleep behavior disorder, and the association between sleep disorders and various disorders of autonomic nervous system dysfunction.

Dr. Miglis received his BS in Biology from the University of North Florida and his MD from the University of Florida. After serving as a medical intern at Washington Hospital Center/Georgetown University, he completed his neurology residency at Bellevue and NYU Hospital in New York City. He then completed two fellowships, the first in Autonomic Disorders at the Beth Israel Deaconess Medical Center of Harvard Medical school, and the second in Sleep Medicine at the Stanford Sleep Medicine Center.

Dr. Miglis is board certified in neurology and sleep medicine by the American Board of Psychiatry and Neurology. Dr. Miglis treats a wide variety of neurological diseases and has a special interest in Autonomic Disorders, Sleep Disorders, and the interaction between these conditions.



Lauren Mikula Schneider, PsyD Psychological Aspects of Pediatric Transplantation and Cardiology

Dr. Lauren Mikula Schneider's clinical research aims to better understand the psychological aspects of chronic illness on pediatric patients and their families. Specifically, her clinical work and research focus on the implications of solid organ transplant and cardiac conditions on mental health and family issues. Dr. Schneider, along with Dr. Anne Dubin from the Division of Pediatric Cardiology, and colleagues are presenting and publishing results from a project in which pediatric patients with implantable cardioverter defibrillators and their parents completed a psychosocial battery in order to describe the psychological needs of this patient population and guide medical professionals treating these patients.

Dr. Schneider, Dr. Richard Shaw, and Dr. Christopher Almond from the Division of Pediatric Cardiology have created the Stanford Pediatric Psychosocial Optimization Tool-Transplant Module (SPPOT-T): a standardized psychosocial tool for pediatric solid organ transplant evaluations. They are in the process of piloting this measure.

Moreover, Dr. Schneider, in collaboration with colleagues from the Division of Pediatric Cardiology, is involved in current research projects aimed to: 1) examine the effectiveness of virtual reality for cardiac procedure preparation and medical professional training, 2) understand the psychological burden of transplantation on patients with congenital heart disease, and 3) examine the potential for post-traumatic growth in pediatric heart transplant patients.



Adriana Miu, PhD
Mindset Effects on Mental Health

Dr. Adriana Miu's research interests focus on social-cognitive processes related to depression, anxiety, and trauma. Specifically, Dr. Miu is interested in examining how fixed and growth mindsets about one's personal characteristics may affect mental health.

Dr. Miu's current projects include applying fixed and growth mindsets to clinical populations and interventions.



Diana Naranjo, PhD
Psychosocial Aspects of Chronic Illness in Children

Dr. Diana Naranjo's clinical research is aimed at overcoming barriers and increasing adherence in persons with chronic illness, specifically diabetes and cystic fibrosis. Two areas of emphasis cut across this work: 1) addressing health disparities in chronic illness through individual, provider, and systems level interventions, and 2) optimizing health and quality of life through medical devices and technologies.

Beginning in postdoctoral fellowship, Dr. Naranjo specialized in understanding the unique behavioral, mental health, individual, and family factors that impact health care for youth with chronic illness.

She has successfully implemented a clinic-based transition program for youth with type 1 diabetes within a Quality Improvement framework, and research to implement patient reported outcomes routinely across pediatric health clinics.

### Clinician Educators



Jennifer Phillips, PhD Autism Assessment Lab

The Autism Assessment Lab focuses on development, training, and research in developmental and neuropsychological measures used to diagnose and measure functioning in individuals with autism and other developmental disabilities. Over the past year, Dr. Phillips has consulted on a number of research trials and longitudinal characterization studies across the Departments of Psychiatry, Neurology, and Genetics. The lab has provided clinical research assessment for projects in the Autism and Developmental Disabilities Research Program, the Cognitive and Systems Neuroscience Laboratory, the Parker Lab, Pediatric Neurology, and Genetics.

An active current project is development of a self-report measure of social motivation with Dr. Antonio Hardan. This instrument holds promise in helping researchers better measure this aspect of treatment outcome, both in autism and other conditions in which motivation is a targeted variable. With the help of research postdoc Mirko Uljarevic and Rachel Schuck, data is currently being compiled for publication.

The lab also provides a clinical psychology graduate training practicum experience, in which students from the PGSP/ Stanford PsyD Consortium program are trained in psychological assessment of children. Students are also mentored in dissertation research as well as given the opportunity to participate on current lab projects, posters, and presentations.



Lisa Post, PhD Sports Psychology

Dr. Lisa Post's clinical and research group is focused on improving psychosocial functioning in elite athletes. Recent research initiatives include evaluation of a pilot injured athlete support group designed to support Stanford Athletes that was funded by the National Collegiate Athletic Association (co-Pl: Norah Simpson). This program was identified as a highly desired resource by both student-athletes and athletic staff.

Ongoing work is focusing on how to increase access to this critical support system, as well as continued development and dissemination efforts. Dr. Post serves as the Chief of Sports Psychology in the Stanford Athletic program and also is the Sports Psychologist for the San Francisco 49ers football program. Her clinical program provides direct services to athletes, psychoeducational services to athletic staff, and training to psychology fellows.



Douglas Rait, PhD Couples and Family Therapy Team Learning and Design

Dr. Douglas Rait's current research and scholarly interests include the therapeutic alliance in couples and family therapy, the family context of health and illness, family-systems training in medical education, work-couple-family balance, the influence of technology on family relationships, health technology innovation, multidisciplinary team performance, and digital applications in the behavioral sciences.



Thalia Robakis, MD, PhD Biology of Perinatal Mood Disorders

Dr. Thalia Robakis is investigating the associations between DNA methylation markers in infants and the attachment styles and trauma histories of their mothers; this work is funded by the Stanford Precision Health and Integrated Diagnostics center (PHIND). She is also conducting a follow-up assessment of developmental outcomes in the young children of mothers who participated in her 2011 study of attachment insecurity and postpartum depression, funded by the Stanford Maternal Child Health Research Institute (MCHRI).

In addition, this past year she collaborated with investigators in the Department of Obstetrics and Gynecology, in the Population Health Sciences Center at Stanford, and in the psychology department at Palo Alto University to publish investigations into the epidemiology of depression in perinatal and reproductive-age women, as well as its possible links to gestational diabetes.

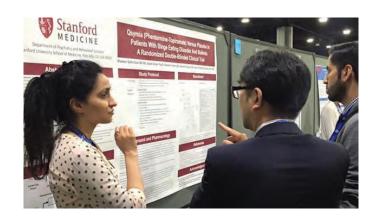
### Clinician Educators



Mary Sanders, PhD
Munchausen by Proxy and Eating Disorders

Dr. Mary Sanders continues to write and present nationally in the area of Medical Child Abuse/Munchausen by proxy. She has been a member of a National Task force through APSAC that provides training throughout the nation and provided diagnostic input to the DSM-V committee. This past year she led several workshops and also led the task force in writing the first Practice Guidelines for the Assessment and Treatment of Munchausen by proxy Child Abuse. She is currently contributing to the creation of the first International Practice Guidelines through ISPCAN.

Dr. Sanders continues to provide treatment and supervision as the Program Director of the Comprehensive Care Unit and presents nationally with her inpatient team in the area of Eating Disorders. She also Chairs site visits nationally and in Canada on behalf of the American Psychological Association to assess accreditation status of pre-doctoral and post-doctoral internship programs.



Shebani Sethi-Dalai, MD, MS Eating Disorders and Obesity Medicine

Dr. Shebani Sethi-Dalai is dedicated to improving both the metabolic and psychiatric health of patients with mental illness. Her clinical and research focus is on patients struggling with untreated obesity, metabolic syndrome, and mental illness, including depression, bipolar disorder, and eating disorders such as binge eating disorder.

Her study "The Impact of the Ketogenic Diet on Obesity, Metabolic Abnormalities and Psychiatric Symptoms in Patients With Bipolar Disorder or Schizophrenia: An Open Pilot Trial" will soon begin recruiting. This project is generously funded by the Obesity Treatment Foundation. She was also a co-investigator on a completed SPARK Spectrum funded study evaluating whether Qsymia (Phentermine/Topiramate), an FDA-approved obesity medication, is efficacious in binge eating and purging.



Yelizaveta Sher, MD
Delirium in Lung Transplant Recipients

Dr. Yelizaveta Sher has been corroborating with cystic fibrosis (CF) and lung transplant (LT) teams. As a Mental Health Coordinator in CF clinic, sponsored by CF Foundation, she oversees mental health screening and care. Ongoing research will determine whether mental health interventions embedded in CF clinic improve mental and physical health outcomes in CF patients.

This past year, Dr. Sher co-edited and published the book "Psychosocial Care of End-Stage Organ Disease and Transplant Patients" with Springer Publishing. She also became a site co-PI with Dr. Paul Mohabir, Chief of Cystic Fibrosis (CF) clinic on multi-site CF-specific Cognitive Behavioral Therapy.

In addition, Dr. Sher has been leading a Quality Improvement (QI) project on timely delirium identification and treatment in LT recipients. The project was inspired by our own retrospective study of 163 LT recipients, which identified a 44% delirium rate post LT surgery. Delirium was associated with longer intensive care unit (12.9 days, 95% CI: 6.1-19.6) and hospital lengths of stay (17.7 days, 95% CI: 7.6-27.8). This publication is currently under review

In Dr. Sher's QI project, the Psychosomatic Medicine team follows each new LT recipient. So far, 37 new LT recipients have been evaluated for development of delirium for at least 5 days post-surgery. In addition to improving patient care, this project will allow them to better identify delirium characteristics and associated outcomes in this patient population, and to design interventions to decrease incidences of delirium and improve outcomes.



Norah Simpson, PhD Sleep and Health

Dr. Norah Simpson's research interests are focused on the intersection of sleep and health, including use of behavioral sleep medicine approaches to improve sleep among individuals with sleep disorders, following concussion, and in high performance athletes. She conducts her research and clinical work as part of the Sleep Health & Insomnia Program (SHIP).

Current research includes: 1) Randomized control trial (RCT) testing a stepped care model of insomnia treatment in primary care settings; 2) RCT testing a stepped care model of treatment of individuals with comorbid insomnia and obstructive sleep apnea; 3) Developing a tailored sleep educational resource for student athletes based on focus groups with Stanford Athletes; and 4) Experimental sleep loss research; most recently, this work examined the impact of repeated episodes of sleep restriction on markers of stress, inflammation and pain.

### Clinician Educators



Keith Sudheimer, PhD Sudheimer Laboratory

Dr. Keith Sudheimer is a Clinical Assistant Professor and affective neuroscientist. The Sudheimer Laboratory is focused on understanding the neurophysiology that creates the emotional symptoms that people experience while they suffer from psychiatric disorders. Dr. Sudheimer then translates these findings into experimental new treatments designed to correct emotion pathophysiology.

The Laboratory is currently investigating how poor sensitivity of subcortical brain structures to hormones may be causing changes in emotion networks in the brains of people with depression. The Sudheimer Laboratory has also created a technique for mapping the brain networks of individual people to allow the development of personalized and precision-guided brain stimulation treatments for across multiple psychiatric disorders, including depression, obsessive-compulsive disorder, autism, addiction, and others.



Margo Thienemann, MD
PANS Program

This has been a vibrant 6th year for the PANS (Pediatric Acute-onset Neuropsychiatric Syndrome) Program. PANS is a relapsing-remitting syndrome with prominent psychiatric symptoms which include obsessions/compulsions, swallowing difficulties/food restriction, severe anxiety, often separation anxiety, sensory dysregulation including unusual sensitives to medications, memory/cognitive impairment, as well as motor symptoms including loss of fine motor skills, grip strength, truncal tone, enuresis, and sleep abnormalities.

The PANS clinical program aims to provide care to patients who are eligible for this research program. Their research program aims to understand immunologic predisposition of the patients with this condition. They seek fundamental and reliable discoveries that will improve therapies and to prevent relapses.

The Stanford PANS clinic is a multi-disciplinary clinic which includes experts in psychiatry and immunology/rheumatology. The clinic also has close collaborations with infectious disease experts, ENT surgeons, and eating disorder specialists.

Child psychiatrist, Dr. Margo Thienemann, is the clinic codirector and leads the PANS mental health team which includes a CBT therapist (Sana Ahmed LCSW) and Drs. Melissa Silverman and Paula Tran (both former Stanford Child Psychiatry Chief Fellows) who joined the PANS mental health team this year.



Mickey Trockel, MD, PhD
Health for Healers

Dr. Mickey Trockel's research over the last year has continued to focus on health care provider wellbeing, including work funded by a program development and evaluation research grant from The Physician Foundation. This project aims to train physicians identified by peers as Opinion Leaders (wellliked and influential physicians). These Opinion Leaders will then encourage engagement in activities designed to create an organizational culture of wellness (e.g. appreciation, values alignment, and peer support). The intent of this effort is: 1) to invite all physicians to become co-creators of their own practice culture in order to cultivate gratitude, compassion, and associated high performance at work, and 2) to learn, experiment with, and encourage each other to practice skills that increase compassion and gratitude for ourselves and for each other. If successful, the result will be a rising tide to increase professional fulfillment for all, and buoy up those at highest risk of burnout.

In addition, Dr. Trockel is working with the American Medical Association on a project to compare performance across multiple instruments commonly used in the United States to assess physician wellbeing. The aim of this project is to determine score equivalency across different assessments of burnout and to compare their predictive value in determining risk for depression, suicidal ideation, and intent to leave current employment.



Peter van Roessel, MD, PhD Exploring Insight in Anxiety Disorders

Dr. Peter van Roessel works within the Rodriguez Translational Therapeutics Lab to advance development of novel, rapidacting treatments for individuals with obsessive-compulsive disorder (OCD) and other severe anxiety disorders. His research interests reflect motivation to understand and better treat disruptions of insight – the human capacity to maintain awareness of illness, to understand the origin of symptoms, or to make evaluations about the need for treatment

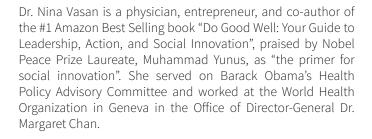
Insight is often impaired in patients with OCD, body dysmorphic disorder, health anxiety, among other obsessive-compulsive spectrum illnesses. The rapid symptom change brought about by new therapies pioneered in the Rodriguez Lab, in the context of ongoing multimodal neuroimaging and EEG studies, presents an exciting opportunity to better understand the brain basis of insight and the neural correlates of its loss and recovery.

Dr. van Roessel recently received a NARSAD Young Investigator Award to study nitrous oxide as a novel rapid-acting treatment in OCD; he was additionally selected for a 2018 Departmental Innovator Pilot award, together with Drs. Carolyn Rodriguez, Booil Jo, and Chi-Ming Chen (U. Conn.), to explore vestibular neurostimulation as a modulator of insight in obsessive-compulsive spectrum disorders.

### Clinician Educators



Nina Vasan, MD, MA Brainstorm



Compelled by her own personal struggles, she is now working to apply her experience in entrepreneurship to brain health. She is the Founder and Director of Stanford Brainstorm, the world's first academic laboratory dedicated to transforming brain health through entrepreneurship. Dr. Vasan and Brainstorm's team are authoring a book on tech ventures in brain health; they were named by The Financial Times and McKinsey to the 2017 international Bracken Bower Prize for the best business book proposal of the year shortlist. Named a "40 Under 40 Healthcare Innovator" by MedTech Boston, she is Chair of the Psychiatry Innovation Lab, the American Psychiatric Association's mental health incubator. She worked at McKinsey & Company in Silicon Valley advising healthcare payers and providers, and also advises investors, philanthropists, and healthcare startups.



Janani Venugopalakrishnan, MD Neuropsychopharmacology

Dr. Janani Venugopalakrishnan has taken on a new role as the child psychiatrist in charge of the neuropsychopharmacology clinic since 2018. It is an interdepartmental collaborative effort between the Stanford pediatric neurology clinic and child psychiatry focusing on caring for children and young adults with complex neuropsychiatric issues. In addition, she also sees patients with autism and intellectual disabilities in her continuity clinic.



Po Wang, MD
Bipolar Disorders

Dr. Po Wang's current research interests focus on clinical management of Bipolar Disorders.

The Stanford University Bipolar Disorder Clinic, established by Dr. Terence Ketter in 1995, focuses on Bipolar Disorder etiology, phenomenology, and treatment. The clinic began with neuroimaging modalities including PET, MRI, and MRS to better understand Bipolar Disorder neurobiology, and to develop techniques to better target treatments. Phenomenological research focused on the development of Bipolar Disorder in late adolescence and early adulthood, and correlations between creativity and mood disorders. Treatment research involves clinical trials of novel medications in Bipolar Disorder, psychotherapy in Bipolar Disorder, industry-funded pivotal phase III efficacy and phase IV effectiveness studies, federally funded comparative effectiveness studies. Major effectiveness studies included Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD), Lithium Treatment Moderate Dose Use Study (LiTMUS), and Bipolar Clinical Health Outcomes Initiative in Comparative Effectiveness (Bipolar CHOICE). The synthesis of this research is a clinical paradigm of evidencebased and measurement-based care

Current research initiatives include longitudinal monitoring of Bipolar Disorders, establishing mood correlates of actigraphy in Bipolar Disorder, integrating actigraphy into clinical care, and an investigator-initiated, double-blind, placebo-controlled trial of adjunctive suvorexant for insomnia in Bipolar Disorder.



Julie Weitlauf, PhD Women's Wellness

Dr. Julie Weitlauf's current work focuses broadly upon the intersection of physical and mental health in women across the lifespan. Her research has particular emphasis on the role of interpersonal violence on women's health and wellbeing, and current projects are evaluating the intersection of physical, sexual and emotional abuse exposure and women's risk of premature mortality, development of chronic illness at midlife, and impact on sexual functioning throughout the life course.

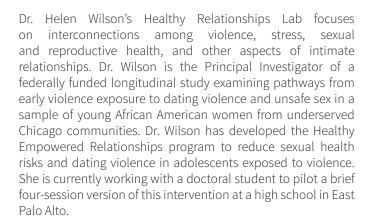
Dr. Weitlauf serves as a standing member of the Vietnam Veterans Mortality Study Steering Group, has worked with Veterans Benefits Administration and the Office of Women's Health and Reproductive Health at the Veterans Affairs Central Office (Washington DC) regarding the development of VA centric health care policies and practices pertinent to the reproductive health of women Veterans, and with the American College of Obstetrics and Gynecology's Committee on Underserved Populations regarding the unique medical and mental health care needs of women Veterans.

Other notable projects include work related to the evaluation of cognitive behavioral therapy for menopausal hot-flashes in mid-life women with mood disorders and the development and implementation of a simulation based training protocol designed to teach interdisciplinary clinical teams (gynecology + mental health) to use cognitive behavioral therapy to treat sexual pain disorders, such as vaginismus, in women.

### Clinician Educators



Helen Wilson, PhD Healthy Relationships Lab



Dr. Wilson is also collaborating with the Department of Obstetrics and Gynecology to determine whether stress in women pregnant with multiple gestations renders them at a higher risk for preterm labor and delivery. Drs. Helen Wilson and Adriana Miu, and a doctoral student Talya Vogel are investigating the role of cognitive beliefs (e.g., fixed vs growth mindset, meaning in life), in the development of psychopathology or resilience in students who have experienced sexual and relationship violence.

Finally, Dr. Wilson is Co-Investigator of a study funded by the Child Health Research Institute Global Child Health Equity Seed Grant Program to determine whether an empowerment program focused on reducing sexual assault may also reduce mental health outcomes among adolescents in Nairobi slums, including those who experience sexual assault during the study period.



Lynn Yudofsky, MD
Wellness and Mindfulness

Dr. Lynn Yudofsky has had a longstanding interest in clinical treatment and research focused on wellness, including integrative medicine, exercise, nutrition, tobacco cessation, yoga, dance, meditation, mindfulness, stress-management, and sleep hygiene, for individuals with psychiatric disorders, neuropsychiatric disorders including developmental disorders, other medical illnesses, and also for preventive purposes and quality of life enhancement for the general population.

In her practice at Integrative Medicine at Stanford, under the direction of Dr. David Spiegel, she has been able to incorporate wellness-based interventions into her treatment of psychiatric patients. She has also been working on the development and establishment of a Lifestyle Psychiatry Clinic at Stanford. The purpose of this clinic is to provide wellness-based treatments for individuals who would like to improve their mental and physical wellbeing by focusing on interventions including mindfulness, compassion focused therapy, nutritional counseling, exercise, guided imagery, stress management, and positive psychology-among others. One type of innovative treatment that she plans to provide in this clinic is "walk therapy" which involves engaging in outdoor walking exercise during psychotherapy.

Dr. Yudofsky is in the process of planning a research project which investigates the effectiveness of this type of treatment. She is also passionate about teaching students and learners at all levels of training and is a member of the Educator's for Care (E4C) Associates Program and a preceptor for the Practice of Medicine in Psychiatry Course.



Laraine Zappert, PhD Women's Health, Wellness, and Work

Dr. Laraine Zappert is a Clinical Professor at the Stanford University School of Medicine, Department of Psychiatry and Behaviorial Sciences. She teaches medical residents, psychology interns, and Stanford undergraduates, and is Director of the Clinical Neuroscience in Women's Health Program.

Dr. Zappert maintains an active calendar of speaking engagements, both nationally and internationally, and is a recognized expert in the fields of clinical psychology, women's health, organizational behavior, sexual harassment, and sexual assault. She has served as a litigation consultant and has been called upon to provide expert forensic consultations.

Dr. Zappert works with individuals, couples, and families who are dealing with a wide range of personal and interpersonal issues. Some of the issues they face include couples communication and relationship problems, personal and professional development issues, weight management and eating disorders, women's reproductive health issues, work/life balance, stress management, anxiety, depression, and other mood disorders, bbsessive compulsive and impulse control disorders, trauma and PTSD, and substance dependency and abuse.

Dr. Zappert has also authored a book on women, work, and wellness, *Getting It Right*, which has received national and international acclaim.

#### Instructors



Joseph Baker, PhD
Neural and Behavioral Science

Dr. Joseph Baker is a translational research scientist whose work aims to elucidate the signatures of typical and atypical human cognitive function in real-world settings. Dr. Baker's research has primarily focused on understanding 1) real-time neural synchronization of socially interacting dyads, 2) the neural and behavioral effects of unexpected or distracting events while driving, and 3) the effect of pesticide exposure on cortical functioning in farm workers. Using functional near-infrared spectroscopy as his primary mode of functional neuroimaging, this work has also included the development of novel approaches to fNIRS imaging in mobile or high-motion environments.

In August 2018, Dr. Baker received an Early Career Transition Award (K99/R00) from the National Institutes of Health to pursue research related to basic number processing in girls, adolescents, and adult women with Turner syndrome. In this project, Dr. Baker will explore the neural and behavioral signatures of nonverbal number processing in Turner syndrome using a multimodal neuroimaging approach, and will conduct an early phase clinical trial aimed at developing a numeracy intervention tool for girls with Turner syndrome. Ultimately, this work aims to improve math education for populations of learners with genetic predispositions to math difficulties.



Tali Ball, PhD
Stanford Translational Anxiety Research Lab

Dr. Tali Ball is a translational clinical psychologist specializing in anxiety disorders. Although mild anxiety is a common experience, anxiety disorders have a devastating impact on patients' lives, leaving them vulnerable to medical, psychiatric, and socioeconomic complications. Dr. Ball's team, the Stanford Translational Anxiety Research (STAR) Lab, aims to use neurobiologically-based models of anxiety to improve understanding and treatment of anxiety disorders.

For example, decades of work in both rodents and humans has established the neurobiology supporting extinction learning. However, even though extinction learning is thought to be the mechanism of exposure therapy, the relationship between extinction learning ability and exposure therapy outcomes has not been established. This year, the STAR lab has launched a randomized controlled trial testing whether extinction learning and its neural correlates can predict exposure therapy outcomes in social anxiety disorder.

In addition, with partners in the Psychosocial Treatment Clinic, the STAR lab runs and evaluates an acceptance-based behavior therapy group for patients with high anxiety. Acceptance-based behavior therapy can be used to target key trans-diagnostic constructs such as avoidance, intolerance of uncertainty, and worry that occur in many anxiety diagnoses. Furthermore, anxiety is a high-leverage target for group therapy because of its high prevalence combined with the negative impact of anxiety comorbidity on treatment outcome for other disorders. The STAR lab is conducting brief research assessments on patients before and after treatment in order to evaluate which transdiagnostic constructs are best targeted by this approach.



Daniel Bowling, PhD
The Biology of Music and
Disorders of Social Function

Dr. Daniel Bowling joined the Department of Psychiatry and Behavioral Sciences last year to apply his expertise in the biology of music to disorders of social function. His approach is focused on the idea that music and language represent overlapping sides of a core capacity for acoustic communication that is integral to human nature. When this capacity becomes dysfunctional, it has far reaching implications for social impairment. Because music is not explicitly referential like language, its effects rely on highly-conserved pre-semantic associations between sound and emotional physiology. Understanding these associations and how they become impaired in disorders like ASD is the principal goal of his research.

Dr. Bowling's research with human subjects combines cognitive neuroscience, experimental psychology, evolutionary biology, musicology, linguistics, and digital signal processing. In the Parker Lab he will use pupillography to study acute noradrenergic reactivity to the building blocks of music and speech (pitch, timbre, rhythm, intensity) in humans with and without disorders of social communication.



Jennifer Bruno, PhD Functional Neurobiology and Developmental Outcomes

Dr. Jennifer Bruno is a translational researcher at the interface of developmental cognitive neuropsychology and neurobiology. Her research is aimed at understanding the neural basis of intellectual and developmental disorders with goals of improving early diagnosis using biomarkers and designing and testing targeted interventions. Current research projects include longitudinal investigations of neurobiological and behavioral outcomes in Fragile X Syndrome and autism spectrum disorders.

Dr. Bruno is also developing adaptable non-constraining functional near-infrared spectroscopy (fNIRS) paradigms to assess the neural circuitry underlying cognition in healthy typically developing individuals and in individuals with neurodevelopmental disorders. Working towards the goal of informing the design of targeted treatments while providing important outcome and progress metrics, Dr. Bruno's research includes infant developmental studies to uncover early, objective biomarkers and epidemiological studies to investigate brain functioning correlates in populations.

#### Instructors



Tamar Green, MD
Green Lab

The Green Lab focuses on pediatric clinical neuroscience, with an emphasis on neurogenetic and neurodevelopmental disorders, such as attention deficit hyperactivity disorder (ADHD) and autism spectrum disorders. The principal aim of this research program is to uncover the effects of genetic variation and associated downstream pathways on the developing human brain. In contrast to traditionally starting with the cognitive and behavioral symptoms that define ADHD and autism spectrum disorders, the lab takes a "genetic first" approach and studies children with the neurogenetic syndrome who present neurodevelopmental disorders. Using a combination of genetic, imaging, and behavioral assessment, the Green Lab aims to contribute to the understanding of abnormalities across "idiopathic" neurodevelopmental disorders such as ADHD, autism spectrum disorders, and cognitive dysfunction.

The Green Lab is studying conditions such as 22q11.2 deletion syndrome, sex chromosome aneuploidies, and the RASopathies. Among the RASopathies they are focused explicitly on Noonan syndrome. There is strong scientific evidence that Noonan syndrome affects cognition and behavior. Further, data collected from animal models of Noonan syndrome show significant effects on brain development, brain function, and behavior in this condition. In the face of these notable findings, and to fill the gaps in understanding how this condition increases the risk for ADHD in children, they have begun to study brain structure and function in children with Noonan syndrome. They have teamed up with great researchers of complementary expertise to their own such as computer scientists and geneticists to make a difference in the children's lives.



Adam Miner, PsyD Artificial Intelligence Behavior Lab

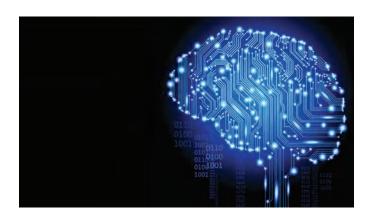
The Artificial Intelligence Behavior Lab (AIBX) is focused on the technical and social impact of AI for mental health. Dr. Adam Miner's research lab has two focuses:

First, they use computational multi-modal language analysis to uncover patterns of successful psychotherapy. Second, they use experimental studies of conversational AI (i.e. chatbots, digital assistants) to understand the psychological impact of AI-mediated communication.

The nature of this work is necessarily collaborative, and Dr. Miner is honored to work with faculty and students in Stanford's Center for Biomedical Informatics Research, Department of Communication, Computer Science Department, and Department of Health Research and Policy. Dr. Miner served as a faculty project lead for Stanford's 'Al for Healthcare Bootcamp' and collaborates with students in the Human-Centered Artificial Intelligence Program. Dr. Miner treats patients and serves as Co-director, along with Dr. Kim Bullock, in the Virtual Reality-Immersive Technology Clinic.

Currently, Dr. Miner and collaborators Drs. Stewart Agras, Bruce Arnow, and Nigam Shah, are developing a HIPAA-compliant approach to bring quantitative language analysis to psychotherapy. This work is supported by awards from the NIH, Spectrum, and a Department Innovator Grants Award.

Recent findings have been published in the Journal of Communication, and presented at a top machine learning conference, Neural Information Processing Systems (NeurIPS).



Srikanth Ryali, PhD

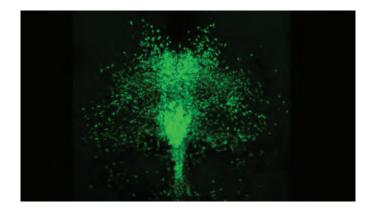
Machine Learning and Signal Processing

Methods for Neuroimaging

Dr. Srikanth Ryali's research interests are in developing advanced machine learning algorithms for analyzing functional magnetic resonance imaging (fMRI) to understand human brain function. Dr. Ryali develops methods to estimate dynamic causal interactions between brain regions in fMRI data using a state-space approach, to develop robust data clustering algorithms to parcellate the brain into functionally homogeneous regions using resting-state fMRI (rs-fMRI) data, and for classification of neuroimaging data using multivariate pattern recognition approaches.

Currently, he is working on estimating time varying functional interactions between brain regions using Bayesian Hidden Markov models.

Further, Dr. Ryali is collaborating with colleagues to characterize the differences in time varying functional interactions in healthy children, adults, and clinical populations.



Matthew Wright, MD, PhD Deciphering Affective Circuitry

The goal of Dr. Matthew Wright's research is to deepen the understanding of the circuits underlying affective disorders by using molecular and circuit level tools to dissect their detailed structure and function and establish targets for advancing treatment.

The focus is primarily on the core conserved circuits that instantiate and control mood and anxiety, including the neuromodulatory centers, such as the dorsal raphe nucleus and ventral tegmental area, as well as circuits that run through the amygdala, brain stem, and hypothalamus.

To achieve this, Dr. Wright uses both molecular and chemical techniques to advance methods to probe the structure and molecular phenotype of circuits in intact tissues. This anatomical work is combined with techniques to measure cellular resolution activity in these conserved circuits and the effects of precisely modulating these circuits on core affective behaviors such as reward, aversion, and learned helplessness. The work is done in collaboration with Dr. Karl Deisseroth and is supported by an NIMH K08 Award.

### **Active Emeritus Faculty**



Steward Agras, MD
Implementation of Evidence-Based Therapies
in Community Settings

A problem common to many areas of medical practice is that evidence-based treatments or practices are not used correctly or not used at all, hence providing less than adequate care. This problem pertains to psychiatry and psychology because research has shown that many practitioners do not use evidence-based psychotherapeutic treatments.

Dr. Stewart Agras is currently investigating this problem, studying 30 college counseling centers across the United States, randomizing colleges to two different methods of training therapists in treatments for eating disorders and depression, and examining the persistence of such training. A further study is examining the use of machine learning to identify a rapid method to estimate therapist's adherence to evidence-based psychotherapy.



Dolores Gallagher-Thompson, PhD, ABPP Caregiver Research Lab

The Department's Caregiver Research Lab focuses on fostering research and innovative clinical care for family members who provide day to day support and assistance to an older relative with a neurodegenerative disorder such as Alzheimer Disease. These family members typically experience significant stress in their role and over half are clinically depressed. CBT-based individual and small group intervention programs have been developed and empirically tested by Dr. Dolores Gallagher-Thompson and colleagues for over 20 years. Her "Coping with Caregiving" program and the nationally-based REACH protocol (Resources for Enhancing Alzheimer Caregivers' Health) are both evidence based, and have been exported successfully to many other settings and communities. In particular, Dr. Gallagher-Thompson's lab has focused on unique caregiving issues experienced by diverse communities including Hispanic/ Latino-, Chinese- Vietnamese, and Persian- Americans. In addition, the third edition of the successful book "Ethnicity and the Dementias" was published in 2018. It is considered an authoritative source for information on how to assess and treat cognitive disorders in a wide variety of diverse patient and caregiver populations.

The recently completed WHO sponsored project, which tested an on-line version of an evidence-based program specifically for use with a culturally diverse population in India, has yielded positive results. This open source platform will now be shared with other interested countries globally.

Dr. Gallagher-Thompson's current research focuses on changing needs for intervention across the trajectory of caregiving. She is working with colleagues at the newly-established Family Caregiving Institute at UC Davis to implement this project.



Lorrin Koran, MD
OCD Treatment

Dr. Lorrin Koran is serving as a mentor to two new faculty in the Department of Psychiatry, Dr. Carolyn Rodriguez and Dr. Nolan Williams, as they develop their research into finding new and more effective treatments for obsessive-compulsive disorder (OCD). He continues to review articles for scientific journals and to give invited lectures regarding OCD and the anxiety disorders.

Dr. Koran has recently begun the first biological studies of a quite rare, newly described condition termed "gadolinium deposition disease," which comes on within days of undergoing a contrast-assisted MRI. He has also designed a multi-site treatment trial that will commence this year.



Seiji Nishino, MD, PhD Sleep and Circadian Neurobiology Lab

The Sleep and Circadian Neurobiology (SCN) Laboratory is dedicated to understanding sleep-wake control and biological rhythms at all levels from the molecular to behavioral and developing new generations of pharmaceuticals to remedy the unmet needs of sleep disorders and disorders of circadian timekeeping.

Dr. Seiji Nishino and his team use rodent models of narcolepsy and circadian rhythm sleep disorders as well as other neurological, neuromuscular (myotonic dystrophy), and neurodegenerative diseases (Alzheimer's disease, Parkinson's disease) to examine the pathophysiology of sleep problems in these diseases. They house a large scale sleep-wake and circadian rhythm bioassay facility for these animal model systems where we conduct sleep recordings. In conjunction with the molecular biology laboratory, they study the pharmacology and molecular biology of sleep disordered and/or deprived animals and conduct neurotransmitter and regional drug delivery studies (In vivo microdialysis, HPLC analysis) as well as neurochemical assessments (radioreceptor binding assays, radio/enzyme-immuno assays, gene expression analysis).

### **Active Emeritus Faculty**



Barbara Sommer, MD
Depression in Elderly Patients

Dr. Barbara Sommer is interested in the long-term outcomes of elderly patients with depression for whom all treatments have failed. Although new and innovative antidepressant treatments become available each year, most are in need of further investigation prior to release to the general public. At this time the most definitive treatment for severe depression remains electroconvulsive therapy (ECT) from which around 90% of patients recover.

Dr. Sommer has become interested in the 10% who do not, and she aims to perform long-term outcome evaluations as we advocate for raising the conversation on whether such patients, capable of making the decision, should have autonomy to continue or discontinue active treatment.



Hans Steiner, MD
Humanistic Principles to the Practice of
Medicine and Psychiatry

Dr. Hans Steiner's work is focused on the integration of Medicine and the Humanities

Dr. Steiner is the Director of The Pegasus Physician Writers at Stanford, since 2008. This is a group of some 100 academic and private practice physicians of all specialties, in various stages of career development who also are creative writers. Dr Steiner founded the group in 2008, together with Drs. Irvin Yalom (Psychiatry), Larry Zaroff (Cardiovascular Surgery) and Audrey Shafer (Anesthesiology). Members write fiction, poetry, narrative non-fiction, fictionalized memoirs, biographies, op-ed pieces and educational texts for the lay public with the intent to broaden public understanding of the science and art of medicine.

The group supports students from all levels (undergraduate, graduate, postgraduate) on their way to or through medicine. The group has regular public events on the Stanford campus in January, March, July, October, and a joint poetry and music event with the St. Lawrence String Quartet in November.

Dr. Steiner also directs Stanford's Program in Psychiatry and The Law. This special initiative provides expert psychiatric testimony to legal bodies, systems and lawyers on a contractual basis. He is regularly providing keynote addresses in the US, Europe, Asia & Australia. He maintains an active mentoring and teaching schedule at the undergraduate, graduate and postgraduate level.



Jared Tinklenberg, MD Alzheimer Research Center

Dr. Jared Tinklenberg serves as Director of the Stanford/VA Alzheimer Research Center (ARC) alongside Dr. Yesavage (Co-Director). Current research is focused on advancing knowledge and understanding of memory disorders. Since 1981, the ARC has been conducting leading research into the causes and treatment of Alzheimer disease (AD).

AD is a progressive disorder of the brain that affects approximately thirty five million people worldwide. The center's multidisciplinary staff includes clinicians and researchers from the Stanford University Department of Psychiatry and from the VA Palo Alto Health Care System. Funded by the US Department of Veterans Affairs, California Department of Health Services, and other sources, the Stanford/VA Alzheimer Research Center offers information, referral services, and comprehensive diagnostic assessments of individuals with memory problems.

In addition to providing advanced caregiver support, intervention, community education, and professional training, the center plays an important role in developing a central pool of information on Alzheimer disease in California.

### **Affiliated Faculty**



J. Wesson Ashford, MD, PhD
War Related Illness & Injury Study Center
Alzheimer Disease Research

Dr. Wes Ashford, Director, War Related Illness & Injury Study Center, VA Palo Alto Health Care System, leads research in chronic pain, PTSD, sleep problems, Gulf War / Chronic Multisymptom Illness, traumatic brain injury, and cognitive impairment. Investigative techniques used in the Center include computerized questionnaires, brain imaging, and genetics. This Center is recognized by Veterans as one of the top clinical, education, and research programs in the US.

Dr. Ashford has been one of the foremost leaders in the Alzheimer disease field, initiating drug development for treating Alzheimer disease in 1978, proposing the neuroplasticity basis for this disease in 1985, focusing the field's attention on the APOE genotype in 2002, explaining the role of the amyloid protein precursor in basic neurobiology in 2002, 2015, and contributing extensively to the development of dementia assessment, screening, and brain imaging. Dr. Ashford is developing an internet-based assessment system for memory and Alzheimer disease: www.memtrax.com, which is the most popular test on: www.brainhealthregistry.org and has been studied in several countries around the World.



Peter Bayley, PhD War Related Illness & Injury Study Center

Dr. Peter Bayley, is a clinical neuroscientist in the War Related Illness & Injury Study Center, VA Palo Alto and a Clinical Associate Professor, Affiliated in the Department of Psychiatry and Behavioral Sciences.

Dr. Bayley's lab is participating in the development of innovative treatments and novel approaches to healthcare. His research interests include rehabilitation treatments for chronic pain and posttraumatic stress disorder (PTSD) using mind-body interventions such as yoga and meditation. He takes a cognitive neuroscience perspective to explore mechanisms of action including memory consolidation, autonomic nervous system function, and cognitive performance. He also has an interest in early detection of dementia and is a member of the Memory Screening Advisory Board for the Alzheimer's Foundation of America.

Most recently he is the PI on two grants investigating yoga as a novel treatment for pain in Gulf War Illness, and meditation as a treatment for PTSD.



Sherry Beaudreau, PhD, ABPP Mental Health, Neurocognition, and Treatment in Older Adults

The overarching goal of Dr. Sherry Beaudreau's lab focuses on the interface between psychiatric symptoms and neurocognitive processing in older adults to inform the development of psychiatric behavioral interventions. This has led to a specific focus on problem-solving therapy for anxiety and depression in older Veterans and civilians. This and other treatment approaches in which distressed older adults with neurocognitive processing issues benefit in terms of a reduction in symptom distress and improvement in functioning drive our treatment approach.

Dr. Beaudreau and her team collaborate extensively with the Lifespan Approaches to Neuropsychiatric Disorders Program directed by Associate Professor, Dr. Ruth O'Hara and the Geriatric Mental Health lab directed by Instructor, Dr. Christine Gould.



Daniel Blonigen, PhD Addictions, Criminal Justice, and Homelessness

Dr. Daniel Blonigen is a mental health services researcher at the Center for Innovation to Implementation (Ci2i), Veterans Affairs (VA) Palo Alto Health Care System. His mission is to promote scholarly research aimed at increasing access to and engagement in clinical care for high-risk, high-need populations marked by co-occurring addictions and mental illness, chronic homelessness, and/or cyclical involvement in the criminal justice system.

One of his current projects is a VA-funded multisite trial to investigate the effectiveness and implementation potential of Moral Reconation Therapy to reduce criminal recidivism risk and improve health outcomes for justiceinvolved veterans. He is also conducting a project funded by VA HSR&D to test the feasibility and acceptability of an innovative, patient-centered model of care for Veterans with substance use problems that leverages technology (e.g., mobile apps) and peer support services.

Finally, Dr. Blonigen has ongoing interests and involvement in mixed methods research to identify and test high-value approaches to care to reduce excessive utilization of psychiatric emergency services.

### **Affiliated Faculty**



Jessica Breland, PhD, MS
Assessing Health Care

Dr. Jessica Breland's work focuses on using quantitative and qualitative methods to bridge gaps in care by: 1) assessing outcomes related to the implementation of evidenced-based treatments, especially through controlled trials in novel settings (e.g., primary care) or with novel methods (e.g., apps); 2) identifying and reducing racial and ethnic disparities in health; and 3) enhancing care for patients with chronic conditions, such as obesity or diabetes.

Dr. Breland is completing a five-year Career Development Award (CDA 15-257) from the Veterans Health Administration's (VHA) Health Services Research & Development service to understand and improve veteran's engagement in behavioral health services. As part of that work, she is conducting administrative database analyses to understand weight loss treatment use among the roughly five million veterans using VHA primary care, interviewing veterans about weight and weight management, and is developing a motivational interviewing-based self-help tool to increase weight loss treatment use.



Shaili Jain,MD Posttraumatic Stress Disorder

Dr. Shaili Jain serves as Medical Director for Integrated Care at the VA Palo Alto HealthCare System and has specialty expertise in posttraumatic stress disorder (PTSD), primary and mental health integrated care, and Women's Health Psychiatry.

Dr. Jain is a health services researcher, affiliated with the National Center for PTSD, who focuses on developing innovative ways to enhance the reach of mental healthcare for underserved populations with PTSD. Her research investigates the effectiveness of peer-support interventions for individuals with PTSD and highlights the myriads of ways PTSD care is being transformed to make it more accessible, acceptable, and available to sufferers via integrated care models, use of peer support programs, and technology.



Christine Gould, PhD, ABPP Mental Health, Aging, and Technology

Dr. Christine Gould is psychologist (Board Certified in Geropsychology) and Investigator at the Geriatric Research, Education, and Clinical Center (GRECC), VA Palo Alto. She is also an Instructor (affiliated) in the Department of Psychiatry & Behavioral Sciences. Through her research program, her team works to develop and evaluate technology-delivered geriatric mental health interventions. Technology-delivered interventions can overcome barriers that make it difficult for older adults to attend face-to-face appointments. Additionally, technology-delivered interventions are a scalable solution to the national shortage of geriatric mental health providers.

Dr. Gould is completing a 5-year VA Career Development Award, in which she is testing a 4-week video-delivered intervention for anxiety (BREATHE) in a randomized controlled trial with older Veterans. With the support of this award, she also investigated older Veterans' preferences for mental health self-management treatments delivery. Following finds that older adults are interested in interactive technologies, Dr. Gould and Co-Investigator, Dr. Ruth O'Hara, are evaluating the Meru Health Ascend mobile app-based intervention for depression in middle age and older adults in an industry-sponsored project.

Dr. Gould also runs a VA clinical demonstration project (Geri-Mobile Health Clinic) in which providers help older Veterans use VA mental health apps to meet their mental health and wellbeing goals.



Tina Lee, MD, MS
Quality, Outcome and Delivery of
Mental Health Services

As Deputy Chief of Staff, Mental Health Service at the VA Palo Alto Health Care System, Dr. Tina Lee provides leadership and operational management for a robust, comprehensive mental health service that provides a productive environment for the numerous clinical, educational and research activities of Stanford faculty, Stanford affiliates and VA staff. Her research focuses on the quality, outcome, and delivery of mental health services to a mentally ill population with high prevalence of cooccurring psychiatric and medical disorders.

Dr. Lee has been the site Principle Investigator of a multisite, randomized controlled trial examining the efficacy of sending emails and reminders to decrease suicidality in military personnel and veterans. She is currently conducting research to improve routine outcome monitoring for Veterans engaged in outpatient mental health care through implementation of a measurement based feedback software system.

Dr. Lee has collaborated on research projects examining clinical practice guideline implementation, the use of technology to bridge the research to practice gap, and use of telemedicine.

### **Affiliated Faculty**



Alka Mathur, MD Telemental Health Program

Dr. Alka Mathur is a Stanford trained Psychiatrist, currently serving as a Clinical Instructor (affiliated) with the Department of Psychiatry and Behavioral Sciences at the Stanford University School of Medicine and as Medical Director of Telemental Health Services for the VA Palo Alto Healthcare System.

In her role, she manages the Telemental Health Program throughout the entire Palo Alto VA system, including community based outpatient clinics (CBOCs) in Modesto, Monterey, San Jose, Capitola, Sonora, Livermore, Freemont, Stockton, Menlo Park, and Palo Alto. She oversees a team of psychiatrists, Stanford Psychiatry residents, psychologists, LVNs, social workers, clinical pharmacists, nurse practitioners, and Telemental Health coordinators, who provide mental health services across the state, allowing veterans increased access to care.

In addition to managing the program, she creates the curriculum for and supervises the Stanford 3rd year Telemental Health Psychiatry rotation and resident clinics. Dr. Mathur also serves as an attending psychiatrist at the CBOC sites.



Carmen McLean, PhD
PTSD in the Military Health System

Dr. Carmen McLean is a clinical psychologist and researcher with the Dissemination and Training Division of the National Center for PTSD at the Palo Alto VA Health Care System. Dr. McLean's research focuses on increasing the reach of evidence-based treatments for posttraumatic stress disorder (PTSD).

Currently, Dr. McLean is collaborating with Dr. Craig Rosen to lead a multi-site implementation study to increase the use of prolonged exposure therapy in the military health system. Site selection and development of the implementation strategy, called Targeted Assessment and Context-Tailored Implementation of Change Strategies (TACTICS) are currently underway. If effective, TACTICS may represent a scalable approach to accelerating the use of other behavioral health best practices in military settings.

Dr. McLean is also completing an open trial of self-guided online prolonged exposure therapy with therapist support for active duty military personnel and veterans with PTSD. Dr. McLean has developed a self-guided exposure therapy mobile app, called Renew, that promotes evidence-based exposure and self-care activities in a gamified app with user-elected peer support reinforcement of app engagement. She plans to collect pilot data on this app in the coming year. Dr. McLean is currently developing an online exposure treatment for PTSD for veterans facilitated by peer-support specialists and will evaluating the treatment in a randomized controlled trial in the coming year. She is also collaborating on a recently completed multi-site study evaluating the effects of post-workshop case consultation on military provider uptake of prolonged exposure and patient outcomes and is working on disseminating the study findings.



M. Windy McNerney, PhD
Neurophysiology and Biochemistry of
Brain and Mental Health Diseases

Dr. M. Windy McNerney is Research Health Specialist in the MIRECC the VA Palo Alto, and a Clinical Assistant Professor (affiliated) at Psychiatry and Behavioral Sciences at Stanford School of Medicine. She earned her PhD from the University of Notre Dame, went on to a postdoctoral position and Lawrence Livermore National Laboratory (DOE), and then completed fellowship at the WRIISC program at the VA and Stanford University.

Dr. McNerney is primarily interested in the neurophysiology and biochemistry of brain and mental health diseases, especially degenerative diseases, depression, TBI, PTSD, and addiction. She is collaborating with researchers to integrate brain imaging and biochemical markers in hopes to better understand these diseases. She also is taking a lead role in investigating the biochemistry of magnetic brain stimulation.

She is currently teaching a class at Stanford, entitled "Addictions in Our World: From Physiology to Human Behavior," which discusses the societal implications of addiction from a neurophysiological prospective.



Claudia Padula, PhD
Neural Circuits and Addiction

Dr. Claudia Padula's research program aims to understand neural circuits underlying addiction in order to predict risk of relapse and understand who may benefit from specific treatments based on their brain functioning.

Through multidisciplinary collaborations between Stanford and the VA, she has been awarded a Career Development Award to lay the foundation for this research. The project will examine the relationship between brain circuits of emotion and reward and risk of relapse following standard residential treatment at the VA. Technological advances in brain imaging have revolutionized our capacity to understand the brain circuits that underlie complex behaviors, like addiction. It is her goal to utilize such technologies to create a more precise care model of treatment for Veterans. Findings from the proposed study will be the first to determine if brain circuits underlying alcohol use disorder can be used to predict relapse in this population. This study is a foundational first step and will lay the groundwork in using innovative neuroimaging technology to identify individuals at greatest risk who may need prolonged or more precise treatment strategies. This neuroscience based translational program of research will help vulnerable Veteran populations obtain more effective treatments and achieve better outcomes

### **Affiliated Faculty**



Allyson Rosen, PhD, ABPP-CN
Cognitive and Affective Neuroscience in
Geriatric Health Care

Dr. Allyson Rosen is a board certified, geriatric, clinical neuropsychologist, who conducts neuropsychological, brain imaging, and noninvasive brain stimulation research in older adults. Her focus is on applying cutting edge, cognitive, and affective neuroscience to advance geriatric precision care. One line of research focuses on helping older adults fight cognitive decline and depression.

Dr. Rosen's lab is just finishing a multisite study of how fMRI derived brain networks relate to clinical transcranial magnetic stimulation for depression. She is also interested in vascular risk and has been studying mechanisms and cognitive changes associated with surgery to improve blood flow to the brain (carotid revascularization) in patients at risk for stroke.

Dr. Rosen also leads a neuroethics feature in the Journal of Alzheimer's Disease that promotes solutions to ethical issues raised by innovations. She is based at the Palo Alto VA and work with Stanford Alzheimer Disease Research Center.



Joy Taylor, PhD

Memory Improvement through

Precision Stimulation Project Lab

The Memory Improvement through Precision Stimulation (MIPS) Project Lab's clinical research is directed toward discovery of innovative non-pharmacological treatments for age-related cognitive decline, Mild Cognitive Impairment (MCI), and Alzheimer Disease dementia.

Currently, Dr. Joy Taylor's Lab is harnessing the potential of repetitive Transcranial Magnetic Stimulation (rTMS) to learn if precisely targeted, noninvasive brain stimulation can improve memory and cognition in MCI, and if so, for how long after a course of rTMS treatment (NCT03331796; supported by 1 R01 AG055526; PI: Taylor). Because the posterior cingulate cortex (PCC), a brain network "hub", is profoundly affected in amnestic MCI, they hope that targeted brain stimulation can help restore abnormal connectivity of the PCC with other regions of the brain. It would be very exciting if rTMS can ultimately delay progression to dementia.



Christine Timko, PhD
Substance Use Disorder Treatment

Dr. Christine Timko, works in three main areas of mental health services research: (1) developing and implementing evidence-based practices to facilitate transitions between levels and types of health care, such as detoxification to substance use disorder treatment, (2) helping family and friends of individuals with unhealthy substance use, and (3) evaluating approaches to improve mental health and recidivism outcomes among Veterans involved in the criminal justice system or seeking legal aid. She is currently implementing and evaluating Enhanced Telephone Monitoring as a telehealth intervention to facilitate the transition from inpatient detoxification to specialty substance use disorder treatment, aiming to improve patients' outcomes and decrease health care system costs.

Dr. Timko is also evaluating a method to increase use of help resources, such as the 12-step groups of Al-Anon and Nar-Anon, by people concerned about another's alcohol and drug use; objectives are to improve functioning of both "Concerned Others" and persons in treatment for substance use.

Finally, Dr. Timko is developing and conducting systemwide surveys of legal aid clinics to examine their potential as settings in which to intervene to increase health care access and utilization by clients.

# Active Sponsored Research 2018

# Federal and State Funding

Abrams, Daniel Arthur	NIH	K01	Decoding Neural Systems Underlying Affective Prosody in Children with Autism
Adeli Mosabbeb, Ehsan	NIH	F32	Identifying Patterns of Cognitive, Motor, and Brain Structural Abnormalities Differentiating Alcohol Use Disorder with and without HIV Infection Comorbidity
Adelsheim, Steven	Santa Clara County		Headspace Program
Adelsheim, Steven	Indian Health Service		Constructing Support for California Tribe Efforts on Suicide Prevention
Agras, William Stewart	NIH	R01	Implementation of evidence-based treatment for on-campus eating disorders (Co-PI)
Asarnow, Lauren	NIH	K23	Reducing Risk: A Comprehensive mHealth Sleep Health Intervention for Adolescents at Risk for Depression and Anxiety Disorders
Baker, Joseph Michael	NIH	K99	Investigation of the role of Turner syndrome on approximate number sense
Ball, Tali Manber	NIH	K23	Developing a mechanistic neurobiological model of exposure therapy response based on fear extinction theory
Beier, Kevin Thomas	NIH	K99	Investigating function of novel drug-induced synaptic changes in the VTA
Bennett, Frederick Christian	NIH	K08	Creation of new tools to study human microglia using blood cells
Bernert, Rebecca Ann	California Departm	nent of Health Services	Technical Consultation Service Agreement in Development of a California Strategic Plan for Suicide Prevention
Bernert, Rebecca Ann	Santa Clara County	y	Pilot Project to Develop an Initial Infrastructure and Data Monitoring Center for Suicide Prevention
Bernert, Rebecca Ann	NIH	K23	A Sleep-Oriented Intervention for Suicidal Behaviors
Bohon, Cara	NIH	K23	Neurochemical and functional neuroimaging of negative and positive valence systems in binge eating
Borniger, Jeremy Charles	NIH	F32	Investigating the Hypocretin to VTA Circuit in Memory Consolidation during Sleep
Cai, Weidong	NIH	K01	Dynamic Brain Mechanisms of Proactive and Reactive Control in Childhood ADHD
Cheung, Joseph	NIH	K23	Characterization and Genetics of Objectively-Verified Long Sleep Hypersomnia
Christoffel, Dan Joseph	NIH	K99	Role of Nucleus Accumbens and Its Glutamatergic Inputs in High-Fat intake
De Lecea, Luis	NIH	R01	Optogenetic interrogation of sleep circuits during aging
De Lecea, Luis	NIH	R01	Neuronal mapping of anxiety and panic
De Lecea, Luis	NIH	R01	Optogenetic Control of Vigilance State Transition
Durazzo, Timothy	NIH	R01	Compounded Neuronal Damage in Comorbid Cigarette Smoking and Addiction (Co-PI)
Etkin, Amit	NIH	DP1	A "Circuits-First" Platform for Personalized Neurostimulation Treatment
Etkin, Amit	NIH	R01	Mapping and Manipulating Circuits for Emotion and Cognition in Anxiety and Depression
Fonzo, Gregory Anthony	NIH	K23	Computational neuroimaging of reward in post-trauma psychopathology
Fung, Lawrence	NIH	K08	GABAergic Neurophysiology in Autism Spectrum Disorder
Gershon, Anda	NIH	K01	Sleep and Circadian Dysregulation in Pediatric Bipolar Disorder
Giardino, William Joseph	NIH	K99	Alcohol-related sleep disturbances and circuit dynamics of arousal neuropeptides
Green, Tamar	NIH	K23	Ras/MAPK Mutations Effects on the Developing Brain
Hall, Scott	NIH	R01	Effects of Social Gaze Training on Brain and Behavior in Fragile X Syndrome
Hallmayer, Joachim Franz	NIH	R01	Gene expression profiling of IPSC derived neurons in Autism Spectrum Disorder
Hallmayer, Joachim Franz	NIH	R01	Integrative Molecular and Phenotype Analysis of 22q11.2 Deletion Syndrome
Hardan, Antonio	NIH	R21	Neuroimaging Predictors of Pivotal Response Treatment in Young Children with Autism
Hardan, Antonio	NIH	R03	Identification of RDoC Social Communication Sub-Constructs Using Existing Datasets
Hardan, Antonio	NIH	R01	2/2-Early Intervention for Youth at Risk for Bipolar Disorder
Hardan, Antonio	NIH	R21	Quantitative Measurements of Cortical Excitability in Neurodevelopmental Disorder

Hardy, Kate	California Departn and Rehabilitation	nent of Corrections	CBTp training for CDCR Stockton
Hayward, Robert C	Office of Statewide and Development		Building a Public Psychiatry Track: A Collaboration between the Stanford Psychiatry Residency Program and La Clinica de la Raza
Ho, Tiffany Cheing	NIH	K01	The Roles of Inflammatory and Glutamatergic Processes in the Neurodevelopmental Mechanisms Underlying Adolescent Depression
Hoerbelt, Paul	NIH	F32	Elucidating the Function of Inhibitory Brain Circuits Involved in Anxiety
Holmberg, Carrie	NIH	K08	Interrogation of network-wide neuronal dynamics during fear memory in mouse default mode network
Hong, David Soonil	NIH	R01	Sex hormone effects on neurodevelopment: Controlled puberty in transgender adolescents
Hosseini, Hadi	NIH	K25	The influence of multi-domain cognitive training on large-scale structural and functional brain networks in MCI
Humphreys, Keith	Santa Clara County		Pay-For-Success Evaluation Proposal to Santa Clara County
Kawai, Makoto	NIH	K23	Cortical Hemodynamism and Oxygenation During Sleep and Cognition: Window to Cognitive Impairment and Neurodegeneration in Aging
Kushida, Clete Anthony	NIH	R21	Predictive Adherence Modeling (PAM) Study
Kushida, Clete Anthony	PCORI		Sustainable Methods, Algorithms, and Research Tools for Delivering Optimal Care Study (SMART DOCS)
Levinson, Douglas Frederick	NIH	U19	Multimodal analysis of high-risk psychosis mutations in induced neuronal cells
Lock, James D	NIH	R01	Confirming the efficacy/mechanism of an adaptive treatment for adolescent anorexia nervosa
Lock, James D	NIH	R33	Optimizing Fidelity to Family-Based Treatment for Adolescent Anorexia Nervosa
Lock, James D	NIH	R44	Optimizing a Smartphone Application for Individuals with Eating Disorders (Co-PI)
Malenka, Robert C	NIH	P50	Activity-dependent Synaptic and Circuit Plasticity
Manber, Rachel	NIH	R01	RCT of the Effectiveness of Stepped-Care Sleep Therapy In General Practice (RESTING)
Manber, Rachel	NIH	R01	Stepped-care management of insomnia co-occurring with sleep apnea (Co-PI)
Mcgovern, Mark	NIH	R01	Using NIATx Strategies to Implement Integrated Services in Routine Care
Mcgovern, Mark	NIH	R21	Integrating Combined Therapies for Persons with Co-occurring Disorders
Mcgovern, Mark	SAMHSA		Mental Health Technology Transfer Center (MHTTC) National Coordinating Center
Menon, Vinod	NIH	R37	Longitudinal Neurocognitive Studies of Mathematical Disabilities: trajectories and outcomes
Menon, Vinod	NIH	R01	Learning and brain plasticity in children with autism: relation to cognitive inflexibility and restricted-repetitive behaviors
Menon, Vinod	NIH	R01	Interventions in Math Learning Disabilities: Cognitive and Neural Correlates
Menon, Vinod	NIH	R01	Methods for Dynamic Causal Interactions in Human Brain Function and Dysfunction
Menon, Vinod	NIH	R01	Novel Bayesian linear dynamical systems-based methods for discovering human brain circuit dynamics in health and disease
Mignot, Emmanuel	NASA		HERO Twin Astronaut Study Consortium (TASC): Immunome Changes in Space
Mignot, Emmanuel	NIH	T32	Multi-Institutional Training in Genetic/Genomic Approaches to Sleep Disorders (Co-PI)
Mourrain, Philippe	NIH	R01	Impact of sleep-wake circuits on cortical synapse plasticity during motor learning
Nishino, Seiji	NIH	R21	Brain Mast Cells in Sleep and Behavioral Regulation
Palesh, Oxana R.G.	NIH	R01	Very-long Term Neurocognitive Outcomes in Breast Cancer Survivors
Palesh, Oxana R.G.	NIH	R01	Brief Behavioral Intervention for Insomnia During Chemotherapy
Parker, Karen Jean	NIH	R01	Intranasal vasopressin treatment in children with autism
Parker, Karen Jean	NIH	R01	A monkey model of naturally occurring social impairments

# Federal and State Funding (continued)

Parker, Karen Jean	NIH	R21	Epigenetic regulation of social impairments and treatment response in autism
Pasca, Sergiu Petrica	NIH	U01	Cross modal integration of molecular and physiological networks in ASD 2/2
Pasca, Sergiu Petrica	NIH	R01	Role of L-type Calcium Channels in Human Interneuron Migration and Integration
Pasca, Sergiu Petrica	NIH	R01	Gaining insight into psychiatric disease by engineering piece by piece the human brain in vitro.
Rasgon, Natalie	NIH	R01	Insulin Resistance and Accelerated Cognitive Aging
Reiss, Allan L	NIH	R01	Brain, Behavior and Puberty in Klinefelter Syndrome
Reiss, Allan L	NIH	R01	Developmental trajectory of anxiety, avoidance, and arousal in girls with the FMR1 full mutation
Reiss, Allan L	NIH	T32	Research Training for Child Psychiatry and Neurodevelopment
Reiss, Allan L	NIH	R01	Gene, Brain and Behavior in Turner Syndrome
Reiss, Allan L	NIH	R01	Longitudinal MRI Study of Brain Development in Fragile X
Reiss, Allan L	NIH	R01	Type 1 Diabetes and the Brain in Children: Metabolic Interventions (Co-PI)
Roberts, Laura W	NIH	R01	Enabling ethical participation in innovative neuroscience on mental illness and addiction: towards a new screening tool enhancing informed consent for transformative research on the human brain
Rodriguez, Carolyn	NIH	R01	NMDAR Modulation As A Therapeutic Target and Probe of Neural Dysfunction in OCD
Ryali, Srikanth	NIH	K25	Methods for Dynamic Causal Interactions in the Developing Human Brain
Saggar, Manish	NIH	DP2	Only time will tell: a computational psychiatry approach to model temporal transitions in brain activity as a lens towards developing better diagnostic nosology for psychiatric illness
Saggar, Manish	NIH	R00	Quantifying the Fluctuations of Intrinsic Brain Activity in Healthy and Patient Populations
Schatzberg, Alan	NIH	T32	A Biobehavioral Research Training Program
Schatzberg, Alan	NIH	R25	Research Career Development Institute for Psychiatry (Co-PI)
Shah, Nirao	NIH	R01	Characterization of Sexual Dimorphism in the brain
Shah, Nirao	NIH	R01	Molecular and Neural Networks Underlying Social Attachment
Shah, Nirao	NIH	R01	Dissecting hypothalamic pathways that regulate sexually dimorphic behaviors
Singh, Manpreet Kaur	NIH	R01	2/2-Mechanism of Antidepressant-Related Dysfunctional Arousal in High-Risk Youth
Singh, Manpreet Kaur	NIH	R01	Neurobehavioral Trajectories of Pediatric Depression and Insulin Sensitivity
Spiegel, David	NIH	U01	Impact of Affect Reactivity and Regulation on Breast Cancer Treatment Decisions
Steinberg, Elizabeth Eugenia	NIH	K99	Linking emotion, motivation and action with amygdalo-nigro-striatal circuits
Sudheimer, Keith Daniel	NIH	K01	Cortisol Receptor Polymorphisms And Cortisol-Induced Emotion Changes In Major Depression
Sullivan, Edith V	NIH	R37	Cerebellar Structure and Function in Alcoholism
Sullivan, Edith V	NIH	R01	International Research Collaboration on Neuroimaging Studies of Alcoholism
Sullivan, Edith V	NIH	K05	Translational Studies of Brain Circuitry Disrupted by Alcoholism
Sullivan, Edith V	NIH	U01	${\it TrackingHIVInfectionandAlcoholAbuseCNSComorbiditywithNeuroimaging(Co-PI)}$
Williams, Leanne Maree	NIH	U01	Mapping connectomes for disordered emotional states
Williams, Leanne Maree	NIH	R01	Neural Dimensions of Threat Reactivity and Regulation for Understanding Anxiety
Williams, Leanne Maree	NIH	UH2	Engaging self-regulation targets to understand the mechanisms of behavior change and improve mood and weight outcomes (Co-PI)
Williams, Nolan	NIH	R33	Use of Repetitive Transcranial Magnetic Stimulation to Augment Hypnotic Analgesia
Wright, Matthew Arnot	NIH	K08	Dissection of the role of serotonin circuits in reward and aversion
Yesavage, Jerome A	California Departr	ment of Public Health	California Alzheimer's Disease Centers (CADC)
Yesavage, Jerome A	California Departr	ment of Public Health	Stanford/VA California Alzheimer's Disease Centers

# Foundation and Non-Profit Funding

Asarnow, Lauren	The Klingenstein Third Generation Foundation	Improving access to care: testing an integrated care mobile health intervention to improve sleep and mental health in adolescents
Bian, Wenjie	Human Frontier Science Program Organization	Developmental roles of sleep and arousal circuits in shaping the cortical connectivity and functions
Birey, Fikri	American Epilepsy Society	In vitro assembly of forebrain spheroids to study excitation/inhibition balance
Cao, Michelle	American Sleep Medicine Foundation	Name of Project: A National Survey on Sleep Medicine Education in Medical Schools and Primary Residency Programs
Carrion, Victor G.	The Tipping Point Foundation	Early Life Stress Research Program
Espil, Flint Martin	American Academy of Neurology	Cortical Functioning and Correlates of Behavior Therapy for Youth with Persistent Tic Disorders
Etkin, Amit	Cohen Veterans Bioscience Inc.	EEG markers of deep rTMS treatment for PTSD
Hall, Scott	The John Merck Fund	Treatment of Disruptive Behaviors in Fragile X Syndrome
Hardan, Antonio	Boston Children's Hospital	A randomized double-blind placebo-controlled trial of Everolimus in children and adolescents with PTEN mutations (rare disease clinical research consortium-developmental synaptopathies consortium)
Hardan, Antonio	The Simons Foundation Autism Research Initiative	Treating Autism with Pregnenolone
Hardy, Kate	Momentum for Mental Health	Cognitive Behavioral Therapy for psychosis training for Momentum Mental Health Phase 1 $\&2$
Hardy, Kate	University of Pittsburgh	University of Pittsburgh Cognitive Behavioral Therapy for psychosis training for UPMC
Holmberg, Carrie	Brain & Behavior Research Foundation	Chronic stress effects on connectivity between default mode network structures in a mouse model
Hosseini, Hadi	Brain & Behavior Research Foundation	Integrating NIRS-based Neurofeedback and Cognitive Rehabilitation for Improving Executive Function Network in Patients with Attention Deficit Hyperactivity Disorder (ADHD)
Humphreys, Keith	Society for the Study of Addiction	Americas Editorial Office for Addiction
Jennings, Kimberly Jeannette	The Lalor Foundation	Hypocretinergic regulation of the hypothalamic-pituitary-gonadal axis.
Kishore, Anita R	The Klingenstein Third Generation Foundation	KTGF Medical Student Program
Lock, James D	Hilda & Preston Davis Foundation	Feasibility of Conducting a Randomized Controlled Trial Comparing Standard FBT and Guided Self-Help FBT for Adolescent Anorexia Nervosa Program
Lock, James D	Hilda & Preston Davis Foundation	Empowering and Guiding Parents with Eating Disorders Through a Focused Intervention: Randomized Control Trial Program
Lock, James D	National Eating Disorders Association	Treating Avoidant/Restrictive Food Intake Disorder (ARFID) with Family-Based Treatment
Mcgovern, Mark	Healthcare Foundation Northern Sonoma County	Wildfire Mental Health Collaborative Research
Mckinsey, Gabriel	American Association of Anatomists Inc	Functional dissection of medial amygdala circuitry
Menon, Vinod	Simons Foundation	Decoding Affective Prosody and Communication Circuits in Autism
Mignot, Emmanuel	Klarman Family Foundation	Next Generation Sleep Analytics
Mourrain, Philippe	BrightFocus Foundation	Deeply conserved GWAS SNPs reveal a regulatory mutation underlying AMD
Mourrain, Philippe	The John Merck Fund	Pharmacological and genetic solutions for FXS and related intellectual disabilities
Mourrain, Philippe	The Simons Foundation Autism Research Initiative	Autism synaptic endophenotypes & candidate drug rescue
Ordaz, Sarah Jean	Brain & Behavior Research Foundation	Neural Functional Connectivity as a Mediator of the Effects of Parenting on Clinical Course in Adolescent Depression
Ostomel, Cara	Hilda & Preston Davis Foundation	Brain Changes Associated with Early Treatment Response: A Potential Treatment Mechanism Program
Parker, Karen Jean	The Simons Foundation Autism Research Initiative	Detecting and Treating Social Impairments in a Monkey Model

# Foundation and Non-Profit Funding (continued)

Parthasarathy, Srinivas	Human Frontier Science Program Organization	Unbiased identification of new mediators of sex hormone signalling and transport
Pasca, Sergiu Petrica	Brain & Behavior Research Foundation	Developing a human 3D spheroid model of oligodendrocyte development to study neuropsychiatric disease
Pasca, Sergiu Petrica	MQ: Transforming Mental Health	Identifying cellular mechanisms of disease and novel therapeutic targets in neurons derived from patients with schizophrenia
Pasca, Sergiu Petrica	The New York Stem Cell Foundation	Assembling human cortical microcircuits in vitro to capture neural function and disease
Rasgon, Natalie	Alzheimer's Association	Sex Specific Interactions of Modifiable & Non-modifiable Risk Factors of AD
Robakis, Thalia	Brain & Behavior Research Foundation	Epigenetic Profile of Attachment Insecurity in Postpartum Depression
Rodriguez, Carolyn	Brain & Behavior Research Foundation	Pilot Study of the NMDAR Modulator GLYX-13 in Obsessive-Compulsive Disorder
Rodriguez, Carolyn	Professional Hockey Players' Association	Exploring mental health in active and retired professional hockey players
Rodriguez, Carolyn	The Robert Wood Johnson Foundation	Neural Mechanisms Underlying Fast-Onset OCD Treatment Across Molecules, Physiology, and Circuits
Saggar, Manish	Brain & Behavior Research Foundation	Quantifying the Fluctuations of Intrinsic Brain Activity in Healthy and Patient Populations
Singh, Manpreet Kaur	American Psychiatric Association	The From Affective Illness to Recovery: Student Access to Rapid Treatment (FAIR START) program
Singh, Manpreet Kaur	Brain & Behavior Research Foundation	Neurobehavioral response during antidepressant-related dysfunctional arousal in highrisk youth
Steinberg, Elizabeth Eugenia	A.P. Giannini Foundation	Anatomical, physiological and behavioral dissection of an amygdala-dopamine circuit
Supekar, Kaustubh Satyendra	Brain & Behavior Research Foundation	Behavioral, Cognitive, and Neural Signatures of Autism in Girls: Towards Big Data Science in Psychiatry
Suppes, Patricia	The Stanley Medical Research Institute	Multi-site clinical trial: Infliximab Study
Trockel, Mickey Todd	The Physicians Foundation	Shifting Organizational Culture Towards Wellness Using Support from Leadership and Popular Opinion Leaders
Tyree, Susan Margot	Neurological Foundation of New Zealand	Investigation of neural circuits mediating negative outcomes of sleep dysregulation
Williams, Nolan	Brain & Behavior Research Foundation	Interrogating the Opioid System to Understand the Mechanism of Action Underlying the Antidepressant Effects of Ketamine
Yang, Taehong	Brain & Behavior Research Foundation	Molecular and Neural Control of Female Social Behaviors
Yoon, Jong	The Charles A. Dana Foundation	Improving the early detection of schizophrenia and outcomes with a novel method of precisely measuring subtansia nigra activity

## Industry Sponsored Clinical Trials and Research

Ballon, Jacob	Janssen Research & Development, LLC	A Prospective, Randomized, Matched Control, Open-Label, Rater-Blinded, Flexible-Dose Study in Subjects with Recent-Onset Schizophrenia or Schizophreniform Disorder to Compare Disease Progression and Disease Interception Following Treatment with Paliperidone Palmitate Long-Acting Injection or Oral Antipsychotics
Ballon, Jacob	Vanguard Research Group	A Phase 3 Study to Assess the Long Term Safety, Tolerability, and Durability of Treatment Effect of ALKS 3831 in Subjects with Schizophrenia, Schizophreniform Disorder, or Bipolar I Disorder
Ballon, Jacob	Vanguard Research Group	A Study to Evaluate the Effect of ALKS 3831 Compared to Olanzapine on Body Weight in Young Adults with Schizophrenia, Schizophreniform, or Bipolar I Disorder Who are Early in Their Illness
Ballon, Jacob	Vanguard Research Group	A Cluster Randomized, Multi-center, Parallel-group, Rater-blind Study Comparing Treatment with Aripiprazole Once Monthly and Treatment as Usual on Effectiveness in First Episode and Early Phase Illness in Schizophrenia
Bhati, Mahendra	Brainsway, Ltd.	A Prospective, Double Blind, Randomized, Controlled Study to Evaluate the Safety and Efficacy of the Brainsway (HAC-Coil) deep Transcranial Magnetic Stimulation (DTMS) System for the Treatment of Post-Traumatic Stress Disorder (PTSD)
Bhati, Mahendra	NeoSync, Inc.	A Prospective, Multicenter, Double-Blind, Sham-Controlled Adaptive Design Study to Confirm the Safety and Efficacy of NEST sTMS in Subjects with Major Depressive Disorder Who Have Not Responded to at Least One Antidepressant Medication in the Current Episode
De Lecea, Luis	Boehringer Ingelheim Pharmaceuticals, Inc	Role of Hcrt neurons on Compulsive Behavior
Debattista, Charles	BioLite Inc.	A Phase II Study of PDC-1421 Capsule to Evaluate the Safety and Efficacy in Patients with Major Depressive Disorder
During, Emmanuel	Rythm, Inc.	Octave Study: Performance of a wireless dry-EEG device for sleep monitoring compared to a gold standard polysomnography
Hardan, Antonio	BioElectron Technology Corp	Analysis of the Glutathione Cycle in Children with Autism
Hardy, Kate	Pear Therapeutics, Inc.	Feasibility study of THRIVE
Kushida, Clete Anthony	INC Research, LLC	A Double-blind, Randomized, Placebo Controlled, Two Arm Multi-center Study to Assess the Efficacy and Safety of a Once Nightly Formulation of Sodium Oxybate for Extended-Release Oral Suspension (FT218) for the Treatment of Excessive Daytime Sleepiness and Cataplexy in Subjects with Narcolepsy / Randomized study Evaluating the efficacy and SafeTy of a ONce nightly formulation of sodium oxybate (REST-ON Study)
Kushida, Clete Anthony	Inspire Medical Systems, Inc.	Adherence and Outcome of Upper Airway Stimulation (UAS) for OSA International Registry: ADHERE UAS Registry
Kushida, Clete Anthony	Jawbone Corporation	Comparison of Jawbone Devices to In-Lab Polysomnography
Kushida, Clete Anthony	Respironics, Inc.	Effects of Positive Airway Pressure on Atrial Fibrillation Recurrence Risk after Catheter Cardiac Ablation in Patients with Atrial Fibrillation and Obstructive Sleep Apnea: A Pilot Randomized Controlled Trial
Kushida, Clete Anthony	Sleepwell Corporation	A study on realization of objective evaluation method of depression using sleep EEG
Kushida, Clete Anthony	XenoPort, Inc.	A Multicenter Open-Label Extension Study to Evaluate the Efficacy and Safety of HORIZANT (Gabapentin Enacarbil) Extended-Release Tablets in Adolescents Aged 13 to 17 Years Old with Moderate-to-Severe Primary Restless Legs Syndrome
Kushida, Clete Anthony	XenoPort, Inc.	A Multicenter, Double-Blind, Placebo Controlled, Parallel Group, Efficacy and Safety Evaluation of HORIZANT (Gabapentin Enacarbil Extended-Release Tablets) in Adolescents Aged 13 to 17 Years Old with Moderate-to-Severe Primary Restless Legs Syndrome
Kushida, Clete Anthony	XenoPort, Inc.	A Multicenter, Open-Label, Single-Dose Pharmacokinetic and Safety Evaluation of HORIZANT (Gabapentin Enacarbil Extended-Release Tablets) in Adolescents Aged 13 to 17 Years Old with Moderate-to-Severe Primary Restless Legs Syndrome
Mignot, Emmanuel	Apple, Inc.	Evaluation of Consumer Overnight Device

## Industry Sponsored Clinical Trials and Research (continued)

Mignot, Emmanuel	Balance Therapeutics, Inc.	A Randomized, Placebo-Controlled, Double-blind, Fixed Dose, Multiple Cohort, Multiple Crossover, Dose-Finding Study of Oral BTD-001 in Adults with Idiopathic Hypersomnia or Narcolepsy Type 2
Mignot, Emmanuel	Jazz Pharmaceuticals	A Long-Term, Safety and Maintenance of Efficacy Study of JZP-110 [(R)-2-amino-3-phenylpropylcarbamate hydrochloride] in the Treatment of Excessive Sleepiness in Subjects with Narcolepsy or Obstructive Sleep Apnea
Mignot, Emmanuel	Jazz Pharmaceuticals	A Double-Blind, Placebo-Controlled, Randomized-Withdrawal, Multicenter Study of the Efficacy and Safety of JZP-258 in Subjects with Narcolepsy with Cataplexy
Mignot, Emmanuel	Jazz Pharmaceuticals	A Double-Blind, Placebo-Controlled, Randomized-Withdrawal, Multicenter Study of the Efficacy and Safety of Xyrem with an Open-Label Pharmacokinetic Evaluation and Safety Extension in Pediatric Subjects with Narcolepsy with Cataplexy
Mignot, Emmanuel	Jazz Pharmaceuticals	Consulting Agreement: Global Lead Investigator for the Jazz Pharmaceuticals Pediatric Narcolepsy Study
Mignot, Emmanuel	Jazz Pharmaceuticals	PSG Biomarkers Narcolepsy Detector
Mourrain, Philippe	Martineau & Associates	Zebrafish Behavior Research Platform and Repository for Mental Health and Neuroscience
Nishino, Seiji	Airweave Holdings, Inc.	EFFECT OF HIGH REBOUND MATTRESS TOPPERS ON SLEEP AND SLEEP RELATED SYMPTOMS
Nishino, Seiji	Daiichi Sankyo Company, Limited	Drug discovery research targeting the epigenome: focus on SIRT6 and SIRT7 longevity genes
Nishino, Seiji	Ono Pharmaceutical Co., Ltd.	Sleep and behavioral characterizations of mouse models of Alzheimer's disease (AD) and Dementia with Lewy Bodies (DLB)
Rodriguez, Carolyn	Biohaven Pharmaceutical Holding Company Ltd.	A randomized, double-blind, placebo-controlled trial of adjunctive BHV-4157 in Obsessive Compulsive Disorder
Schatzberg, Alan	Janssen Research & Development, LLC	A Prospective, Longitudinal, Observational Study to Evaluate Potential Predictors of Relapse in Subjects With Major Depressive Disorder Who Have Responded to Antidepressant Treatment
Singh, Manpreet Kaur	Janssen Research & Development, LLC	An Observational Longitudinal Study in Offspring of Parents with Bipolar Disorder to Evaluate the Relationship of Impairment in Psychosocial Functioning with the Manifestation of Mood Symptoms over 24 Months
Solvason, Hugh Brent	Neuronetics, Inc.	A Randomized, Sham-Controlled Trial Evaluating the Safety and Effectiveness ofNeuroStar Transcranial Magnetic Stimulation (TMS) Therapy in Depressed Adolescents
Trockel, Mickey Todd	Sumit Insurance Company Ltd.	Physician Wellness: Physician sleep-related impairment project
Wang, Po W.	Merck Sharp & Dohme Corp.	$\label{prop:prop:continuous} Adjunctive suvor exant for treatment-resistant in somnia in patients with bipolar disorder and the properties of the properti$

## **Subcontracts**

Albucher, Ronald C	University of Michigan	Electronic Bridge to Mental Health (eBridge) for College Students
Awaad, Rania	Muslim American Society - Social Services Foundation	Refined Community Defined Evidence Practice (CDEP) Introduction to the Community Defined Evidence Practice: Shifa for Today
Ballon, Jacob	Icahn School of Medicine at Mount Sinai	Improving Cognition via Exercise in Schizophrenia
Cassidy Eagle, Erin L.	Environment and Health Group, Inc.	Technology-Enabled Therapy for Elders with Insomnia and Comorbid Mild Cognitive Impairment
Debattista, Charles	Massachusetts General Hospital	SWITCHING VERSUS AUGMENTATION IN TREATMENT-RESISTANT DEPRESSION
Hallmayer, Joachim Franz	University of California, Davis	Center for the Development of Phenotype-Based Treatments of Autism Spectrum Disorder (NIH P50)
Hardan, Antonio	Boston Children's Hospital	Developmental Synaptopathies Associated with TSC, PTEN, and SHANK3 Mutations (CT Pilot) $$
Hardy, Kate	Network180	Cognitive Behavioral Therapy for Psychosis (CBTp) Training for ETCH
Humphreys, Keith	Baystate Health	Impact of health reform on outpatient substance abuse treatment programs
Humphreys, Keith	University of California, San Francisco	Selection Bias Free Estimation of the Impact of Drug-Focused Twelve Step Mutual Help Groups
Jo, Booil	Palo Alto Veterans Institute for Research	Leveraging Routine Clinical Materials and Mobile Technology to Assess CBT Quality
Kushida, Clete Anthony	Palo Alto Veterans Institute for Research	Treatments for Insomnia, Mediators, Moderators, and Quality of Life
Levinson, Douglas Frederick	University of California, San Diego	4/7 Psychiatric Genomics Consortium: Finding actionable variation
Levinson, Douglas Frederick	University of California, San Diego	Psychiatric Genomics Consortium for PTSD
Malenka, Robert C.	Mt. Sinai School of Medicine	Molecular Neurobiology of Drug Addiction (NIH P01)
Mcgovern, Mark	University of California, Los Angeles	Medication Assisted Treatment (MAT) Expansion Project: CA Hub & Spoke System Training and Learning Collaborative
Mcgovern, Mark	University of Vermont and State Agricultural Coll	Integrating Behavioral Health and Primary Care for Comorbid Behavioral and Medical Problems
Mignot, Emmanuel	Cincinnati Children's Hospital Medical Center	A Multicenter Retrospective and Prospective Follow-up Study of Early Onset Childhood Narcolepsy: Recent Cases and Post Infection Human Subjects
Mignot, Emmanuel	Utah State University	Long-term trajectories of subjectively- and polysomnographically-assessed sleep patterns as predictors of neuroendocrine dysregulation and weight gain in adults
O'Hara, Ruth	University of California, Los Angeles	Neurodevelopment and Psychosis in the 22q11.2 Deletion Syndrome
Reiss, Allan L	National Fragile X Foundation	Fragile X Registry and Database
Reiss, Allan L	University of California, Berkeley	Long-term sequelae of early life pesticide exposure in the CHAMACOS birth cohort
Safer, Debra L.	Sanford Research North	Post-Surgical Predictors of Depression and Weight Regain After Bariatric Surgery
Schatzberg, Alan	University of Michigan	iPSC derived neurons to model stress and depression
Spiegel, David	University of Miami	Biological and Psychosocial Mechanisms of Cancer Caregivers' Elevated Health Risk
Sullivan, Edith V	SRI International	NCANDA: Data Analysis Resource
Sullivan, Edith V	SRI International	AD/ADRD Supplement to CNS Deficits: Interaction of Age and Alcoholism
Sullivan, Edith V	SRI International	Neuroimaging of Alcohol-Induced Neuroadaptation: Translation from Animals to Humans
Trockel, Mickey Todd	Washington University in St. Louis	Technology to Improve Eating Disorders Treatment
Urban, Alexander E	Yale University	Somatic Mosaicism in the Brain of Tourette Syndrome
Urban, Alexander E	Yale University	Genomic mosaicism in developing human brain
Urban, Alexander E	Yale University	Somatic Mosaicism in autism spectrum disorders



## Educational Excellence

Our department is committed to nurturing the development of each of our learners through personalized education that fosters independent thinking and the pursuit of specialized interests.

Educational excellence is an essential mission of the Department of Psychiatry and Behavioral Sciences. We are committed to nurturing the development of each of our learners through personalized education - an approach that fosters independent thinking and the pursuit of specialized interests. We are also committed to producing leaders - individuals whose work will bring about change in our world through their influence and impact.

Ourdepartment engages with over 7,000 learners each year, including medical students, residents, fellows, postdocs, clinicians in practice and even college undergraduates and high school students. We offer learners individual mentoring across a range of disciplines, including the clinical neurosciences, psychiatry, psychology, and other behavioral sciences, and strive to be an inclusive, supportive, and open-minded learning community.

Interprofessional and transdisciplinary collaborations between the Department and all of the Schools of Stanford University (e.g., Business, Earth Sciences, Education, Engineering, Humanities & Sciences, Law) are encouraged.

In sum, ours is a personalized and inclusive model of education. In keeping with the culture of Stanford University, we seek to foster individualism and innovation in supporting our learners to advance as leaders, engage in critical thinking and creativity, connect knowledge across professions, and form a learning community to bringing about transformative change in society.

Alan K. Louie, MD Professor and Associate Chair, Education 7,000+

learners across diverse educational programs, 2018-2019

Together we have created a truly distinguished department.

7 and 3

subspecialty physician fellowships and NIH T32 training programs Academic medicine is entrusted with human health.

 $100^{\%}$ 

PsyD graduates into APA-accredited internships

## **Training Programs**

## **Medical Student Programs**

### Klingenstein Fellowship Program



### Shashank Joshi, MD, Program Director

The Klingenstein Fellowship Program is a mentoring program designed to expose first and second year medical students to the rewarding field of child and adolescent psychiatry, and to increase awareness and education about child and adolescent mental health issues. It offers a year-long program wherein medical students are paired with child and adolescent psychiatrists, meeting bimonthly for clinical experiences and mentoring. It also provides opportunities for the students to get involved in cutting-edge scientific research, networking opportunities, and opportunities to attend professional conferences.

In February, 2019, Dr. Anita Kishore hosted the Klingenstein Third Generation Foundation at Stanford. For nearly 15 years the Klingenstein Third Generation Foundation (KTGF) has provided funding to a coordinated network of medical schools across the country to administer the Klingenstein Medical Student Program (MSP). Each school selected to participate as an MSP carries out a unique, customized program that encourages medical students to pursue child and adolescent psychiatry as a career specialty. The programs are designed to provide medical students with mentorship and exposure to clinical experiences, research, and advocacy. The MSPs also participate in many other important projects including an annual KTGF National Medical Student Conference, special lectures, and networking opportunities with child and adolescent psychiatry leaders. Students who do not choose psychiatry as a specialty will benefit from a broader perspective relevant to behavioral/mental health in whatever practice they choose.

### Medical School Education in Psychiatry



Charles DeBattista, MD, DMH, Director, Medical Student Education Yasmin Owusu, MD, Pre-Clerkship Director Daniel Kim, MD, Site Director Stanford Health Care Margaret May, MD, Site Director VA Palo Alto Division and Faculty Liaison to the Psychiatry and Behavioral Sciences Interest Group

Psychiatry and behavioral sciences are taught during both the pre-clerkship and clerkship parts of medical school. Preclerkship instruction is provided to first- and second-year students and explores the behavioral determinants of health, doctor-patient relationship, and human development; offers patient interviewing apprenticeships; and examines the major psychiatric disorders including psychotic, mood, anxiety, eating, trauma-related, somatic symptom, and substance use disorders.

Elective courses are also offered in topics like careers in psychiatry, child and adolescent psychiatry, research, and group discussions of the medical student experience. First and second-year medical students now have opportunities for early clinical experiences in psychiatry.

Clerkships and Continuity Clinics in the third and fourth years of medical school offer clinical instruction in inpatient and outpatient interdisciplinary settings, designed to teach students how to conduct a diagnostic assessment and to use standardized diagnostic criteria and psychiatric treatments. Interest groups in psychiatry and addiction medicine are open to all students.

### **Resident Programs**

### La Clinica Residency Partnership

Chris Hayward, MD, MPH, Principal Investigator

The Stanford Psychiatry Residency Program has embarked upon a new partnership with La Clinica de la Raza, one of the largest Federally Qualified Health Centers (FQHCs) in California. Together, we are building the foundation for a long term, sustainable educational partnership that will train future leaders to address disparities in mental health. In addition to sending Stanford residents to La Clinica, we are also bringing staff and leaders from La Clinica to Stanford, and creating faculty appointments for them. Through this approach, we aim to create new avenues for collaborative curriculum development, informed by the essential



knowledge, cultural expertise, and perspectives of our partners. Our collaboration with La Clinica is part of a broader effort within the psychiatry residency program to deepen our work in community engagement and health disparities work.

Program objectives include 1) providing high-quality, patient-centered mental health care in underserved and immigrant communities in the Bay Area, regardless of insurance or documentation status; 2) recruiting residents from minority and other disadvantaged and diverse backgrounds to become leaders in addressing disparities in mental health; and 3) deepening and expanding curriculum development related to mental health equity. Residents are currently engaging in a new experiential education program including training in how to do asylum evaluations at the Highland Hospital Human Rights clinic, site visits to a needle exchange, a youth homeless shelter, the jail, and behavioral health court, in an effort to broaden resident perspectives on the social determinants of mental health, monthly meetings with the director of Alameda county behavioral health department, to enhance understanding of public health systems, and exploring opportunities for collaborative research.

### **Psychiatry Residency Training Program**

Chris Hayward, MD, MPH, Director of Residency Training Sallie DeGolia, MD, MPH, Associate Director of Residency Training Belinda Bandstra, MD, MA, Assistant Director of Residency Training Malathy Kuppuswamy, MD, Site Director, VA Palo Alto Division Mark Freeman, MD, PhD, Site Director, VA Menlo Park Division

The ACGME-accredited Psychiatry Residency offers a unique blend of clinical and research opportunities, coupled with a sense of collegiality, cohesiveness, and deep care about residents' individual development in the context of a wealth of resources at Stanford



University. Clinical training competencies are systematically defined across services with emphasis in combining the application of biological therapeutics, psychotherapies, social interventions, and a transdisciplinary attitude, with the goal of training residents to become well-rounded physicians. Clinical care is approached with critical thinking and innovation. The curriculum features a scholarly concentration program, starting early in residency, that allows residents to pursue their interests with individualized training and research. Residents are supported in cultivating careers that involve leadership, specialization, and academic growth. We strongly promote resident involvement in program improvement and prioritize resident wellbeing during training.

Stanford Psychiatry has an outstanding research track designed for residents with extensive research background to continue to engage in basic science, translational, and clinical research throughout residency. We have a long-standing history of research excellence, preparing generations of leaders in the field of neuroscience and psychiatry. We pride ourselves on interdisciplinary scholarship, dedicated mentorship and a culture of innovation and interdisciplinary collaboration. With easy access to world-class faculty and research laboratories, research track residents are encouraged to engage across disciplines and work with program directors to customize their training and to transition to T-32 and clinical subspecialty fellowships.

## **Training Programs**

### **Professional Education**

### **Annual CME Conference**



Alan Louie, MD, Course-Director

In 2018, we hosted our 4th annual conference, Innovations in Psychiatry and Behavioral Health: Adult Disorders, Technology, and Provider Wellbeing.

This year our conference aimed to fulfill the knowledge and competence needs for practicing physicians, psychologists, nurse practitioners, physician assistants, clinical social workers, and interested allied health professionals to enhance their understanding of psychiatry and behavioral health disorders and equip them with skills and strategies to effectively treat in practice. Topics included adult disorders such as mood disorders, marijuana addiction, OCD, psychotic and cognitive disorders.

The course also addressed the use and application of technology in psychiatry and behavioral health, and recommendations for improving physician/provider wellness and resilience. Teaching methods included talks along with active learning in workshops and interaction with faculty and other attendees.

### Continuing Medical Education (CME)



Alan Louie, MD, Director

Multiple educational activities for professionals are sponsored by the Department of Psychiatry and Behavioral Sciences. The target audiences are usually psychiatrists, clinical psychologists, behavioral and neuroscientists, non-psychiatric physicians, allied health professionals, and trainees. Many offer CME credit through the Stanford Center for Continuing Medical Education. As a service to our patients, their families, and others, several activities are open to the general public, for instance, conferences on autism, dementia, and bipolar disorders, and a number of grand rounds sessions.

Examples of activities are as follows:

- CME Conferences: Fourth Annual Innovations in Psychiatry and Behavioral Health: Virtual Reality and Behavior Change
- Grand Rounds: Psychiatry and Behavioral Sciences, Sleep Medicine, Geriatric Psychiatry, and Neuroscience Grand Rounds
- Joint Sessions of the Psychiatry and Behavioral Sciences Grand Rounds and the Stanford Wu Tsai Neuroscience Institute
- Regularly Scheduled Series: VA Interdisciplinary Mental Health CME Series, Closing the Gap: Moving towards Best Practices in Psychiatry
- Online CME courses, seven available on addiction, dementia, and psychosis

### **Faculty Scholars Program**

### Alan Louie, MD, Director

Faculty Scholars are members of the Department's faculty who spend one year with an emphasis in a specialized academic area (e.g. autism spectrum disorders, prodromal psychosis) aligned with the Department's missions. Along with a majority of time spent in clinical work, the Faculty Scholar has protected time for scholarly pursuits in research and teaching. Faculty Scholars are appointed for one year as a Clinical Instructor in the Clinician Educator faculty line, after which their position ends with the expectation that they will apply for a subsequent position in academia.

### **Clinical Psychology Training**

### Child and Adolescent Pre-doctoral Psychology Internship

Michelle Brown, PhD, Director

The Doctoral Psychology Internship Program is a one-year, American Psychological Association (APA)-accredited program with a training focus on clinical child and pediatric psychology. As a consortium, the internship provides intensive training in the assessment and treatment of children and families in a variety of interdisciplinary settings at the Lucile Packard Children's Hospital at Stanford and the Children's Health Council. Inpatient and outpatient clinical experiences are informed and enriched by exposure to current empirical literature, ongoing applied research,



and scholarly lectures. The program seeks to train reflective, highly skilled and culturally sensitive clinicians capable of functioning in a variety of clinical settings with a wide range of child and family issues and challenges. As the capstone of graduate training in clinical psychology, the internship provides a wealth of supervised experiences so that interns may develop particular areas of clinical interest with the aim of preparing leaders in the field of clinical child and pediatric psychology, who will be engaged in clinical practice, interdisciplinary collaboration, as well as advocacy and/or scientific investigation.

In 2017, the internship program was granted re-accreditation from the APA for a ten-year period, the maximum number of years granted. The 2018 graduates took postdoctoral positions at three major research medical centers and one community agency.

### Clinical Psychology Post-doctoral Fellowships

Kate Corcoran, PhD, Training Director, Adult Clinical Psychology Sharon Williams, PhD, Training Director, Child Clinical Psychology

The Clinical Psychology Fellowship at Stanford, accredited by the American Psychological Association (APA), is a one-year post-doctoral fellowship serving as the culmination of training in psychology and is guided by the scientist-practitioner model. Fellows are offered diverse clinical experiences in assessment and treatment utilizing evidence-based treatments, rich didactics based on current empirical literature, opportunities for



scholarly inquiry, and supervision by Stanford faculty. In 2013, the Clinical Psychology Post-doctoral Fellowship Program achieved accreditation from the APA. This initial accreditation for the program was for seven years, the longest term possible, which is rarely confirmed for a new program. The Child and Adolescent Program has 8 positions and continues to be 1 of 7 programs in the country with this accreditation. The Adult Program now offers 10-12 positions across the four tracks.

### PSGP-Stanford PsyD Consortium Training Program

Kimberly Hill, PhD, Director of Clinical Training Jamie Kent, PhD, Co-Associate Director of Clinical Training (PAU) Allison Thompson, PhD, Co-Associate Director of Clinical Training



The PGSP-Stanford PsyD Consortium is an American Psychological Association (APA)-Accredited, full-time, five-year, practitioner-scholar clinical psychology program intended for those seeking

careers devoted primarily to the direct delivery of clinical psychological services. Students in the program are taught by an outstanding faculty drawn from the Stanford University School of Medicine, Department of Psychiatry and Behavioral Sciences, and Palo Alto University. The program provides a generalist education in clinical psychology, emphasizing evidenced-based practice and cultural competence, and incorporating supervised clinical training. Students complete three full years of practicum training in settings that include the Psychiatry and Behavioral Sciences Department before completing a full-time, year-long, doctoral internship.

In 2019, we matched 100% of graduates into APA-accredited internships, compared to 73% for clinical psychology PsyD students nationally. In the most recent (2016) US News & World Report ranking of clinical psychology graduate programs, the PGSP-Stanford PsyD Consortium was ranked 3rd among PsyD programs in the country.

## **Training Programs**

## **Research Training Programs**

### Mental Illness Research, Education, and Clinical Center (MIRECC) Advanced Fellowship



Ruth O'Hara, PhD National Director Kaci Fairchild, PhD, Director (Psychology), VISN 21 Michael Ostacher, MD, MPH, MMSc, Director (Psychiatry), VISN 21

The Sierra Pacific Mental Illness Research, Education, and Clinical Center (MIRECC) at Veterans Affairs Palo Alto Health Care System provides a two-year post-doctoral fellowship affiliated with Stanford for MD and PhD fellows. The Sierra Pacific MIRECC fellowship is an integrated system of clinical, research, and educational efforts designed to improve the clinical care for aging veterans with dementias and with PTSD. Dementia and PTSD

share common clinical symptoms including cognitive difficulties, sleep disorders, and agitation and the Sierra Pacific MIRECC aims to evaluate current approaches and develop new treatments for these clinical problems. The training program offers didactic courses to promote research and professional development. In 2018, the psychology program at the Palo Alto VA obtained APA accreditation for 10 years under the leadership of Kaci Fairchild. Recent trainees have obtained NIH (3 fellows) and VA career development awards (one fellow).

### National Center for Posttraumatic Stress Disorder (NCPTSD) Advanced Fellowship



Marylene Cloitre, PhD, Fellowship Director

The National Center for Posttraumatic Stress Disorder (NCPTSD), Division of Dissemination and Training at the Veterans Affairs Palo Alto Health Care System provides a two-year post-doctoral fellowship affiliated with Stanford University for MD and PhD fellows in PTSD. The fellowship is sponsored by the Office of Academic Affiliations, Department of Veterans Affairs. The training program is mentorship based with a focus on guiding and supporting the fellow to an independent research career.

The fellowship focuses on research regarding engagement, assessment, and treatment of traumatized populations and extending reach of care both within VA and to national and global communities. The fellowship is in its fifth year. Thus far all graduates have obtained academic or VA research positions in line with our training mission.

### T32 Biobehavioral Research Training Program



PI: Alan Schatzberg, MD Co-PIs: Rachel Manber, PhD and W. Stewart Agras, MD

Funded by the National Institute of Mental Health, T32MH019938: A Biobehavioral Research Training Program is designed for those who plan to pursue careers in clinical or basic research with a specialization in adult disorders including mood, anxiety, and eating disorders and related areas such as insomnia. This program aims to help clinically trained MD and PhD fellows develop skills and experience in research to enable their investigative careers. Research

in the program is conducted under the direction of faculty mentors. The core aspect of the program is the mentoring relationship that will eventually enable an independent program of research. The training program offers didactic courses to promote research and professional development. Continuously funded by NIMH since 1994, this program has supported some 80 fellows, who have produced numerous publications in top journals and won career development grants from NIH

### T32 Multi-Institutional Training in Genetic/Genomic Approaches to Sleep Disorders

PI: Emmanuel Mignot, MD, PhD Co-PI Ruth O'Hara, PhD

This multi-institutional T32 training grant is the first multi-site training program to be funded by NHLBI. It involves the University of Pennsylvania, Stanford, Johns Hopkins, and the University of Michigan and provides three years of post-doctoral fellowship training. This multi-institutional T32 training grant was competitively renewed in 2018 for an additional five year cycle. Trainees have





co-mentors at their home institution: one expert in sleep research and one in genetics/genomics. Each fellow also has a mentorship committee with experts in sleep research and genetics from the various institutions in this program, as well as others, when appropriate, having currently funded training programs in sleep research (e.g., Harvard, Penn, Pittsburgh). Trainees who pursue genetic/genomic research at these other institutions will also be considered part of this national effort. Trainees take a core curriculum using videobased IT technology including lectures on genetics/ genomics of sleep and its disorders by faculty at all participating institutions, and attend career development training, and grants workshop, journal club, and research-in-progress talks by trainees. Dr. Mignot is a regular contributor to the monthly didactics on the genetics of sleep, and the monthly national grant writing seminar is led by Dr. Ruth O'Hara at Stanford University. Amongst recent graduates, three have obtained faculty positions at major research medical centers and have successfully competed for NIH career development awards.

### T32 Research Training Program in Child Neuropsychiatry and Neurodevelopment

PI: Allan Reiss, MD

This research training program provides funding for postdoctoral researchers who seek to improve or expand their ability to conduct ground-breaking interdisciplinary investigation in child neuropsychiatry and neurodevelopment. Candidates selected for the program (MD, PhD, MD/PhD) are those who seek to develop and pursue an original idea that crosses traditional disciplinary boundaries (e.g., psychiatry, psychology, genetics, education, neuroscience, cellular biology). Fellows typically engage in mentored research for two to three years in the clinical and/or basic



sciences. Postdoctoral fellows have the opportunity to participate in research projects of their mentor(s) and/or develop their own research programs. A key component of the program is the mentoring relationship, designed to facilitate the fellow's career trajectory toward academic independence. The training program offers didactic courses to promote research and professional development including formal training in research methods and ethics. Continuously funded by NIMH since 1993, graduates of the program have gone on to develop highly successful and productive careers in academia or industry.

### War Related Illness and Injury Study Center (WRIISC) Post-doctoral Fellowship

### Ansgar Furst, PhD, Fellowship Director

The War Related Illness and Injury Study Center at the Veterans Affairs Palo Alto Health Care System provides a two-year postdoctoral fellowship affiliated with Stanford for MD and PhD fellows in advanced neuroimaging, neuroscience, mental health and neuroscience, and complementary and alternative medicine. The fellowship is sponsored by the Office of Academic Affiliations, Department of Veterans Affairs. The training program offers individual mentorship with leaders in the field combined with didactic courses to promote research and professional development. The fellowship has



attracted outstanding applicants from across the nation. Since its inception in 2012, alumni have benefited from the training to launch successful careers in academia, government, healthcare, or high technology industries. Amongst the three 2018 WRIISC graduates, one has become the Clinical Director of the WRIISC and the other has taken a tenure-track position at a University.

## **Training Programs**

### Subspecialty Physician Clinical Fellowships

Subspecialty clinical fellowship training has actively expanded since 2009, from three fellowships to now seven, in response to the increasing need for subspecialized psychiatric care in our country. The fellowships are also an integral part of our Department's education, research, clinical care, community engagement, and leadership in these subspecialties.

### Addiction Medicine Fellowship



### Anna Lembke, MD, Training Director

The Addiction Medicine Fellowship is a one-year fellowship open to two physicians each year, who have completed any ACGME-accredited residency in any specialty (e.g., psychiatry, combined psychiatry/ internal medicine, family medicine, emergency medicine). The fellowship provides state-of-the-art training in the treatment of patients with substance use disorders and other addictions, in a variety of clinical settings. The program is tailored to the individual background and interests of the applicant, and our goal is to promote expert clinicians, policy-makers, researchers, and future leaders in the field of addiction medicine. The fellowship is currently accredited by the Accreditation Council for Graduate Medical Education (ACGME).

The Addiction Medicine Fellowship has become a model of cross-specialty training, participating in the White House/NIH Symposia "Medicine Responds to Addiction" in 2015, 2016, and 2018. The fellowship published the online, enduring CME course "Prescription Drug Abuse – Compassionate Care for a Complex Problem," funded by the Stanford Center for Continuing Medical Education. The Fellowship was awarded the Next Generation Award (2014-2016) for Adolescent Substance Use Prevention, (2014-2016); and one of our goals is to expand training in child and adolescent addiction treatment. Our fellows have gone on to leadership roles in diverse areas of addiction medicine at Stanford, Kaiser, county mental health, and a community hospital.

### Child and Adolescent Psychiatry Fellowship



Shashank Joshi, MD, Training Director Glen Elliott, MD, PhD, Associate Training Director David Hong, MD, PhD, Assistant Training Director Isheeta Zalpuri, MD, Assistant Training Director

The highest priority of the ACGME-approved Child and Adolescent Psychiatry Fellowship is to prepare trainees for leadership roles in academic child and adolescent psychiatry, clinical practice, and public service. Over the last 7 years, about 70% of our graduates have entered academic careers, post-doctoral fellowship or have an academic affiliation.

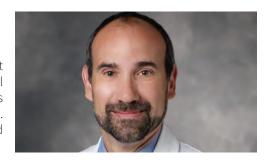
All fellows are thoroughly trained as clinicians and scholars. The training program is based on the principles of developmental sciences and developmental psychopathology. This theoretical framework views human development and its disturbances as flowing from the complex and reciprocal interactions between the family, broader social and physical environments, and biological factors. This framework integrates information from the social and behavioral sciences, developmental psychology, neuroscience, molecular biology and human genetics, developmental biology, and epidemiology.

The fellowship is ACGME-approved for nine fellows per year, one of the largest child and adolescent psychiatry fellowship in the country, with a total of 18 fellows over the two-year training. Two of these fellows enter a community track and a varying number a research track.

### Consultation-Liaison Fellowship

Jose Maldonado, MD, FAPM, FACFE, Training Director Yelizaveta Sher, MD, Associate Training Director

The ACGME-accredited Consultation-Liaison Fellowship is a one-year fellowship that includes the evaluation and management of the psychiatric complications of medical illness and/or its treatment, in both the inpatient and ambulatory care settings. This fellowship offers abundant didactic, clinical, and cutting-edge research opportunities. The program is designed to allow each fellow to develop his or her unique strengths and interests.



Every year fellows are mentored in various aspects of academic medicine, from research design to grant writing, to manuscript writing and publishing, to presentations at local, national and international scientific meetings. Our fellows' participation in clinical research have contributed to the development of various clinical tools currently used world-wide for the psychosocial assessment of solid organ transplant candidates, to the prediction of patients at risk for complicated alcohol withdrawal, to the assessment and prediction of delirium in medically ill individuals. They have also been instrumental in the development of treatment protocols and algorithms of psychiatric conditions among medically-ill patients.

The program has two fellows per year and nine faculty who are ABPN-certified in "Psychosomatic Medicine."

### Geriatric Psychiatry Fellowship

### Laura Dunn, MD, Geriatric Psychiatry Program Director

The goal of the ACGME-approved VA/Stanford geriatric psychiatry fellowship is to train psychiatrists to assume leadership roles in clinical and academic geriatric psychiatry. Two fellows per year develop clinical expertise in assessing and treating a wide range of psychiatric disorders in older adults. The faculty currently includes eight faculty members who are ABPN-certified in geriatric psychiatry.

Fellows develop excellence in working with multidisciplinary teams, provide geriatric psychiatry consultation in a variety of clinical settings (including inpatient, outpatient, collaborative care, consultation, and residential and long-term care), and develop skills in teaching geriatric psychiatry concepts, content, and skills to a variety of learners in various settings.



Fellows have a broad range of research opportunities, and develop skills in scholarly activities and administration that are required of leaders in clinical practice, community work, and/or academia.

## **Training Programs**

## Subspecialty Physician Clinical Fellowships

### Neuropsychiatry Fellowship



John Barry, MD, Training Director Sepideh Bajestan, MD, PhD, Associate Training Director

The United Council of Neurologic Subspecialties (UCNS)- accredited Neuropsychiatry Fellowship is a one-year fellowship designed to provide requisite skills and resources that will allow the fellow to practice independently as a neuropsychiatrist, the fellowship is open to both psychiatry and neurology residents who have fulfilled their ACGME requirements in their respective fields. Training occurs in both inpatient and outpatient settings and on psychiatric and neurological services.

The fellowship allows for research and specialization in different areas of neuropsychiatry that include Neuropsychiatry Psychopharmacology Outpatient Clinic, Neuropsychiatry Consult Liaison, Interventional Psychiatry Clinic (the opportunity to learn and practice different Interventional psychiatry methods in-depth including Transcranial Magnetic Stimulation, Electroconvulsive Therapy, etc.), individual and group psychotherapy for neuropsychiatric disorders, Outpatient Neurology Clinics, and Epilepsy Monitoring Unit.

The Fellowship has two fellows per year and seven core faculty who are UCNS-certified in "Neuropsychiatry and Behavioral Neurology." Our UCNS accredited program includes a sister Behavioral Neurology Fellowship program in the Neurology Department under our accreditation. Over the past years, all of our graduates have attended and presented the results of their research studies at the American Neuropsychiatric Association's Annual Meeting. Seventy-five percent of our past fellows are currently in academic institutions.

### Sleep Medicine Fellowship



### Anstella Robinson, MD, Training Director

The ACGME-accredited Sleep Medicine Fellowship was the first accredited by the American Sleep Disorders Association and is viewed internationally as the world's leading training program for sleep disorders medicine. It draws fellows from across the United States as well as from around the globe, who have trained in diverse specialties and subspecialties (e.g., anesthesia, family medicine, internal medicine, neurology, otolaryngology, pulmonology, pediatrics, psychiatry). This one-year clinical fellowship at the Stanford Sleep Medicine Center is available to 8 fellows per year.

Twenty-three faculty members from multiple specialties train the fellows in the full range of sleep medicine areas including the pharmacology of sleep, sleep disordered breathing, insomnia, narcolepsy, pediatric sleep, parasomnias, restless legs syndrome, neurodegenerative disorders, and orthodontics involving both children and adults. Fellows have opportunities to pursue research and to be educators and are quite active in public education about sleep and in scholarly/research endeavors.

Of our 2017-18 fellowship graduates, 4 took positions in academic medical centers, 2 took positions in medical centers, and 2 in private practice / consulting.

### Student Mental Health Fellowship

### Amy Alexander, MD, Training Director

The one-year Student Mental Health Fellowship is one of only a few in the US that focuses on training in college and university mental health delivery, the mental health of transitional and young adults, and systems-based practice with stakeholders in a major university. Fellows work with undergraduate and graduate students in outpatient psychotherapy and pharmacotherapy. The fellowship includes administrative and systems aspects of student mental health, outreach efforts to undergraduates on campus, didactics, and a scholarly project.



Flexibility exists to customize the curriculum to include the fellow's particular areas of interest (e.g., eating disorders, mood disorders, first episode psychosis, adult ADHD, addiction) and to work with special populations (e.g., first generation college students, athletes, people of color, survivors of sexual assault).

The first fellowship began in 2017, and the current fellow works within Stanford Health Care, Vaden Student Health Center, and Stanford University. This fellow is receiving specialized training in sports psychiatry for student athletes, and will be presenting "Millennials Helping Millennials: Exciting the Next Generation of Psychiatrists about College Psychiatry" at the American Psychiatric Association (APA) Meeting in 2019.

The Fellowship Director, Dr. Alexander, is currently one of the Co-Chairs of the APA's College Mental Health Caucus, the Chair of the Higher Education Mental Health Alliance (HEMHA) for 2019, and also the President of the new Association for College Psychiatry (AFCP). There are a dozen faculty who are involved in teaching and supervising this fellowship.

133%

increase in subspecialty clinical fellowships offered in the last 10 years Educational excellence is an essential mission of our Department.

34

clinical fellows enrolled among our 7 MD fellowships

## **Training Programs**

## **Sleep Technology Training**

### The Accredited Sleep Technologist Education Program



Clete Kushida, MD, PhD, Director

The Accredited Sleep Technologist Education Program (A-STEP) started at Stanford in 2011. This program provides education and training to individuals whom are interested in becoming sleep technologists. Sleep technologists' responsibilities include conducting sleep studies on patients with sleep disorders; monitoring, collecting, and analyzing patient information during all sleep testing procedures; and assisting sleep clinicians with patient care and education. Stanford's A-STEP is only one of two in California; the program accepts trainees in the spring and/or fall of each year, and no prior sleep laboratory experience is required.

A-STEP provides participants with standardized education and training that develops a knowledge-base about sleep medicine and the professional skills required of a sleep technologist. The Stanford Center for Sleep Sciences and Medicine has earned a two-year accreditation as an A-STEP Provider.

 $8^{\%}$ 

of Stanford medical students entering psychiatry in 2019 Ours is a personalized and inclusive community of learners.

27+

education and training programs in 2018-2019

### **Educational Excellence**

### **Undergraduate and High School Programs**

### Stanford Undergraduate Education in Psychiatry and Behavioral Sciences

Alan Louie, MD, Director

Many faculty members of the Department of Psychiatry and Behavioral Sciences also teach Stanford undergraduate students in a variety of courses and educational activities, ranging from small Freshman and Sophomore Seminars to large, lecture-based courses with up to 200 students. During one year, we enrolled over 1,500 undergraduates in educational activities in the Department and over 45 members of the Department's faculty taught undergraduate courses. Our faculty have won undergraduate teaching awards, like the Allan V. Cox Medal and a Human Biology Teaching Fellowship.



Stanford Explore Courses has listed almost 50 courses that have been taught in recent years by our faculty covering a wide range of topics, including sleep, addiction and the opioid epidemic, autism, psychosis and literature, happiness, secrecy, mindfulness, healthcare leadership, neurodiversity, xenophobia, culture and psychiatry, brain plasticity, behavior and development, careers in psychiatry, and more. Research courses also provide state-of-the art opportunities, including individual investigation or reading under a faculty member. Faculty serve as mentors, for instance, in the Pre-Major Advising Program.

We encourage active and adult learning models of education with lively discussions and student-centered projects. Student projects are frequently community-facing, like giving a talk about sleep at a local high school or getting an article about sleep in the student's hometown paper (Sleep and Dreams course). We draw upon our diverse departmental faculty to mentor student presentations on topics ranging from the genetics to the sociology of autism (Autism Spectrum Disorder course). Working in teams, students develop and pitch an innovation in mental healthcare (Leadership and Innovation in Mental Healthcare course). This latter course is taught to a mixture of learners who get to interact from the undergraduate, law, business, medicine, education, and engineering schools.

We believe the teaching of undergraduates/college students should be part of the educational excellence mission of a department of psychiatry. Colleges offer courses in experimental psychology, but often only a few cover clinically relevant topics. We are building a suite of courses in psychiatry, clinical psychology, clinical neuroscience, and behavioral science that have daily relevance to individuals and societies. Our goal is to inform the personal well-being and future professional lives of our students, to develop a pipeline for those considering advanced study in these field, and to de-stigmatize mental illness and health in our society.

### **High School Clinical Neuroscience Experiences**

Alan Louie, MD, Co-Director Laura Roberts, MD, MA, Co-Director Laura Turner-Essel, PhD, Program Manager

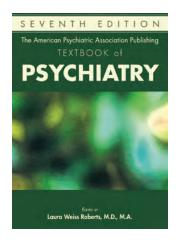
The Clinical Neuroscience Internship Experience (CNI-X) is an intensive, week-long summer program that introduces program participants to the amazing breadth of research found in our Department. The program is packed with small group sessions on topics ranging from miniature



human brains in petri dishes, to treatments using virtual reality, to addiction in adolescents, to transcranial magnetic stimulation. Experiential learning, designing a research project in a group, and self-directed study and self-reflection are emphasized. The program includes outreach to underserved schools.

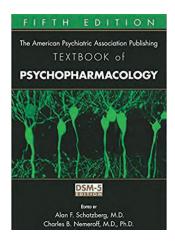
The Clinical Neuroscience and Research Experience (CNR-X) is an immersive, two week educational summer program for international high school students. Program participants have come from all across China to our Department to experience immersive lectures on the principles of neuroscience, clinical neuropsychiatry, neuroscience research, psychiatric epidemiology, behavioral and social sciences, and more. CNR-X also offers international students program participants an opportunity to experience life, as undergraduates do, on Stanford's campus. Programs with participants from other countries are being planned.

### **Recent Texts**



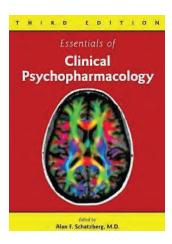
The American Psychiatric Association Publishing Textbook of Psychiatry: Seventh Edition

Author and Editor Laura Roberts, MD, MA



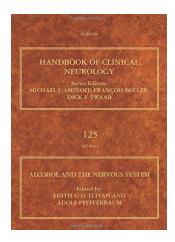
The American Psychiatric Association Publishing Textbook of Psychopharmacology

Co-Author and Co-Editor Alan Schatzberg, MD



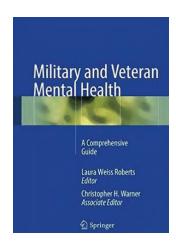
Essentials of Psychopharmacology: Third Edition

Co-Author and Co-Editor Alan Schatzberg, MD



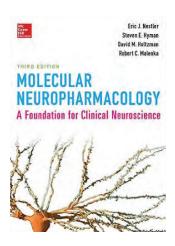
Handbook of Clinical Neurology: Alcohol and the Nervous System, First Edition

Co-Editor Edith Sullivan, MD



Military and Veteran Mental Health

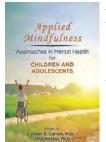
Editor Laura Roberts, MD, MA



Molecular Neuropharmacology: Third Edition

Co-Editor Robert Malenka, MD, PhD

### **Recent Books**



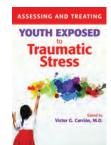
Applied Mindfulness: Approaches in Mental Health for Children and Adolescents 1st Edition

Co-Editors Victor Carrion, MD John Rettger, PhD



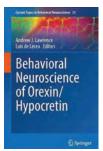
The Art and Science of Physician Wellbeing: A Handbook for Physicians and Trainees 1st edition

Co-Editors Laura Roberts, MD, MA Mickey Trockel, MD, PhD



Assessing and Treating Youth Exposed to Traumatic Stress, 1st Edition

Author and Editor Victor Carrion, MD



Behavioral Neuroscience of Orexin/Hypocretin

Co-Editor Luis de Lecea, PhD



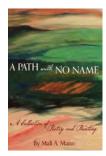
Building Better Caregivers: A Caregiver's Guide to Reducing Stress and Staying Healthy

Co-Author Dolores Gallagher-Thompson, PhD, ABPP



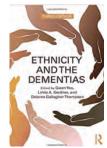
Clinical Manual for Assessment and Treatment of Suicidal Patients, Second Edition

Co-Author Laura Roberts, MD, MA



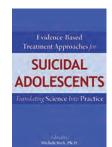
A Path with No Name: A Collection of Poetry and Painting

Author Mali Mann, MD



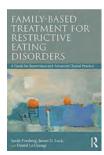
Ethnicity and the Dementias, 3rd Edition

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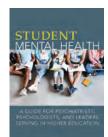
Evidence-Based Treatment Approaches for Suicidal Adolescents: Translating Science Into Practice

Editor Michele Berk, PhD



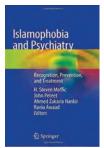
Family Based Treatment for Restrictive Eating Disorders

Co-Editor James Lock, MD, PhD



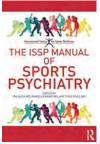
Student Mental Health: A Guide for Psychiatrists, Psychologists, and Leaders Serving in Higher Education

Editor Laura Roberts, MD, MA



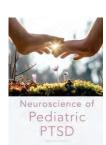
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Co-Editor Rania Awaad, MD



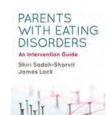
The ISSP Manual of Sports Psychiatry, 1st Edition

Co-Editor Ira Glick, MD



The Neuroscience of Pediatric PTSD

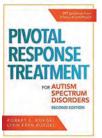
Co-Author Victor Carrion, MD



Parents with Eating Disorders: An Intervention Guide, 1st Edition

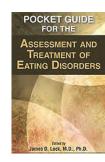
Co-Author James Lock, MD, PhD

### **Recent Books**



Pivotal Response Treatment for Autism Spectrum Disorders, Second Edition

Co-Authors Lynn Koegel, PhD Robert Koegel, PhD



Pocket Guide for the Assessment and Treatment of Eating Disorders

Editor James Lock, MD, PhD



Psychosocial Care of End-Stage Organ Disease and Transplant Patients

Co-Editors Jose Maldonado, MD Yelizaveta Sher, MD



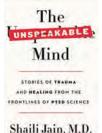
Terapia de claves traumáticas

Author Victor Carrion, MD



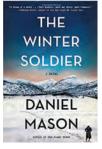
Traité De Psychopharmacologie Clinique (French Edition)

Co-Authors Alan Schatzberg, MD Charles DeBattista, MD, DMH



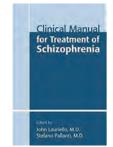
The Unspeakable Mind: Stories of Trauma and Healing from the Frontlines of PTSD Science

Author Shaili Jain, MD



Winter Soldier

Author Daniel Mason, MD



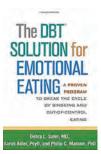
Clinical Manual for Treatment of Schizophrenia

Co-Editor Stefano Pallanti, MD, PhD



Competency in Combining Pharmacotherapy and Psychotherapy: Integrated and Split Treatment, 2nd Edition

Co-Author Laura Roberts, MD, MA



The DBT® Solution for Emotional Eating: A Proven Program to Break the Cycle of Bingeing and Out-of-Control Eating

Co-Author Debra Safer, MD



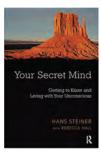
Disruptive Behavior: Development, Psychopathology, Crime, & Treatment

Co-Authors Whitney Daniels, MD Michael Kelly, MD Hans Steiner, MD



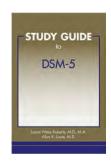
LooseLeaf for Fit & Well: Core Concepts and Labs in Physical Fitness and Wellness, 13th Edition

Co-Authors Paul Insel, MD Walton Roth, MD



Your Secret Mind: Getting to Know and Living with Your Unconscious

Co-Author Hans Steiner, MD



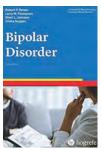
Study Guide to DSM-5

Co-Editors Laura Roberts, MD, MA Alan Louie, MD



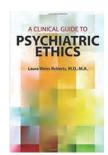
The Associate Professor Guidebook: Continuing the Journey to Professor

Editor Laura Roberts, MD, MA



Bipolar Disorder, 2nd Edition, a Volume in the Advances in Psychotherapy: Evidence-Based Practice Series 2nd Edition

Co-Author Larry W Thompson, PhD



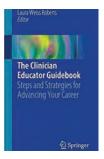
A Clinical Guide to Psychiatric Ethics

Author Laura Roberts, MD, MA



Clinical Medical Ethics: Landmark Works and the Legacy of Mark Siegler, MD

Co-Editor Laura Roberts, MD, MA



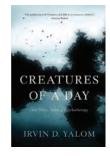
The Clinician Educator Guidebook: Steps and Strategies for Advancing Your Career

Editor Laura Roberts, MD, MA



Connect Core Concepts in Health

Co-Author Walton Roth, MD



Creatures of a Day: And Other Tales of Psychotherapy

Author Irvin Yalom

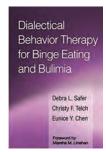


SECOND EDITION

Dement's Sleep and Dreams, 2nd Edition

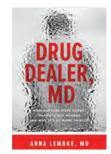


Co-Authors William Dement, MD Rafael Pelayo, MD



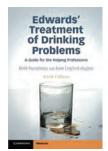
Dialectical Behavior Therapy for Binge Eating and Bulimia

Co-Author Debra Safer, MD



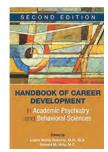
Drug Dealer, MD: How Doctors Were Duped, Patients Got Hooked, and Why It's So Hard to Stop, 1st Edition

Author Anna Lembke, MD



Edwards' Treatment of Drinking Problems: A Guide for the Helping Professions, 6th Edition

Co-Author Keith Humphreys, PhD



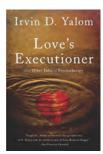
The Handbook of Career Development in Academic Psychiatry and Behavioral Sciences, 2nd Edition

Co-Editor Laura Roberts, MD, MA



International Medical Graduate Physicians: A Guide to Training

Co-Editor Laura Roberts, MD, MA



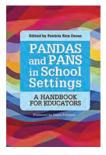
Love's Executioner: & Other Tales of Psychotherapy

Author Irvin Yalom, MD



Medical Computer Vision: Algorithms for Big Data

Co-Editor Weidong Cai, PhD



PANDAS and PANS in School Settings: A Handbook for Educators

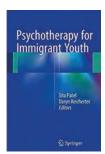
Contributor Margo Thienemann, MD

### **Recent Books**



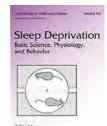
Psychiatric Aspects of Critical Care Medicine, An Issue of Critical Care Clinics, 1st Edition

Editor José Maldonado, MD, FAPM, FACFE



Psychotherapy for Immigrant Youth

Co-Editor Daryn Reicherter, MD



Sleep Deprivation: Basic Science, Physiology and Behavior (Lung Biology in Health and Disease)

Editor Clete Kushida, MD, PhD



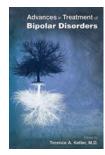
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Co-Editor Ira Glick, MD



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Editor Laura Roberts, MD, MA



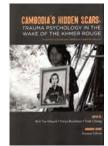
Advances in Treatment of Bipolar Disorders

Editor Terence Ketter, MD



Autism Spectrum Conditions: FAQs on Autism, Asperger Syndrome, and Atypical Autism Answered by International Experts

Co-Editor Joachim Hallmayer, MD, Dr med



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Co-Editor Daryn Reicherter, MD



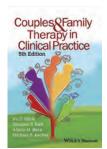
Cognitive-Behavioral Therapy for Late-Life Depression

Presenter Dolores Gallagher-Thompson, PhD, ABPP



Community-Based Participatory Research for Improved Mental Healthcare: A Manual for Clinicians and Researchers

Author Laura Roberts, MD, MA



Couples and Family Therapy in Clinical Practice

Co-Authors Ira Glick, MD Douglas Rait, PhD



Cue-Centered Therapy for Youth Experiencing Posttraumatic Symptoms: A Structured Multi-Modal Intervention, Therapist Guide

Author Victor Carrion, MD



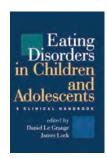
Cultural Issues in Pediatric Mental Health, An Issue of Child and Adolescent Psychiatric Clinics of North America

Co-Editor Shashank Joshi, MD



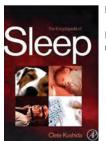
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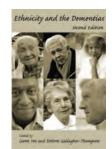
Eating Disorders in Children and Adolescents: A Clinical Handbook

Co-Editor James Lock, MD, PhD



Encyclopedia of Sleep

Editor Clete Kushida, MD, PhD



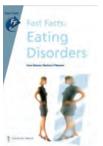
Ethnicity and the Dementias

Co-Editor Dolores Gallagher-Thompson, PhD, ABPP



Evaluation of Sleep Complaints, An Issue of Sleep Medicine Clinics

Editor Clete Kushida, MD, PhD



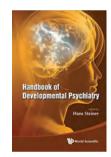
Fast Facts: Eating Disorders

Co-Author Hans Steiner, MD



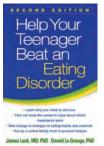
Goodnight Mind: Turn Off Your Noisy Thoughts and Get a Good Night's Sleep

Co-Author Rachel Manber, PhD



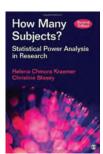
Handbook of Developmental Psychiatry

Co-Author and Editor Hans Steiner, MD



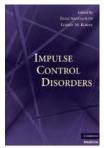
Help Your Teenager Beat an Eating Disorder

Co-Author James Lock, MD, PhD



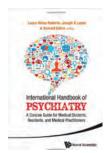
How Many Subjects? Statistical Power Analysis in Research

Co-Author Helena Kraemer, PhD



Impulse Control Disorders

Co-Editors Elias Aboujaoude, MD Lorrin Koran, MD



International Handbook of Psychiatry: A Concise Guide for Medical Students, Residents, and Medical Practitioners

Co-Author and Co-Editor Laura Roberts, MD, MA



Manual of Clinical Psychopharmacology

Co-Authors Alan Schatzberg, MD Charles DeBattista, DMH, MD



Mental Health in the Digital Age: Grave Dangers, Great Promise

Co-Editor Elias Aboujaoude, MD



The Oxford Handbook of Child and Adolescent Eating Disorders: Developmental Perspectives

Editor James Lock, MD, PhD



Partnerships for Mental Health: Narratives of Community and Academic Collaboration

Co-Editors Laura Roberts, MD, MA Daryn Reicherter, MD Steven Adelsheim, MD Shashank Joshi, MD



Professionalism and Ethics in Medicine: A Study Guide for Physicians and Physicians-in-Training

Co-Editors Laura Roberts, MD, MA Daryn Reicherter, MD

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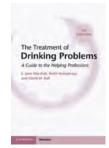
The Spinoza Problem: A Novel

Author Irvin Yalom, MD



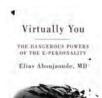
Treating Adolescents

Co-Author Hans Steiner, MD



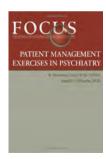
The Treatment of Drinking Problems: A Guide to the Helping Professions

Co-Author Keith Humphreys, PhD



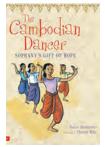
Virtually You: The Dangerous Powers of the E-Personality

Author Elias Aboujaoude, MD



Focus Patient Management Exercises in Psychiatry

Co-Author Ronald Albucher, MD



The Cambodian Dancer: Sophany's Gift of Hope

Author Daryn Reicherter, MD

### **Journals**



Academic Psychiatry

Editor-in-Chief Laura Roberts, MD, MA



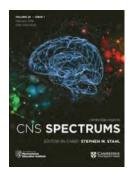
Addiction Journal

Regional Editor-in-Chief, Americas Keith Humphreys, PhD



Clinical Gerontologist

Co-Editor-in-Chief Dolores Gallagher-Thompson, PhD, ABPP



CNS Spectrums

Field Editor Stefano Pallanti, MD, PhD



Journal of Psychiatric Research

Co-Editor-in-Chief Alan Schatzberg, MD



Journal of Substance Abuse Treatment

Editor-in-Chief Emeritus Mark McGovern, PhD



Neuropsychology Review

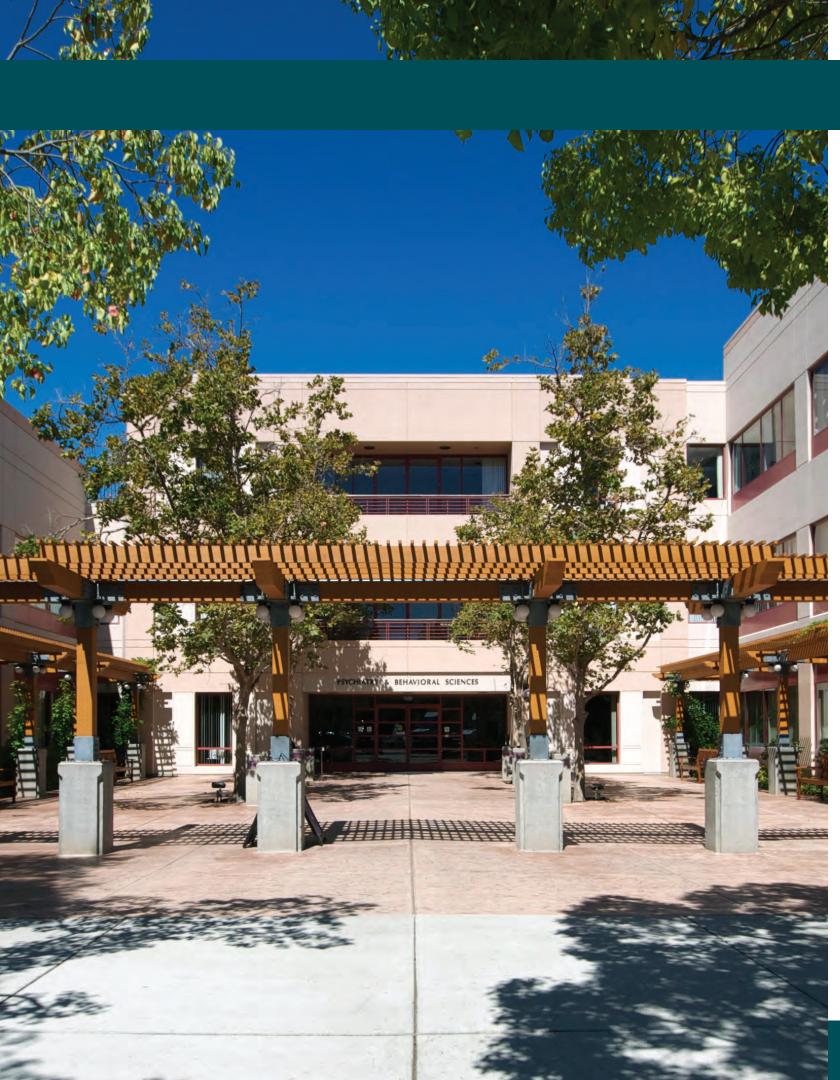
Editor-in-Chief Edith Sullivan, PhD





Sleep Science and Practice

Editor-in-Chief Clete Kushida, MD, PhD



# Clinical Innovation and Service

"Seeking not only to cure but to foster overall health, wellbeing, and resilience."

The preeminence of Stanford Medicine's Department of Psychiatry and Behavioral Sciences is predicated on exceptional clinical care for individuals and families across the age spectrum who live with mental disorders and related conditions. The need for exceptional care – care that is richly informed by expertise, evidence, compassion, and attunement – is urgent. One-in-five adults and one-in-eight children in the US experience an episode of mental illness each year, and one life is lost every 15 minutes to suicide in this country. Our community is especially hard hit, with a suicide rate far greater than national averages. Addressing the mental health needs of children, transitional age youth, adults, and elders is a priority for Stanford Medicine in serving the Bay Area and in serving as a model academic program across the country.

Over the past years, the Department has recruited many new faculty who have brought novel areas of expertise, deepened our existing areas of strength, and advanced innovative clinical approaches and models of care. In partnership with our affiliated hospitals, Stanford Health Care, Stanford Children's Health, and Palo Alto Veterans Affairs Health Care System, we have greatly expanded our portfolio to include new and more intensive clinical services and programs. In FY19, our Quarry Road clinics will have nearly 90,000 outpatient visits and our faculty as a whole has more than doubled the clinical productivity as measured by wRVU's since 2010. Many more patients are seen at other sites, such as El Camino Hospital, Santa Clara Valley Medical Center, and the Palo Alto and Menlo Park VA. We work side by side with physicians in every clinic and service line of our affiliated hospitals, providing state-of-the-art care for cancer, cardiovascular disease, neurological and neurosurgical conditions, and general medical, surgical, and emergency care.

Through enriched community-based partnerships, including engagement with local schools and federally qualified health centers, we are able to provide needed expertise and greater presence to our neighbors seeking mental health services. Through technological innovation, we are able to provide needed expertise and greater presence in the care of special populations, e.g., veterans with trauma related syndromes, and individuals at risk for eating disorders. Working intensively with Stanford University, we have expanded our services to students, staff, faculty, and their loved ones, on our campus. We are excited to have improved capacity and access, better serving the patients of the Stanford community, Stanford Medicine, the Bay Area, and beyond. Through integration with our translational, clinical, and implementation science activities, as well as our clinical training programs, we are able to have optimal impact in real-time and in the future.

Our department is dedicated to providing outstanding, evidence-based clinical and wellbeing services for individuals of all ages who are living with mental health related conditions and their families. The department's world-class faculty is defining new approaches to treatment and prevention, seeking not only to cure psychiatric disorders but to foster overall health, wellbeing and resilience. Our faculty, fellows, and advanced clinical trainees see patients in many different settings in our community and throughout the health systems of Stanford Health Care, Stanford Children's Health/Lucile Packard Children's Hospital, and the Veterans Affairs Hospital.

 $40^{+}$ 

department specialty clinic programs

Our department is a community in which we value all people.

143%

increase in departmental clinic visits since FY10

## **University Engagement**

### Student Health and Wellbeing

The Department of Psychiatry and Behavioral Sciences works in close collaboration with colleagues across Stanford University to foster and support the wellbeing and overall health of our students. Our efforts fall along the five missions of advancing science, clinical innovation, educational excellence, community commitment and engagement, and leadership and professionalism. We have endeavored to be good citizens and outstanding partners in addressing the hardest challenges faced on every university campus across the country: enhancing mental health and combating the phenomena of sexual violence and of discrimination associated with identity. Our retreat in June 2017 focused on social justice as one of its primary themes and our upcoming retreat this year will be focused on Wellbeing, Belonging, and Resilience in the Clinic, Classroom and Laboratory.

Our faculty lead educational activities, engaging with 1,500 undergraduates of Stanford University. In the undergraduate programs, we have made intensive, comprehensive, and expanding efforts to address student wellbeing and mental health in specific areas including increased focus on wellbeing of each student, strengthened positive care, community resources across the campus, further integration of self-care in the curriculum, more coordinated, comprehensive mental health services, new prevention, identification, and early-intervention approaches, and preparation for the needs of future students. In addition, for years we have partnered with others in the School of Medicine and Stanford Health Care to develop new services for physicians-in-training as well as other health professionals to promote self-care and strengthened programmatic approaches ensuring health of trainees and their mentors and teachers. With the launch of YogaX, the Department will provide opportunities for undergraduate, graduate, and postdoctoral students, along with professional students and student family members, to engage in self-care practice and to learn about therapeutic yoga and mindfulness.

#### PSYCHIATRY SERVICES AT VADEN HEALTH CENTER



Led by Executive Director, James Jacobs, MD PhD, Vaden Health Center is an accredited, multidisciplinary ambulatory clinic serving the approximate 16,300 undergraduate, graduate, and professional students of Stanford University. Dr. Jacobs has an MCL appointment in the Department of Psychiatry and Behavioral Sciences, and there are many points of collaboration between Vaden and the Department. Vaden units include medical services, psychiatric and counseling services, the Confidential Support Team for survivors of sexual and relationship abuse, wellness services, and administrative operations. Additional clinical services available at Vaden include nutrition, radiography, laboratory, injection and immunization clinics, travel medicine, pharmacy, and physical therapy, plus specialty clinics staffed by School of Medicine faculty. Vaden also administers the Cardinal Care health insurance program, which

serves more than half of the student body. All of Vaden's physicians and the director of the Confidential Support Team are Clinician Educators in the School of Medicine, primarily in the Department of Psychiatry and Behavioral Sciences and in the Department of Internal Medicine. Vaden also hosts a training program for pre- and post-doctoral psychologists and serves as a rotation site for Stanford Psychiatry and Internal Medicine resident physicians, and for the College Mental Health Fellow. Psychiatrist Bina Patel was named director of Vaden's Counseling and Psychological Services department, succeeding Psychiatrist Ron Albucher, who had been in the role for the prior eight years. With regard to research collaborations, Dr. Jacobs is working with Dr. Keith Sudheimer using a Departmental Small Grant to study neuropsychiatry of secret-keeping, and Vaden's Kevin Lee, MD and Dr. Patel are collaborating with Dr. Fiona Barwick using a Departmental Small Grant to study sleep health in college students.

### **CONFIDENTIAL SUPPORT TEAM**



Directed by our Department's own Dr. Helen Wilson, the Stanford Confidential Support Team (CST) offers free and confidential support to Stanford students impacted by sexual assault and relationship violence, including domestic abuse, intimate partner abuse, stalking, and sexual or gender-based harassment and discrimination. CST services include brief emotional support and ongoing individual counseling. CST counselors offer information about rights and reporting options and support throughout the reporting process, if pursued. Appointments are intended to provide confidential support for students who have experienced sexual/relationship violence, students accused of violence, and those who have questions about how to help a survivor of sexual/relationship violence. CST takes a collaborative approach and supports a student in determining the best next steps in their unique situation. Same day appointments are available for urgent needs, and 24-hour support is available by phone.

#### THE BELONGING PROJECT

The Belonging Project at Stanford is a recently launched Special Initiative of the Chair that was developed to promote emotional health and wellbeing through connection with the community through a sense of belonging. The importance of the feeling of belonging has been demonstrated through empirical work on human resilience and identity formation and on factors that protect emotional health and personal wellbeing, even in the context of adversity and trauma. University activities that foster a sense of belonging promote mental and physical health and help individuals to flourish in all aspects of their lives.

### STANFORD WELLCONNECT

Stanford WellConnect is a confidential mental health referral and consultation for residents and fellows, and it is a program that helps support institutional programs with necessary educational activities and policies related to trainee health and wellbeing. For physicians-in-training, stressors can get in the way of balancing the demands of professional and personal life, and without help, problems can intensify, having an effect on emotional and physical wellbeing and professional success. Although emotional distress often manifests in obvious ways, the symptoms can be subtle. WellConnect is a way to help our students stay healthy and resilient, even as they face the many challenges that come with modern medical training.

### STOKED LABORATORY

The psychology of Stoked, taught by Dr. Shashank Joshi and Daryn Reicherter, engages undergraduate students around issues of compassion, gratitude, existential philosophy, brain biology and the genesis of the mind, spirituality, and creativity. The Stoked Laboratory provides experiential learning to foster student resilience.

### STUDENT ATHLETES

The Sport Psychology Program offers confidential personal counseling, performance psychology counseling, psychological rehabilitation from injury, medication evaluation and management and specialized care referrals. Team centered workshops for varsity teams, crisis intervention and consultation with coaches and athletic department staff are also available. The services are provided by two licensed psychologists who specialize in sport performance and in student-athlete mental health. Medication evaluation and treatment is provided by physician specialists of the Department.

### STUDENT MENTAL HEALTH BOOK

With writing contributions from numerous members of our department faculty, including several based at Vaden Health Center, Dr. Laura Roberts edited the book Student Mental Health: A Guide for Psychiatrists, Psychologists, and Leaders Serving in Higher Education. The book addresses the issues encountered in caring for today's students who experience distress or develop significant mental health conditions, including suicidality, newly emergent psychosis, problems associated with substance misuse, the health risks of eating disorders, and the devastation of sexual assault. The book also covers topics related to safety, respect, conflict, and connection on campus, as well as students' evolving relationships with family, friends, and romantic partners. Student Mental Health brings understanding and clinical acumen to bear on the complex problems of this vulnerable group.



### OTHER EXAMPLES OF RECENT COLLABORATIONS

- Creation of several new psychotherapy groups to address and support needs of special student groups/interests
- Introduction of new models of short- and medium-term multidisciplinary therapies
- Expanded services for underrepresented students, at-risk students, and student athletes
- New University Mental Health Fellowship for physicians

## Specialty Clinical Programs

### Overview from Chair and Division Chiefs

#### OVERVIEW FROM THE CHAIR

Laura Roberts. MD. MA



Our department is dedicated to providing outstanding, evidence-based clinical and wellbeing services for individuals of all ages who are living with mental health-related conditions and their families. The department's world-class faculty is defining new approaches to treatment and prevention, seeking not only to cure psychiatric disorders but to foster overall health and resilience. Our faculty, fellows, and advanced clinical trainees see patients in many different settings in our community and throughout the health systems of Stanford Health Care and Stanford Children's Health/Lucile Packard Children's Hospital. New efforts, collaborations, and programs are always underway. Selected clinical activities and programs can be found on the following pages.

### DIVISION OF GENERAL PSYCHIATRY AND PSYCHOLOGY

Division Chiefs: Chris Hayward, MD, MPH and Bruce Arnow, PhD





The Division of General Psychiatry and Psychology provides state-of-the-art treatment for a wide range of psychiatric illnesses. We provide comprehensive psychiatric and psychological services across a continuum of care, through each of our specialized clinics and services. Our inpatient units include open and secured programs. Our ambulatory sub-specialty clinics focus on acute phase care with modes of treatment that include psychopharmacology, group and individual psychotherapy, interventional treatments including transcranial magnetic stimulation, and other innovative approaches to care, including virtual and augmented reality therapy.

### DIVISION OF SLEEP MEDICINE

Division Chief: Clete Kushida, MD, PhD



The Division of Sleep Medicine evaluates and manages patients with sleep problems across the age spectrum, from infancy to the elderly. We use cutting-edge, new technology to aid in the care of our patients, using a patient-centered care and translational approach for the diagnosis and treatment of sleep disorders. Our division adopts a comprehensive approach to our management of patients with sleep disorders; our faculty is composed of specialists in neurology, psychiatry, psychology, pulmonary medicine, internal medicine, pediatrics, and otolaryngology who excel in the diagnosis and treatment of the close to 90 different sleep disorders.

### DIVISION OF INTERDISCIPLINARY BRAIN SCIENCES

Division Chief: Allan Reiss, MD



The Division of Interdisciplinary Brain Sciences brings together faculty in psychiatry, psychology, statistics, and computational neuroscience, whose collective efforts are committed to leveraging interdisciplinary knowledge to provide explanatory models for human behavior that capture the inherent complexity of genetic, biological, and environmental factors, developing innovative methods for studying the brain and behavior and applying these tools to better understand brain-behavior associations underlying cognitive, developmental, and neuropsychiatric impairments, and addressing an individual as a whole person undergoing unique trajectories of development, across all stages of the lifespan.

#### DIVISION OF CHILD AND ADOLESCENT PSYCHIATRY AND CHILD DEVELOPMENT

Division Chief: Antonio Hardan. MD



The Division of Child and Adolescent Psychiatry and Child Development is an integral part of one of the preeminent child and adolescent mental health treatment consortiums in the country, which includes Lucile Packard Children's Hospital at Stanford, Stanford Children's Health, Stanford Hospital & Clinics, and Stanford University School of Medicine. Our clinical mission is founded on a commitment to family focused evaluation and treatment using the best available evidence-based methods. Our treatment philosophy embodies an emphasis on improving parent empowerment and providing parent training, when indicated, to make meaningful improvements in family quality of life and optimize outcome.

#### DIVISION OF PUBLIC MENTAL HEALTH AND POPULATION SCIENCES

Division Chiefs: Cheryl Gore-Felton, PhD and Mark McGovern, PhD





The Division of Child and Adolescent Psychiatry and Child Development is an integral part of one of the most preeminent child and adolescent mental health treatment consortiums in the country. Our clinical mission is founded on a commitment to family focused evaluation and treatment using the best available evidence-based methods. Our treatment philosophy embodies an emphasis on improving parent empowerment, time-limited psychotherapeutic interventions and providing parent training, when indicated, to make meaningful improvements in family quality of life and optimize outcome.

#### SELECTED SPECIALTY CLINICAL PROGRAMS

Addiction Medicine Dual Diagnosis Clinic

Adolescent Crisis Clinic

Adolescent Dialectical Behavioral Therapy

Adult Eating and Weight Disorders Program

**Assessment Clinics** 

Autism and Developmental Disorders Clinic

Behavioral Neurogenetics Clinic

Bipolar Disorders Clinic

Center for Integrative Medicine

Child Parent Management Clinic

Cognitive Behavioral Sleep Medicine Program

Complex Behavior Disorders Clinic Comprehensive Care Program Couples and Family Therapy Clinic

Dialectical Behavior Therapy Adult Program

**Diversity Clinic** 

Eating Disorders Clinic Executive Function Clinic Forensic Psychiatry Program

General Adult and Pediatric Sleep Medicine

Geropsychiatry Services

Inpatient and Acute Psychiatry Services

**INSPIRE Clinic** 

Interventional Psychiatry Clinic

Mood Disorders Program

Neuroendocrine and Sex Chromosome Variation Clinic

Neuropsychiatry Services

Neuropsychology Assessment Clinic Obsessive-Compulsive Disorder Clinic

PANS: Pediatric Acute-Onset Neuropsychiatric Syndrome Program

Pediatric Anxiety and Traumatic Stress Clinic Pediatric Functional Neurological Disorders

Pediatric Mood Disorders Program Pediatric Psychiatry Consult Service

Positive Care Clinic

Psychosocial Treatment Clinic
Psychosomatic Medicine Program
School Mental Health Services
Sleep Health & Insomnia Program

Sports Psychiatry and Sports Psychology

THRIVE

Virtual Reality-Immersive Technology Clinic

WellConnect
Women's Wellness

# **Specialty Clinical Programs**



Clinic Director Anna Lembke, MD

### Addiction Medicine Dual Diagnosis Clinic

Addiction Medicine Dual Diagnosis Clinic is composed of experts with experience treating patients with many different types of addiction, including behavioral addictions. Our team provides an evidence-based approach to treat patients with substance use disorders, behavioral addictions, and co-occurring psychiatric disorders.

#### **Conditions Treated**

- Alcohol use disorders
- Drug use disorders
- Prescription drug use disorders, including prescription opioids
- Behavioral (process addictions): Internet, gambling, shopping, sex, pornography

### This Program Provides

- Detoxification
- Pharmacotherapy for addiction
- Abstinence-based recovery models
- Harm-reduction recovery models
- Motivational interviews
- 12-Step Facilitations
- Psychosocial approaches to the treatment of patients with addiction and pain
- Group Psychotherapy: Early Recovery Group, Mindfulness Group, Buprenorphine Group, and Smoking Cessation Group



Clinic Director Michele Berk, PhD

### Adolescent Crisis Clinic

The Adolescent Crisis Clinic addresses the shortage of mental health services in the local area for teens at risk for suicide. The Crisis Clinic provides brief, evidence-based interventions to youth who present to the Stanford Children's Health Outpatient Child & Adolescent Psychiatry Clinic or to the Stanford Emergency Department with recent suicidal and/or self-harm behaviors. The Crisis Clinic provides youth and families with 1-4 sessions that include diagnostic evaluation, treatment recommendations, assistance with linkage to ongoing follow-up care, and a series of safety-focused strategies known to decrease suicide risk.

### Criteria for referrals to the clinic

- Adolescent has a recent history of a suicide attempt (within the past 4-6 months)
- OR, Adolescent has a recent history of non-suicidal self-injury/self-harm (past 4 months)
- OR, Adolescent has had recent suicidal ideation (within the past 4 months) requiring hospitalization or an FR visit
- AND, Adolescent is not currently in treatment with another psychotherapy provider and is in urgent need of services

### Adolescent Dialectic Behavior Therapy

Adolescents who hurt themselves often experience very strong and painful negative emotions, such as depression, anger, and anxiety. Because these emotions can be so hard to bear, people may engage in suicidal and self-harm behaviors as a way to make the painful feelings stop. Dialectical Behavior Therapy (DBT) helps people stop hurting themselves by teaching them safe and positive ways to cope with their negative emotions. DBT with adolescents includes parents in the treatment process. Adolescent DBT is for ages 12-18 (living at home and attending middle or high school).



Clinic Co-Directors Sanno Zack, PhD Michele Berk, PhD

### This Program Provides

- Individual therapy
- Multifamily skills group
- Telephone coaching
- Consultation team meeting for therapists

### Adult Eating and Weight Disorders Program

The Adult Eating and Weight Disorders Program is a specialty program providing evidence-based treatment to patients with disordered eating behaviors that impact their health and quality of life. The Program's mission is to provide efficient, efficacious treatment for our patients while supporting clinician and trainee professional development and well-being. The Program, housed within Stanford's Psychosocial Treatment Services Program, serves adult patients ages 18-75. For patients younger than age 18, please see the Eating Disorders Clinic listing for a description of services.

### **Conditions Treated**

- Disordered eating
- Body image
- Weight management
- Post-bariatric surgery weight regain
- Anorexia nervosa
- Bulimia nervosa
- Binge-eating disorder
- Other specified feeding and eating disorders (OSFED)

- Initial evaluation and assessment
- Evidence-based psychotherapy
- Also available: adjunctive medication management





Clinic Co-Directors Debra Safer, MD Kristine Luce, PhD



Section Chief Sallie De Golia, MD, MPH

### **Assessment Clinics**

The Assessment Clinics comprise three separate clinics: The Evaluation Clinic, the Individual Psychotherapy Clinic (IPC), and the Continuity Clinic. The Evaluation Clinic offers comprehensive evaluations and brief management (up to 3 months) for stabilization and support. Comprehensive recommendations and referrals will be provided for ongoing treatment. The Individual Psychotherapy Clinic (IPC) is a training clinic offering patients weekly, long-term psychodynamic psychotherapy. The Continuity Clinic is a training clinic offering patients comprehensive evaluations and up to one year of management for all psychiatric conditions. Treatment includes medication management and brief psychotherapy, recommendations and referral for longer-term psychotherapy or interventional therapies where appropriate, and collaborative care with patients' psychotherapists and primary care providers.

### This Program Provides

- Diagnostic evaluations
- Full medical and psychological workup
- Medication initiation and management (as appropriate)
- Psychodynamic Psychotherapy within the Individual Psychotherapy Clinic (IPC)
- Supportive, brief modalities within the Evaluation Clinic and Continuity Clinic
- Expedited referrals to appropriate resources and services through social work facilitation



### Autism and Developmental Disorders Clinic

The Autism and Developmental Disabilities Program (ADDP) is an integrated program that strives to achieve excellence in patient care, research, and clinical teaching. The program is founded on a commitment to familyfocused evaluation and treatment using evidence-based methods and best clinical practices, and serves children, adolescents, and adults.





Clinic Director and **Division Chief** Antonio Hardan, MD

**Program Co-Director** Jennifer Phillips, PhD

**Autism Clinic Director** Grace Gengoux, PhD

### **Conditions Treated**

- Autism Spectrum Disorder
- Social (Pragmatic) Communication Disorder
- Developmental Delays and Intellectual Disability
- Down Syndrome
- Tuberous Sclerosis
- 22q11 deletion (Velocardiofacial) and duplication syndromes
- Other genetic or medical conditions associated with developmental delay and/or autism

- Diagnostic evaluations
- Developmental and neuropsychological testing
- Pharmacologic consultation and treatment
- Neuropsychopharmacology multi-disciplinary clinic (psychiatry and neurology)
- Intervention and family supports
- Professional conferences for training in PRT
- Annual community conference on research advances

### Behavioral Neurogenetics Clinic

The Behavioral Neurogenetics Clinic focuses on the evaluation and treatment of neuropsychiatric, behavioral, and developmental problems of children, adolescents, and young adults with genetic disorders.

#### **Conditions Treated**

- Fragile X syndrome
- Williams syndrome
- 7q11.23 duplication syndrome
- Velo-cardio-facial (22q11.2 deletion) syndrome
- Marfan syndrome and other connective tissue disorders
- X-Chromosome linked intellectual/developmental Disorders
- Neurofibromatosis-1
- Noonan syndrome
- Other conditions associated with identifiable genetic disorders or risk factors

### This Program Provides

- Diagnostic consultation and evaluation
- Medication management
- Individual and family therapy





Clinic Director Allan Reiss, MD

Associate Director Tamar Green, MD

### **Bipolar Disorders Clinic**

The Stanford University Bipolar Disorder Clinic provides specialized, evidence-based, measurement-based consultation and treatments of adults with Bipolar Disorder. The practice model begins with a careful, comprehensive, patient-centered, biopsychosocial diagnostic evaluation, then treatment planning is multimodal and evidence-based, but also innovative.



- Bipolar 1 Disorder
- Bipolar 2 Disorder
- Bipolar Spectrum Disorders
- Cyclothymic Disorder
- Schizoaffective Disorder, Bipolar Type

- Comprehensive Assessment
- Consultation
- Psychopharmacology management
- Potential for clinical trials participation
- Comprehensive treatment planning



Clinic Director Po Wang, MD



Center Director David Spiegel, MD

### Center for Integrative Medicine

Integrative Medicine combines the best of "alternative" and complementary treatments with mainstream modern medicine and psychology to provide care for the whole person: mind and body. We provide evaluation and counseling to help patients match integrative medicine offerings with their individual needs. We assess medical problems, coping resources, family and social support, and patient goals, abilities, and opportunities. We offer our patients a variety of integrative techniques including acupuncture, hypnosis and mindfulness, and information regarding dietary supplements, in conjunction with traditional medical care.

### **Conditions Treated**

- Chronic pain
- Headache
- Anxiety
- Gastrointestinal issues
- Women's health issues
- Cancer (or other illness) treatment side effects
- Depression
- Musculoskeletal and joint pain

- Infertility
- Smoking habits
- Facing life-threatening diagnoses
- Stress management
- Phobias
- Stress-related neurological problems
- Fatigue



### Child Parent Management Clinic

The Child Parent Management Clinic consists of a multidisciplinary team specializing in the diagnosis and treatment of externalizing behaviors.

#### Conditions Treated

- Attention-Deficit/Hyperactivity Disorder
- Oppositional Defiant Disorder
- Conduct Disorder
- Disruptive Mood Dysregulation Disorder
- Intermittent Explosive Disorder (IED)
- Family Conflict
- Parent-Child Conflict
- High Functioning Autism Spectrum Disorder
- Anxiety
- Self-Esteem Issues

- Psychotherapy programs:
  - o Family therapy
  - o Behavioral parent training (PMT)
  - o Parent-Child Interaction Therapy (PCIT)
  - o Individual cognitive behavioral therapy (CBT)
- Consultation and medication management



Clinic Co-Directors Elizabeth Reichert, PhD Mari Kurahashi, MD

# Cognitive Behavioral Sleep Medicine Program

The Cognitive Behavioral Sleep Medicine Program at the Stanford Sleep Medicine Center offers a comprehensive evaluation of sleep problems and brief, evidence-based, non-drug treatments for insomnia, hypersomnia, circadian rhythm disorders, nightmares, and PAP adjustment. Treatment emphasizes a collaborative approach using cognitive and behavioral techniques, including mindfulness and acceptance and commitment therapy, to help people fall and stay asleep more easily, feel less sleepy or fatigued during the day, manage misaligned sleep-wake and other circadian patterns, reduce the frequency and severity of nightmares, and adjust to PAP therapy. Integrated protocols have been developed and are currently being tested for optimizing sleep health in students and treating sleep problems that co-occur with medical conditions such as chronic pain or POTS.



Clinic Director
Fiona Barwick, PhD

### This Program Provides

- Cognitive Behavioral Therapy for Insomnia (CBT-I)
- Medication tapering and cessation for hypnotic-dependent insomnia
- Desensitization and relaxation strategies for adjustment to PAP Therapy
- Augmentation techniques for Circadian Rhythm Disorders and Hypersomnia
- Imagery Rehearsal Therapy (IRT) for Nightmare Disorder

### Complex Behavior Disorders Clinic

The Complex Behavior Disorders Clinic provides expert assessment and treatment of problem behaviors in children, adolescents and adults with a broad range of developmental and intellectual disabilities, including autism spectrum disorder (ASD) and neurogenetic syndromes such as Prader-Willi syndrome, fragile X syndrome, Down syndrome, and other neurodevelopmental disorders. Patients in our clinic are among the hardest cases to treat, and are among the most underserved in our community. Our treatment approach is to identify the underlying reason for problem behaviors, which commonly include social-environmental factors. Our clinic uses developmentally sensitive and evidence-based approaches based on the principles of Applied Behavior Analysis (ABA).



Clinic Director Scott Hall, PhD

#### **Conditions Treated**

- Autism Spectrum Disorder
- Developmental Delays and Intellectual Disability
- Down Syndrome
- Fragile X syndrome
- Prader-Willi syndrome
- 22q11 deletion (Velocardiofacial syndrome)
- Williams syndrome
- 7q11.23 duplication syndrome
- X-Chromosome linked intellectual/developmental disorders

- Diagnostic evaluations
- Behavioral treatments
- Parent consultations
- Telehealth access





**Psychiatric Director** Jennifer Derenne, MD

**Program Director** Mary Sanders, PhD

# Comprehensive Care Program

The Comprehensive Care Program (CCP) is a 15-bed inpatient unit located at El Camino Hospital. The program uses a multidisciplinary approach to treating eating disorders and is part of Lucile Packard Children's Hospital's Comprehensive Eating Disorders Program. Patients admitted to this unit are adolescents who are medically compromised as a result of their eating disorder. Admission is designed to:

- Treat medical disorders resulting from abnormal eating that may affect a patient's heart, bones, liver, kidney, brain, reproductive system, or other organs
- Prevent long-term and life-threatening complications
- Evaluate and treat psychiatric disorders that often accompany eating disorders, such as:
  - o Depression
  - o Obsessive-compulsive disorder
  - o Anxiety

# This Program Provides

- Diagnostic evaluation (both medical and psychiatric)
- Medical management to prevent or detect complications
- Nutritional assessment and management
- Growth and development evaluation
- Assessment and management of osteopenia and osteoporosis
- Psychiatric medication evaluation and monitoring
- Individual therapy (including cognitive behavioral therapy, interpersonal therapy, psychodynamic therapy, and family-based therapy)
- Coordination with the patient's school
- Group and environment (milieu) treatment



Clinic Chief Douglas Rait, PhD

# Couples and Family Therapy Clinic

All relationships experience difficulties from time to time. When these problems pile up or seem too complicated to solve, it may be helpful to meet with a couples and family therapist. Because family and intimate relationships provide an important setting for growth and understanding, we focus on these relationships as the primary unit of care in the Couples and Family Therapy Clinic.

### This Program Provides

- Couples and family assessment and consultation
- Couples and family therapies, including structural couples and family therapy, emotion focused couples therapy, integrative behavioral couples therapy, and multi-generational approaches

### **Conditions Treated**

- Communication difficulties
- Marital conflict
- Parent-child problems
- Child and adolescent distress
- Depression and anxiety
- Work-family balance
- Family stress and crisis
- Family transitions

- Coping with medical illness
- Helping aging family members
- Loss and grief
- Sexual problems
- Separation and divorce
- Issues facing remarried families
- Loneliness and lack of intimacy

# Dialectal Behavior Therapy Adult Program

The Stanford Dialectical Behavior Therapy (DBT) Adult Program offers evidence-based care to adults (ages 18-75) with suicidal behavior and self-harm, as well as those with a range of diagnostic presentations underpinned by emotion dysregulation, impulsivity, difficulty with interpersonal relationships, and reduced quality of life. For patients younger than 18, please see the Adolescent Dialectical Behavioral Therapy services listing.



Clinic Director Sanno Zack, PhD

#### **Conditions Treated**

- Suicidality
- Self-harm
- Borderline Personality Disorder
- Ineffective coping behaviors directly related to core emotion dysregulation and/or chronic trauma sequela (e.g., substance abuse, binge eating, high risk behavior)

# This Program Provides

- Comprehensive DBT
  - o Individual DBT
  - o Skills Group
  - o Telephone Coaching
  - o Provider Consultation Team
- DBT Skills Group Only Track for Emotion Dysregulation
- DBT Skills Group for Functional Neurological Disorder (Conversion Disorder)
- DBT Skills Groups for Friends and Family of loved ones who are enrolled in or who would benefit from DBT

# **Diversity Clinic**

The Diversity Clinic serves patients from all walks of life and provides a safe space to address the unique intersectional identities of each individual. A holistic approach that fully integrates the many potential variables that affect a patient's emotional well-being (such as culture, race, ethnicity, faith/spirituality, class, gender identity, sexuality, or immigration status) is taken in order to provide the best care possible.

### Conditions Treated (For ages 18 and above)

- Depression
- Anxiety Disorders
- Post Traumatic Stress Disorder (PTSD)
- Obsessive Compulsive Disorder (OCD)
- Peripartum or Postpartum Depression/Anxiety
- Cultural Concerns
- Role/Identity Change
- Professional Life Balance
- Stress and Anger Management
- Spirituality and Faith Concerns
- Immigration Status Concerns

- Clinical assessment and treatment
- Medication consultation and management
- Individual therapy and counseling
- Family counseling
- Black and Muslim student services are offered through a partnership withCounseling and Psychological Services (CAPS) at Vaden Health Center





Clinic Co-Directors Rania Awaad, MD Yasmin Owusu, MD



Clinic Director Cara Bohon, PhD

# **Eating Disorders Clinic**

The Eating Disorders Clinic provides comprehensive outpatient medical and psychiatric evaluation, treatment, and follow-up for children, teens, and young adults (ages 10-24) with eating disorders. Please see the Adult Eating and Weight Disorders Program listing for a description of services for adults with eating and weight disorders.

#### **Conditions Treated**

- Anorexia Nervosa
- Bulimia Nervosa
- Binge Eating Disorder
- Avoidant Restrictive Food Intake Disorder
- Atypical eating disorders

### This Program Provides

- Diagnostic evaluation
- Medical management
- Nutritional assessment and management
- Growth and development evaluation
- Assessment and management of osteopenia and osteoporosis
- Psychiatric medication evaluation and monitoring
- Individual psychotherapy
  - o Cognitive behavioral therapy
  - o Interpersonal therapy
  - o Psychodynamic therapy
  - o Family-based therapy
- Coordination with the patient's school
- Group and environment (milieu) treatment



Clinic Director David Hong, MD

# **Executive Function Clinic**

The Executive Function Clinic primarily serves as a consultation service for psychiatrists at Stanford and for primary care physicians looking for a rigorous clinical evaluation for individuals with executive function difficulties, including Attention Deficit Hyperactivity Disorder (ADHD), but also encompassing other domains of executive function. The clinic also provides individual and family therapy, with an emphasis on habit formation and organizational skills development.

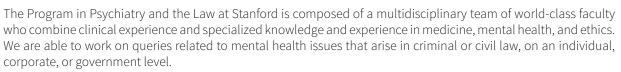
#### **Conditions Treated**

- Executive Function Deficits
- Attention Deficit Hyperactivity Disorder

- Diagnostic consultation and evaluation
- Medication management
- Cognitive and behavioral therapies
- Organizational skills training
- Parent training
- Individual and family therapy

# Forensic Psychiatry Program

Forensic Psychiatry is a subspecialty of psychiatry that encompasses the interface between the law and psychiatry. A forensic psychiatrist can provide evaluations for numerous legal purposes, including competency to stand trial and mental state opinion, among others.





Program Director Hans Steiner, MD

## This Program Provides

Our mission is to provide the highest level of ethical, comprehensive, unbiased, and evidence-based forensic assessments possible. We embrace the core values of integrity, excellence, and professionalism in all of our cases. We review all pertinent information and apply clinical expertise to each unique case to ensure that we are providing the most objective psychiatric assessments and expert opinions.

# General Adult and Pediatric Sleep Care Clinic

Our General Adult Sleep Medicine Clinic focuses on not only the diagnosis and treatment of common sleep disorders, but also rare sleep disorders. Our Pediatric Sleep Medicine Clinic diagnoses and manages infants, children, and adolescents with any sleep issue, from difficulty falling and staying asleep to disorders such as delayed sleep phase syndromes (i.e., inability to fall asleep unless late at night), sleepwalking, night terrors, or sleep-related breathing disorders.



Clinic Director Clete Kushida, MD, PhD

### **Conditions Treated**

- Insomnias
- Circadian rhythm sleep disorders
- Sleep-related breathing disorders
- Sleep-related movement disorders
- Parasomnias
- Hypersomnias
- Autonomic Disorders
- Dental Sleep Medicine
- Narcolepsy
- Neuromuscular Disease

- Sleep-Wake Pattern Assessment
- Hypoglossal Stimulation
- Positive Airway Pressure Naps
- Support Groups
- Sleep Technology Fairs
- Sleep Surgery
- Dental Sleep Medicine



Clinic Director Laura Dunn, MD

# **Geropsychiatry Clinic Services**

The Geropsychiatry Clinic provides a team-based approach to the evaluation and treatment of older adults with many different types of mental health conditions. We work collaboratively with patients, their families and caregivers, and other treating providers, to enhance older adults' mental well-being and quality of life.

### **Conditions Treated**

- Mood disorders
- Anxiety disorders
- Neurodegenerative disorders (e.g., Alzheimer's disease) with behavioral or psychological symptoms

In addition, we work with many of our patients on co-occurring symptoms and conditions that affect their mental well-being, such as sleep problems, changes in physical function, pain, loneliness, and grief.

# This Program Provides

- Pharmacotherapy
- Psychotherapy
- Psychosocial support groups
- Social work consultation
- Referrals to other resources and agencies for identified needs



Clinic Director Katherine Sanborn, MD

### Inpatient and Acute Psychiatry Services

The Inpatient Psychiatry Service at Stanford is committed to coordinating all patient care through a multidisciplinary team including psychiatrists, psychologists, nurses, occupational and physical therapists, social workers, and case managers. The 29-bed Inpatient Psychiatry Service features both open and secured unit programs. Our treatment program is structured to maintain the safety, dignity, and confidentiality of every patient on the unit.

### **INSPIRE Clinic**

The INSPIRE Clinic provides respectful and recovery-oriented assessment, consultation, and treatments for adolescents and adults experiencing clinical high risk and early symptoms of psychosis. Using an innovative interdisciplinary approach, we provide patient-centered and community-focused, evidence-based assessment and treatment for people at risk of or experiencing a psychotic disorder, with a focus on comprehensive treatment at the early stages to prevent progression of illness.

### This Program Provides

- Assessment
- Consultation
- Psychopharmacology
- Cognitive Behavioral Therapy for Psychosis
- Participation in Clinical Trials and Other Research
- Interdisciplinary Consultation
- Family Education
- Group Cognitive Behavioral Therapy for Psychosis (adult clinic only)
- Social Work Support (adult clinic only)







Clinic Co-Directors
Adult:
Jacob Ballon, MD, MPH
Kate Hardy, ClinPsychD

Adolescent: Steven Adelsheim, MD Kate Hardy, ClinPsychD

### Interventional Psychiatry Clinic

The Interventional Psychiatry Clinic provides specialized treatments utilizing device-based interventions such as electroconvulsive therapy (ECT), repetitive transcranial magnetic stimulation (rTMS), and deep brain stimulation (DBS). We provide consultations for patients with major depressive disorder who may benefit from TMS or ECT and patients with treatment-refractory obsessive compulsive disorder who may benefit from DBS. In additional to these clinical interventions, active research using novel forms of TMS, DBS, focused ultrasound, and other device-based interventions are available for patients.



Clinic Director Mahendra Bhati, MD

### **Conditions Treated**

- Major depressive disorder
- Bipolar depression
- Schizoaffective disorder
- Catatonia
- Obsessive-compulsive disorder
- Post-traumatic stress disorder
- Pain syndromes (e.g. fibromyalgia)
- Tourette's syndrome

- Electroconvulsive therapy (ECT)
- Repetitive transcranial magnetic stimulation (rTMS)
- Deep brain stimulation (DBS)



**Program Director** Charles DeBattista, MD, DMH

### Mood Disorders Clinical Services

Stanford's comprehensive, interdisciplinary approach to mood disorders integrates significant basic science research with innovative clinical care and training for future physician-scientists.

### Conditions Treated

- Major depressive disorder
- Bipolar disorder
- Seasonal affective disorder (SAD)
- Cyclothymic disorder
- Persistent depressive disorder (dysthymia)
- Disruptive mood dysregulation disorder

### This Program Provides

- A holistic approach beyond traditional psychiatry—integrating social factors, a deeper understanding of brain mechanisms, and a diverse range of diagnostic and treatment techniques, including genetics, imaging, psychotherapy, acupuncture, and behavioral therapy
- Pharmacological management and pharmacogenetics
- Targeted brain stimulation
- Minimally invasive surgery
- Computer-based brain training





Clinic Co-Directors David Hong, MD Allan Reiss, MD Gisela Sandoval, MD

# Neuroendocrine and Sex Chromosome Variation Clinic

The Neuroendocrine and Sex Chromosome Variation Clinic provides consultation and services across a range of syndromic disorders that commonly include cognitive-behavioral and psychiatric symptoms as part of their overall phenotype. This particular focus of the clinic is to treat conditions related to the action of hormones on the brain and/or differences in sex chromosome number. We provide specialized care for these often complex conditions that require interdisciplinary care across a number of medical domains, and we participate in advisory capacities for several national organizations related to these conditions.

### **Conditions Treated**

- Turner syndrome
- Klinefelter syndrome
- Other sex chromosome aneuploidies
- Endocrinological and neuroendocrine disorders associated with psychiatric symptoms

- Diagnostic consultation and evaluation
- Medication management
- Behavioral therapy including organizational skills training
- Parent training
- Individual and family therapy

# **Neuropsychiatry Services**

Our department is home to the only neuropsychiatry service in Northern California. Our focus is on the interface of neurological and psychiatric disorders and therefore we collaborate closely with the departments of neurology and neurosurgery.

# This Program Provides

- Multidisciplinary care in outpatient services
- Neuropsychiatry consultation-liaison services
- Partial Hospitalization and Residential Programs

Our interventions include several levels of psychopharmacology, individual and group psychotherapy, and interventional neuropsychiatry.





Program Co-Directors Sepideh Bajestan, MD, PhD John Barry, MD

# Neuropsychology Assessment Clinic

The Neuropsychology Assessment Clinic provides evaluation of a wide range of issues. Referrals made to this service typically result in cognitive testing, psychological testing, or both.

### This Program Provides

- Clinical intake
- Psychological and neuropsychological testing
- Comprehensive report
- Feedback session including discussion of testing results, diagnoses, and treatment recommendations

### Sample situations initiating referral to the clinic

- Dementias
- Cognitive effects of medical disorders
- Cognitive effects of substance abuse
- Midlife cognitive complaints
- Women's issues (e.g., breast cancer, menopause)
- Head injury/concussion, traumatic brain injury
- Attentional deficits
- Cognitive/memory changes or impairment
- Trauma (cognitive and psychological effects)
- Diagnostic issues concerning mood, anxiety, or thought disorders
- Differential diagnosis (e.g., psychiatric vs cognitive impairment)
- Adult Autism Spectrum Disorder (e.g., Asperger's)
- Adult Learning Disabilities





Clinic Co-Directors Jennifer Keller, PhD Tonita Wroolie, PhD



Clinic Director Elias Aboujaoude, MD, MA Conditions Treated

# Obsessive-Compulsive Disorder Clinic

The Obsessive-Compulsive Disorder Clinic provides specialized treatment for OCD and related conditions. We provide expert consultation and state-of-the-art medication and psychotherapy treatment in a supportive outpatient environment that respects the safety, dignity, and confidentiality of every patient. We also specialize in helping patients previously resistant to treatment and patients with complex, related problems.

- Trichotillomania
- Compulsive buying disorder
- Hoarding disorder
- Body dysmorphic disorder
- Problematic use of Internet-related technologies

# This Program Provides

- Psychopharmacologic treatment
- Exposure and response prevention
- One-time consultations• Computer-based brain training



Director of **Psychiatry Services** Margo Thienemann, MD

# PANS: Pediatric Acute-Onset Neuropsychiatric Syndrome Program

The Stanford PANS Clinic, the first established multidisciplinary PANS clinic, aims to care for affected children in the context of working to characterize and understand mechanisms of illness development and develop effective treatments. The multidisciplinary clinic engages members of the Division of Child and Adolescent Psychiatry working in concert with (and literally in the examining room with) members of the Department of Pediatrics, Primary Care, the Divisions of Allergy/Immunology/Rheumatology, the Department of Social Work and Hospital Educational Advocacy Liaisons (HEAL). We consult with many services, several of which are otolaryngology, sleep medicine, infectious disease, dermatology, occupational therapy, and physical therapy. The clinic accepts patients referred by pediatricians meeting specific criteria.

- Psychiatric diagnostic evaluations
- Psychotherapies targeted at specific symptoms of OCD, food refusal, tics, anxiety, mood symptoms (Child Psychiatry and Social Work)
- Psychopharmacologic interventions when indicated
- Brief computer-based and extensive neuropsychiatric testing
- Consultation with HEAL and schools
- Group Psychotherapy for parents psycho-education and skills-building
- When indicated, some patients participate in a cognitive behavior therapy group for OCD in the Division of Child and Adolescent Psychiatry and Child Development

# Pediatric Anxiety and Traumatic Stress Clinic

The Pediatric Anxiety and Traumatic Stress (PATS) Clinic consists of an integrated, multidisciplinary team seeking to address the impact of anxiety, stress, and trauma exposure on child development.

#### Conditions Treated

- Separation Anxiety Disorder
- Selective Mutism
- Specific Phobias
- Social Anxiety Disorder
- Generalized Anxiety Disorder
- Panic Disorder
- Agoraphobia
- PTSD and Traumatic Stress
- Obsessive Compulsive Disorder
- Trichotillomania
- Tics and Tourette's Disorder

### Additional conditions:

- Adjustment to life stressors
- Shyness
- School refusal
- Medical trauma

### This Program Provides

- Evaluation and consultation
- Individual, family, and group therapy
- Pharmacotherapy
- Parent coaching
- School collaboration
- Psychotherapy programs:
  - o Cognitive Behavioral Therapy (CBT)
  - o Cue Centered Therapy (CCT)
  - o Exposure/Response Prevention (ERP)
  - o Trauma Focused CBT (TF-CBT)
  - o Habit Reversal Training (HRT)
  - o Mindfulness and acceptance based treatments
- Specialty programs for young children:
  - o Parent Child Interaction Therapy (PCIT)
  - o CBT and play therapy
  - o Trauma focused therapies



Clinic Director Elizabeth Reichert, PhD

# Pediatric Functional Neurological Disorders and Conversion Disorder Clinic

The FND clinic aims to treat children and adolescents suffering from Functional Neurological Disorder (FND) and specializes in children and adolescents with Psychogenic Non-Epileptic Seizures (PNES), FND is diagnosed when altered voluntary motor or sensory function do not match up with known neurological or medical conditions, and is commonly thought to be due to an involuntary displacement of negative emotions onto physical symptoms. FND, also known as conversion disorder, has high morbidity with numerous visits to doctors and emergency room, use of anti-epileptic drugs (AEDs), and disruption of and absence from school – left untreated, affected children suffer Gisela Sandoval MD, PhD significant symptom burden and often develop additional physical symptoms and comorbid psychiatric disorders such as anxiety and depression.



Clinic Director

We provide a thorough clinical evaluation resulting in recommendations for an individualized treatment plan in a collaborative setting with neurologists, medical specialists, psychologists, and school staff. In addition, we assess for comorbid psychiatric diagnoses as well as functioning in different areas of the life of the adolescent using a variety of tools.

- Assessment
- Consultation
- Psvchoeducation
- Evaluation of co-occurring psychiatric diagnoses such as anxiety and depression
- Time limited specialized psychotherapy to target symptoms of FND/CD
- Medication if indicated
- Behavioral interventions (behavioral plans, school re-entry)



**Program Director** Manpreet Singh, MD, MS

# Pediatric Mood Disorders Program

The Pediatric Mood Disorders Program treats children and adolescents with a spectrum of mood disorders using developmentally sensitive and evidence based approaches. We provide careful assessment and treatment of mood disorders using clinical and structured interviews and evidence-based interventions (psychotherapies and psychopharmacological and psychoeducational interventions) to improve the mental health of children and adolescents affected by mood disorders.

#### **Conditions Treated**

- Major Depressive Disorders and all of their subtypes (melancholic, atypical, seasonal, premenstrual dysphoria, unspecified)
- Persistent Depressive Disorder
- Bipolar Spectrum Disorders (Bipolar I Disorder, Bipolar II Disorder, Unspecified Bipolar Disorder)
- Cyclothymia
- Disruptive Mood Dysregulation Disorder
- Unspecified Mood Disorder
- Adjustment Disorders with mood components
- Mood Disorders due to a General Medical Condition
- Substance-induced Mood Disorder
- Bereavement
- Commonly co-occurring conditions: Anxiety Disorders, Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder, Conduct Disorder, Substance Use Disorders, Alcohol Use Disorders



Medical Director Richard Shaw, MD

### Pediatric Psychiatry Consult Service

The Pediatric Psychiatry Consult Service provides inpatient and outpatient psychiatric consultation on children and parents of children with physical illness with the goal of facilitating the psychological adjustment of families dealing with the stress of new diagnoses and complex chronic health conditions.

### **Conditions Treated**

- Adjustment to medical illness
- Medical posttraumatic stress disorder
- Nonadherence with medical treatment
- Somatoform disorders
- Delirium
- Factitious disorder
- Catatonia
- Psychiatric complications of autoimmune encephalitis

- Diagnostic evaluations
- Psychopharmacology for the treatment of delirium, depression, insomnia, and other related conditions
- Individual and family therapy to address emotional stress
- Medical hypnosis to assist with chemotherapy-related nausea, pain syndromes, and procedural anxiety
- Solid Organ Pretransplant Psychosocial Evaluation

### Positive Care Clinic

We are committed to changing lives in positive ways. The Positive Care Clinic offers appointments for evaluation and physical examination within 24 hours, organizes laboratory testing, and provides cost effective treatments for sexually transmitted infections (STIs) and diseases. Other services include private STI testing and general sexual health and safety counseling for non-HIV positive patients.



Director of Mental Health Lawrence McGlynn, MD

# This Program Provides

- Primary and HIV specialty care
- Comprehensive primary care services for persons with HIV infection
- Adult primary care services for spouses and partners of HIV-positive individuals
- Family planning and counseling for HIV-positive individuals
- Culturally competent primary care and psychiatric services for the lesbian, gay, bisexual, and transgender community
- Adult psychiatric care and treatment

# **Psychosocial Treatment Clinic**

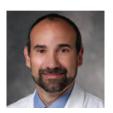
The Psychosocial Treatment Clinic provides short-term, evidence-based, psychological treatment for a variety of mood and anxiety disorders. Psychotherapy may be delivered in individual or group format. The clinic is staffed by faculty psychologists, clinical psychology post-doctoral fellows, faculty psychiatrists, and psychiatry residents.



Clinic Director Bruce Arnow, PhD

### **Conditions Treated**

- Major Depressive Disorder
- Dysthymic Disorder
- Bipolar Disorder
- Panic Disorder
- Acute Stress Disorder
- Posttraumatic Stress Disorder
- Generalized Anxiety Disorder
- Social Phobia
- Obsessive-Compulsive Disorder
- Trichotillomania
- Simple Phobia
- Adjustment Disorders



**Program Director** José Maldonado, MD

# Psychosomatic Medicine Program

The Psychosomatic Medicine Service functions both as a consultant and as part of the primary medical/surgical treatment team. Via conjoint rounds and teaching conferences, formal consultations, and involvement in inpatient treatment and discharge planning, the Psychosomatic Medicine Service provides a comprehensive approach to the emotional, cognitive, and behavioral needs of the patient.

### This Program Provides

- Consultation to Stanford Hospital medical/surgical units for patients with psychiatric disorders
- Pre-organ transplant evaluation to assess patients' psychological readiness for transplantation, as well as treatment for common psychiatric complications
- Prevention and management of alcohol and drug withdrawal at Stanford Hospital
- Competency assessments for participation in medical decision making
- Psychiatric aspects of pain management
- Prevention, diagnosis, and treatment of delirium
- Psychotherapeutic and pharmacologic interventions for those suffering from cancer, HIV, terminal illnesses, neurological illnesses, and chronic medical processes
- Psychopharmacology of intubated patients in the intensive care unit setting
- Family, caregiver, and hospital staff support for coping with illness or death of a loved one
- Consultation to hospital staff managing complex patients and the psychiatric aspects of medical processes



Director of School Mental Health Services Shashank V. Joshi, MD

### School Mental Health Services

The School Mental Health team provides clinical consultation and teacher training to several San Francisco Bay Area schools through established contracts with their respective school districts. These include the Palo Alto Unified School District, Mountain View Los Altos High School District, Los Altos School District, East Palo Alto Academy High School, San Mateo Union High School District, and Achievekids School.

### Mental Health Services This Program Provides

- Consultation in suicide postvention and crisis response
- Assistance on implementing the Student Suicide Prevention Bill (AB 2246)
- Teacher and administrator training on student mental health
- Assistance with selecting evidence-based school mental health curricula and school-wide suicide prevention programs
- Direct mental health support for students and school staff
- Opportunities for community-academic research collaborations

# Sleep Health & Insomnia Program

The Sleep Health & Insomnia Program provides effective non-medication based treatment for adults, adolescents, and children with sleep difficulties. The majority of the patients we see have insomnia and are treated with cognitive behavioral therapy for insomnia (CBTI), which is recognized by multiple major medical organizations as a first line treatment for patients with insomnia disorder. Our program specializes in treating complex behavioral sleep medicine presentations, including patients who have failed previous attempts at CBTI; patients who have co-morbid psychiatric, pain, sleep, and other medical conditions; and patients with hypnotic dependence.



Clinic Director Rachel Manber, PhD

#### **Conditions Treated**

- Insomnia
- Circadian rhythm sleep-wake disorders
- Nightmare disorders
- Daytime sleepiness/hypersomnia
- Chronic insufficient sleep
- Difficulty reducing or eliminating sleep medication
- Difficulty acclimating to sleep apnea treatment (CPAP or BiPAP)
- Bedtime fears/struggles (children)

### This Program Provides

- Short-term, sleep-focused treatments based on current scientific knowledge of how sleep and arousal systems are regulated
- A comprehensive sleep assessment
- Also available: one-time extended consultations

# Sports Psychiatry and Sports Psychology

The Sports Psychiatry and Sports Psychology Program provides evaluation and treatment for professional, Olympic, and NCAA athletes from around the San Francisco Bay area. We also provide integrated behavioral health services to Stanford student-athletes, including a full-service sport psychology program. We provide psychological services to varsity student-athletes that foster mental health and well-being, promote excellence in educational and athletic goals, and contribute to a safe, welcoming, and multi-culturally aware athletic department and campus community.



Clinic Director Lisa Post, PhD

### **Conditions Treated**

- Mood disorders
- Substance abuse
- Anxiety disorders
- Difficulties with anger, loneliness, or sadness
- Attention, concentration, and academic performance difficulties
- Motivation challenges and burnout
- Coping with and returning from injury
- Rest and recovery

- Confidential personal counseling and psychotherapy
- Performance psychology consulting
- Psychological rehabilitation from injury
- Career counseling
- Medication evaluation and management
- Lifestyle interventions
- Help identifying strengths and weaknesses in mental game
- Help improving confidence, composure, consistency, and goal-setting



Clinic Director Christina Khan, MD, PhD

### THRIVE

THRIVE (therapeutic, healing, resilience, inclusivity, values, empowerment) focuses on the wellness of individuals who experience adversity. Those who may benefit from our services include individuals who have experienced significant stress and are coping with changes in mood, anxiety, sleep, or disruption to work performance and interpersonal relationships. Services are personalized through an integrative and strengths-based approach to promote resilience in each individual served.

Clinical services include psychiatric consultation, psychotherapy, and referral for the following conditions: stress, burnout, anxiety, mood disorders, gender and sexuality issues, and trauma/loss. The program has subspecialty clinics serving LGBTQ+ individuals and resident physicians-in-training.

### Focus of Work

- Stress management and strengthening coping skills
- Identity exploration and development
- Fostering assertiveness and effective interpersonal skills
- Re-engaging meaning and hope
- Addressing stigma, discrimination, and micro-aggressions
- Processing trauma and moving toward recovery
- Promoting healthy lifestyles and maximizing quality of life



Clinic Director Kim Bullock, MD

# Virtual Reality-Immersive Technology Clinic

With the development of biometric sensing devices, virtual reality and other immersive technologies can now provide many types of sensory feedback retraining and education relevant to treating psychiatric illnesses. The merging of immersive technology with the biology of sensation allows behavioral shaping and conditioning procedures specifically targeting symptoms unique to each patient. The Virtual Reality and Immersive Technology (VR-IT) Clinic bridges evidenced-based behavioral psychotherapies, clinical research, and medical technologies to treat a varying spectrum of psychiatric conditions. The VR-IT Clinic incorporates the most current and emerging methods of virtual and augmented reality treatments into traditional cognitive behavior and mindfulness-based therapies, taking a holistic, customized, and personal approach to each patient.

### **Conditions Treated**

- Simple Phobias
- Obsessive Compulsive Disorder
- Post-Traumatic Stress Disorder
- Complex Trauma
- Addiction
- Psychosis
- Social Anxiety
- Panic Disorder
- Generalized Anxiety Disorder
- Somatic Symptom Related Disorders
- Eating Disorders

- Patient evaluation and consultation
- Desensitization
- Exposure Therapy
- Trauma-focused psychotherapy
- Social, interpersonal, and communication skills training
- Habit Reversal Training
- Evidenced-based psychotherapies delivered with virtual and augmented reality technology
- Mindfulness-based skills training
- Dialectical Behavior Therapy skills training

### WellConnect

Stanford WellConnect is a confidential mental health referral and consultation for residents and fellows. At times, stressors can get in the way of balancing the demands of professional and personal life, and without help, problems can intensify, having an effect on emotional and physical well-being and professional success. Although emotional distress often manifests in obvious ways, the symptoms of many psychological problems can be subtle.



Clinic Director
Mickey Trockel, MD, PhD

# This Program Provides

- Individual counseling
- Couples counseling
- Substance abuse assessment and counseling
- Medication evaluation
- Medication management
- Consultation to assist in the recognition of mental health concerns of residents and fellows
- Occasional lectures on wellness topics for physicians in training

# Women's Wellness

The Women's Wellness Clinic provides specialized mental health care to women. The clinic specializes in the evaluation and treatment of a wide variety of disorders.

### **Conditions Treated**

- Premenstrual dysphoric disorder (PMDD)
- Perinatal mood and anxiety disorders
- Perimenopausal mood and anxiety disorders
- Infertility treatment related adjustment and mood disorders
- Treatment resistant depression in women
- Psychiatric effects of gynecology-related conditions, such as polycystic ovary syndrome (PCOS), endometriosis, and cancer
- Menopausal symptoms (i.e., hotflashes)
- Sexual Pain Disorders (vaginismus)



Clinic Director Katherine Williams, MD



# Community Commitment and Engagement

Because it is so important to address critical mental health issues, our community mission is valued by every member of our Department, from laboratory scientist to front-line community-based clinician.

Community commitment and engagement is a fundamental academic mission of the Department and continues to grow and expand over time. Our community mission is defined broadly and flexibly to include our dedication to expanding our intensive local, state, and national community partnerships, ultimately extending these efforts to support novel behavioral health systems for providing mental health care around the world. Our view is that community commitment and engagement will have the greatest impact when informed by and combined with the other missions of science, clinical care, education, and leadership.

The Department has had a long tradition of great efforts in our community – sharing expertise and working on site at our local schools, serving on multidisciplinary care teams in Santa Clara County, supporting shared clinical training programs in San Mateo County, providing care for individuals with mental illness from historically underrepresented communities throughout our area, and working shoulder to shoulder with clinicians in federally qualified health centers to the north and the south of our campus. Our faculty have partnered with local agencies and advocacy groups to bring greater focus to the public health impact and specific needs of people living with mental disorders, ranging from autism to schizophrenia. We have worked tirelessly to address the issue of suicide that has threatened the lives of our young people and the heart of our neighborhood.

Our community engagement and collaboration mission remains an area of ever increasing focus as a key component of the vision and within our 10-year plan aspiration for the Department of Psychiatry and Behavioral Sciences of Stanford Medicine. Numerous groups of faculty, trainees and staff have come together to support these community efforts, including the monthly Community Psychiatry and Behavioral Sciences Workgroup, the faculty Community Engagement Advisory Committee, and the trainee community interest group. The dialogues within these workgroups and with our community partners have led to numerous community based activities in training, research and program development.

Our department continues to expand the community experiences for our trainees in county and local agency settings. We continue to integrate our community behavioral health efforts with an ever-increasing number of county and community agencies and partners. We continue to develop and expand our programs and laboratories to support communities of people with early psychosis, children and adults who have experienced trauma, the US Muslim community, people with Alzheimer Disease, veterans living with co-occurring disorders, international victims of torture and others. And through the development of new partnerships, we seek to expand our community engagement efforts to increase broad access to culturally appropriate, cutting-edge mental health care.

Over this next year we will continue to directly address and challenge the issue of stigma that delays access to critical mental health care and leads to difficulty in advocating for expanded community resources for mental health care. Further, by expanding on current efforts to create a cadre of trainees equipped to serve as community mental health leaders and team members, providing education and consultative support for our community-based partners across a range of settings and disciplines, and reaching out to offer clinical expertise in community-based clinics, we hope to strengthen our relationships and community capacity, to give rise to better mental health outcomes for the communities, people and populations we serve.

Our department makes connections and works shoulder to shoulder.

50+

regional, national, and international partnerships throughout the world

We embrace our community, our neighborhood, and our world.

# **Outreach Exemplars**

# **Regional Collaborations**

# California Student Mental Health Policy Workgroup



State Superintendent of Public Instruction (SSPI) Tom Torlakson convened the Student Mental Health Policy Workgroup (SMHPW) to bring together individuals with diverse expertise to develop innovative policy recommendations to address the mental health challenges facing vulnerable youth.

This work group is composed of teachers, school counselors, school social workers, school psychologists, school nurses, and school administrators, as well as state and county mental health professionals. This diverse group of experts has reviewed the current mental health needs of California students as well as the existing student mental health practices, and its first recommendation is that educators—including administrators and teachers—need more training in student mental health. Dr. Shashank Joshi is actively involved in working with this state effort to expand suicide prevention plan training for schools across the state.

# Center for Behavioral Health Services and Implementation Research



The Center for Behavioral Health Services and Implementation Research is actively involved in many projects focused on scaling up and sustaining evidence-based services in community settings. Our goal is to improve mental health care options for the people with the greatest need. Two local examples are: The Sonoma County Wildfire Mental Health Collaborative and State of California response to the opioid epidemic (State Opioid Response).

The Sonoma County Wildfire Mental Health Collaborative, led by Drs. Mark McGovern, Shannon Wiltsey-Stirman and Adrienne Heinz, aims to address the mental health needs of persons affected by the

deadly and destructive Northern California fires in October 2017. The project consists of two main endeavors: 1) expanding access to an evidence-based therapy for trauma and PTSD, the Skills for Psychological Recovery; and 2) using mobile health technology to reach adolescents with PTSD and trauma symptoms. This work is funded by the Healthcare Foundation of Northern Sonoma County.

California State Opioid Response has many components but our team at Stanford is directly involved in implementation and sustainment support activities focused on the implementation and improved access to FDA-approved medications to treat opioid use disorder. Our team leads regional Learning Collaboratives and mentors expert medical providers in Implementation Facilitation—two implementation strategies used to support existing and new providers in delivering high quality evidenced-based treatment for persons with opioid use disorders.

# Regional Adolescent Mental Wellness Conference



In April of 2018, the Stanford Psychiatry Center for Youth Mental Health and Wellbeing co-led and sponsored the second regional adolescent mental wellness conference with Lucile Packard Children's Hospital (LPCH). Held in Santa Clara, the conference attracted over 500 participants with its theme of Overcoming Cultural Barriers to Access. This event is unique in the diverse audience it serves - bringing together youth, parents, educators, clinicians, and policymakers to focus on youth mental health issues and needs. The third conference will be held in 2020.

# School Mental Health District Partnerships

The Stanford / Lucile Packard Children's Hospital (LPCH) School Mental Health Program has worked extensively with elementary, middle and high schools in Palo Alto, East Palo Alto, Mountain View, San Francisco, and San Jose since 2000, and provides a variety of mental health services, engages in community-based participatory research, builds capacity through ongoing professional development of school staff, promotes leadership among our trainees and community partners, and disseminates findings in multiple venues (academic journals, national meetings, and popular media). Our program is led by Dr. Shashank Joshi, with clinical care and consultation by Drs. Moira Kessler, Steven Sust, and Steven Adelsheim with staff partnership from Jasmine Lopez, Nadia Jassim, and Vicki Harrison.



Through these partnerships, we have learned about the specific mental health factors that may impact a student's learning, such as trauma, loss, depression, anxiety, and emotional distress in general. Many stakeholders have been engaged in these community efforts focused not only on mental health treatment and wellness promotion, but also on suicide prevention (see below).

Some school mental health research efforts focus on the interaction of culture, stigma, and help-seeking among diverse youth and their families. We have also implemented and evaluated peer-led (and adult-mentored) culturally adapted mental health interventions for several communities affected by suicide clusters. These interventions have led to more students being able to name trusted adults they would go to when seeking help for themselves or for peers. Recently, we received funding to study classroom teacher self-efficacy in student mental health, by utilizing a virtual classroom interaction platform.

### Stanford Health and Wellness Study

Stanford Health and Wellness Study, led by Drs. Victor Carrion and Ryan Matlow, is a three-year longitudinal, multi-method neuroscience-based research evaluation of a yoga- and mindfulness-based health and wellness curriculum being implemented in local school districts. It is a partnership between Pure Edge Inc. (formerly The Sonima Foundation), Ravenswood City School District, Alum Rock Unified School District, Orchard School District and Stanford's Early Life Stress and Pediatric Anxiety Program.



# Teen Wellness Conference

The Center for Youth Mental Health and Wellbeing was proud to co-sponsor and help plan the second annual Teen Wellness Conference held at Google's Sunnyvale campus on September 22, 2018. The event was organized "for teens by teens" under the leadership of TeenzTalk founder and UC Berkeley freshman, Nadia Ghaffari, who is also a member of our youth advisory board. The conference brought together over 200 youth from around the world to connect around their mental health experiences and explore resources for wellness, all while harnessing the power of positive peer support and empowering youth voices.



# **Training Collaborations**

# American Psychiatric Association Minority HIV Fellowship



The APA offers fourth year medical students the opportunity to spend one month at Stanford's Positive Care Clinic and Santa Clara Valley Medical Center's PACE Clinic working with Dr. Lawrence McGlynn in HIV psychiatry. The fellowship provides a stipend for housing, as well as a fully-funded 3-day HIV training program in Washington D.C.

# Early Psychosis/ CBT for Psychosis Training



Dr. Kate Hardy has led departmental efforts in early psychosis and Cognitive Behavioral Therapy for psychosis (CBTp) training for regional and state partners. With Momentum for Mental Health Dr. Hardy and Dr. Nichole Olson led a five-day training in CBTp for clinicians and CBTp informed skills for case managers followed by 10-month weekly consultation calls. This model ensures that staff in the agency are familiar with this approach across disciplines ensuring that individuals with psychosis are exposed to this intervention. She also works with California Department of Corrections and Rehabilitation to train clinical staff in CBTp informed skills to support patients in this setting who are experiencing psychosis. Nationally, Dr. Hardy has been training clinicians in CBTp at the University of Pittsburgh Medical Center followed by 10-month weekly consultation and tape review to ensure clinicians provide fully competent CBT for this population. Dr. Hardy is also leading a training for NAVIGATE Early Psychosis teams across Michigan in CBTp. Within this initiative 20 clinicians were trained in this approach over the course of a three-day training. Weekly consultation is being conducted with these clinicians with monthly tape review in collaboration with the NAVIGATE trainers to support ongoing sustainability and integration of these models.

# One East Palo Alto Neighborhood Improvement Initiative



One East Palo Alto (OEPA) is a non-profit community-based organization whose mission is to develop resident leaders, broker resources and services, build the capacity of individuals and organizations, and advocate for change, leading to the improved social, physical, spiritual, educational and economic well-being of East Palo Alto. OEPA is a community 'backbone' organization that convenes service organizations from across the community for collective impact, and spearheads a variety of youth and

community service programs. Dr. Ryan Matlow and Dr. Flint Espil provide professional development and consultation support to OEPA's Behavioral Health Advisory Group Ambassador Team in their efforts to provide crisis intervention, mentorship, and behavioral health support to youth in the Ravenswood City School District middle schools. Dr. Matlow also serves as a focus area workgroup co-lead for OEPA's Youth Empowerment and Strategies for Success (YESS) collaborative.

# San Jose AIDS Education and Training Center

The San Jose AIDS Education and Training Center (SJ AETC), under the medical directorship of Dr. Lawrence McGlynn, provides training, clinical consultation and technical and capacity building assistance for health care professionals at no cost utilizing expert faculty on topics related to HIV/AIDS and Hepatitis C prevention and care in the counties of Santa Clara, Santa Cruz, San Benito, Monterey and San Luis Obispo. SJ AETC provides customized presentations tailored to specific provider audiences and offers capacity building support for the development and implementation of routine HIV testing in primary care practices. Training and coaching services are also available for primary care clinics interested in transforming into a Patient Centered Health/Medical Home.



# Tipping Point Mental Health Initiative

Tipping Point Community's Mental Health Initiative began a partnership with Stanford's Early Life Stress and Pediatric Anxiety Program in 2012 to develop comprehensive and integrated wellness services and mental health supports at community-based organizations in the South Bay. Dr. Victor Carrion, Dr. Daryn Reicherter, Dr. Ryan Matlow, and Dr. John Rettger are engaged in ongoing collaboration with Tipping Point Community and their grantees at JobTrain, CollegeTrack East Palo Alto and Aspire's East Palo Alto Charter School and East Palo Alto Phoenix Academy. Mental health clinicians Veronica Alvarez, Cristina Cortez, Cynthia Yee, and Cindy Perez serve as Wellness Educators providing psychoeducation, mental health consultation, and service linkage and coordination for clients and staff at grantee sites. Through consultation, service delivery, and program development that is driven by principles of trauma-informed care and restorative justice, program faculty and staff seek to promote organizational wellness, system change, and capacity-building at partner community-based organizations.



### Trauma Treatment Training for Community Partners

Dr. Victor Carrion, Dr. Ryan Matlow, and Dr. Hilit Kletter provide training on Stanford's Cue Centered Therapy for Youth Experiencing Post-traumatic Symptoms (CCT) for therapists and counselors at behavioral and mental health care service organizations. In 2016 and 2017, CCT training was provided to members of partner organizations including the Center for Youth Wellness, Counseling and Support Services for Youth, Ravenswood City School District, Stanford Youth Solutions, One East Palo Alto, and Ponce Health Sciences University in Puerto Rico. Current plans are to hold annual 1-2 day CCT trainings for program and department partners.



# **Cultural Partnerships**

# The Bay Area Muslim Mental Health Community Advisory Board



In partnership with the Muslim Community Association (MCA), the largest Muslim community center in the Bay Area, the Stanford Muslims and Mental Health Lab was awarded a 2016 pilot grant from the Stanford Center for Clinical and Translational Research and Education (Spectrum). The overall goal of this project was to develop a community advisory board with key stakeholders that could address the mental health needs of the Muslim community. This CAB meets monthly under the leadership of Dr. Rania Awaad and is working to develop a community based model that facilitates utilization of formal mental health services among American Muslims in the Bay Area. At the 15th Annual Community Health Symposium in January 2017, the community-university partnership between the Stanford Department of Psychiatry and the Muslim Community Association was awarded the Outstanding Community Partnership Award.

# The Bay Area Muslim Mental Health Crisis Response Team



Dr. Rania Awaad is the co-chair of a crisis response team that services the Muslim community in the Bay Area. This team is comprised of therapists who volunteer their time for emergency consultations when the local Muslim community faces a crisis. Examples of emergency response efforts have been in the aftermath of the Muslim Travel Ban, Chapel Hill, UC Merced, San Jose Shootings and Santa Cruz drownings.

# The Bay Area Muslim Mental Health Professionals



The Stanford Muslims and Mental Health Lab hosts and helped develop a monthly meeting at Stanford for the Bay Area Muslim Mental Health Professionals network. This meeting has drawn mental health professionals and trainees from all over the Bay Area who work with Muslim populations. Since its inception, this network of Muslim Bay Area mental health professionals has grown from a handful to over 100 interdisciplinary mental health providers and trainees. The monthly meeting facilitates networking, peer support, and mentorship opportunities for those interested in Muslim Mental Health. The lab also helps organize the monthly didactic sessions and competency pre/post evaluations for these monthly trainings.

# Chinese Health Initiative



Steven Sust, MD is the Co-Chair of San Mateo County's Chinese Health Initiative (CHI). The CHI is dedicated to community education and outreach for general wellness of the Chinese population and the corresponding services available. In addition, CHI advocates for culturally and linguistically appropriate community services given the shortage of available community resource.

# Muslim American Society Social Services Foundation

Muslim American Society-Social Services Foundation (MAS-SSF) is a non-profit based in Sacramento, CA that aims to aid families in general and the Muslim community in particular with their culturally sensitive social and mental health service needs. The Stanford Muslims and Mental Health Lab has assisted MAS-SSF in applying for and successfully receiving a Capacity Building Pilot Project grant that is offered by California Department of Public Health (CDPH) California Reducing Disparities Project (CRDP). This grant will provide technical assistance to MAS-SSF to further develop their infrastructure and improve their ability to apply to larger state or federal grants. Later, the lab's role will be to evaluate the efficiency and the impact of their community based mental health practices.



### Stanford Communication Health Interactive for Parents of Adolescents and Others

In 2015, youth suicides among Palo Alto teenagers again made national news. To be responsive to the community, the department chose to expand a focus on supporting Asian students and families across the region. Nationally, Asian-American youth are at higher suicide risk, citing family acculturation mismatches as especially stressful. As the Stanford Psychiatry department responded with interventions for teens, we also talked with parents, whose upbringing may have stigmatized emotional issues. At a recent symposium, Asian parents discussed cultural differences, but also requested role-modeling and guidance on parent-child communication. Stanford faculty and trainees, under the leadership of faculty member Dr. Rona Hu, wrote scripts and became actors, depicting common scenarios, drawing on our academic backgrounds, clinical work, and our own lives. The team performed each scene first one way, paused for questions, and then performed the scene again, using audience input. The response: coverage from front page news, television and radio, to national and international invitations to perform for schools, communities, and professional meetings. Even more gratifying has been the response from parents who realize that they are not alone, and talk openly about their struggles. Responding to requests, the program is now expanding: vignettes for South Asians and Latinos, outcomes research, and video programs supplementing our live performances. As clinicians, we have found a "treatment" with lasting effects and no side effects, that the team hopes can save lives.



# Tribal Youth Suicide and Opiate Use Prevention Partnerships

In the Fall of 2018, the Center for Youth Mental health and Wellbeing was awarded a second year of funding from the California Indian Health Service to partner with Two Feathers Native American Family Services on youth suicide prevention education & program development across California. To date, this collaboration has led to expanded funding for Two Feathers and Native American youth and families in Humboldt County focused on school mental health, youth suicide prevention, opiate prevention and case management support, while also developing youth and family resiliency and expanded use of traditional practices in youth leadership development. Through this collaboration, our Center hopes in 2019 to expand Telebehavioral health support to the Hoopa Schools and other rural & tribal partners in Humboldt and, possibly, Del Norte Counties.



# **Clinical Collaborations**

# allcove Integrated Youth Mental Health Model



The Center for Youth Mental Health and Wellbeing has been actively working to expand access to integrated youth mental health services locally, within California and across the US. Based on international models such as headspace in Australia and Foundry in British Columbia, the intent is to create a one-stop shop for mental health support, primary care, early substance use support, supported education/employment and peer support for young people ages 12-25. In partnership with Santa Clara county, we are hoping the first two US sites, now known as allcove centers (see below), will open late in 2019 or early 2020. In addition, there is growing interest from other counties in California and other states to develop this innovative model. The Center is grateful for the support from local donors, foundations and the state of California to be able to develop the implementation team to support broader expansion of this model.

### Arbor Free Clinic: Stanford Medicine's Free Clinic



Founded in 1990, the ongoing mission of Arbor Free Clinic is to provide culturally appropriate, high quality transitional medical care for an underserved patient population and to educate and empower a new generation of healthcare leaders to proactively address health disparities and improve access to care in their communities. Dr. Daryn Reicherter is Faculty Advisor and an Attending Physician for the Mental Health Chapter of the Arbor Free Clinic. This serves as a training experience for Resident Psychiatrists, Medical Students, and Pre-medical Undergraduates.

# Center for Survivors of Torture, Asian Americans for Community Involvement



Since its inception in 2000, Center for Survivors of Torture (CST) has provided specialized services, including individual and group psychotherapy, psychiatry, psychological and medical evaluations for political asylum cases, medical, social and legal services to more than 800 victims of torture and family members from 64 countries. Dr. Daryn Reicherter has become the medical director and provides clinical services for victims of political torture from around the world. He also helped develop rotations there to enhance exposure to community psychiatry for education at Stanford School of Medicine. AACI now has a robust resident training program and PsyD training from Stanford and from Stanford/PAU programs (respectively). AACI is developing an integrated behavioral health program to complement its growing primary care program as well.

### Center for Youth Wellness

The Center for Youth Wellness (CYW) is an innovative, public-private initiative working to provide a full spectrum of services under one roof for San Francisco's most vulnerable children. Exposure to adverse childhood experiences not only affects brain development, it can change children's hormonal systems, immune systems, and even their DNA. This can cause behavioral problems, learning difficulties, and physical health issues. Screening for adverse childhood experiences in children as early as possible and providing children and their families with the support services they need is a critical step to prevent and undo the existing and future harm to children's brains and bodies caused by toxic stress. Dr. Victor Carrion is a founding member and past Chair of the Scientific Advisory Committee for the Center for Youth Wellness. Dr. John Rettger provides ongoing support in yoga and mindfulness practices for CYW staff. In addition, Dr. Hilit Kletter provides Cue Center Therapy (CCT) trainings to clinical staff.



### El Camino Women's Medical Group

El Camino Women's Medical group provides comprehensive women's health care. During a woman's lifetime, she will deal with many unique issues, and the El Camino Women's Medical Group strives to treat every woman as a whole person, offering the most current and innovative treatment options while being open to alternative treatment modalities. Located in Mountain View and San Jose, it is the largest OB/GYN practice that caters to the Muslim community and holds a community partnership affiliation with the Department of Psychiatry and Behavioral Sciences to offer women's mental health care to its diverse population. Our Department's, Dr. Rania Awaad, serves as its Psychiatric Director.



# Gardner Family Health Network

Dr. Daryn Reicherter is a Consulting Psychiatrist working to develop Integrated Behavioral Health for Gardner Primary Care. Three of Gardner's 7 sites have operational behavioral health, including Packard/Gardner Children's Health Center. Gardner has an operational 1st Five Program operating at several sites. The Program is growing with the goal of having behavioral health available at all its sites.



# Clinical Collaborations (continued)

# The Khalil Center - Bay Area



The Khalil Center works to address the clinical needs of local Muslim populations using faith-based approaches rooted in Islamic theological concepts, while integrating the science of psychology towards addressing psychological, spiritual and communal health. There are currently offices in both the South Bay and East Bay. Dr. Rania Awaad teaches Khalil Center interns and trainees and provides leadership, vision, and capacity building through her role as the Khalil Center's Clinical Director.

# Partners in AIDS Care and Education Clinic, Santa Clara Valley Medical Center



The Partners in AIDS Care and Education (PACE) Clinic is the largest provider of comprehensive HIV care in Santa Clara County. The patient population represents the diversity of the community it serves, including over 50% Hispanic and significant numbers of Asians and immigrants from Africa. Dr. Lawrence McGlynn serves as the PACE Clinic's Director of Mental Health Services. Dr. Ripal Shah is also actively seeing patients in the PACE Clinic. In addition to primary and psychiatric care, the clinic also offers substance abuse counseling and treatment, pain management, Hepatitis C treatment, case management, and outreach.

# Psychosis-Risk and Early Psychosis Program Network (PEPPNET): Local



Our PEPPNET early psychosis team of Kate Hardy and Steve Adelsheim were excited to partner with Santa Clara County on their successful effort to obtain a SAMHSA Clinical High-Risk grant. This 4 year grant, which began in October 2018, will support expanded efforts of the REACH programs, run through partners at Momentum in Mental Health and Starlight. We are excited to be technical assistance partners on this wonderful opportunity to expand the early intervention continuum in Santa Clara County.

### Ravenswood Family Health Center



Ravenswood Family Health Center is a nonprofit federally qualified community health center based in East Palo Alto. RFHC provides healthcare for the underserved, uninsured and most vulnerable low-income residents of communities in southeastern San Mateo County. Drs. Christina Khan and Ryan Matlow provide mental health services for Ravenswood Family Health Center as members of the Integrated Behavioral Health Services team.

### Stanford Positive Care Clinic

The Stanford Positive Care Clinic was founded in 1994 to provide support and treatment for those living with HIV/ AIDS. Today the clinic has expanded its mission, providing primary and mental health care to the LGBT population, as well as those seeking Pre-Exposure Prophylaxis (PrEP), an effective method to reduce the transmission of HIV. The faculty and staff of the Positive Care Clinic are also active in outreach and education of the HIV and LGBT community. International research continues to be an important component of the Positive Care Clinic's work.



### Stanford Psychiatry Forensics Team

The Stanford Psychiatry Forensics team provides clinical support and collaboration with juvenile and adult court systems in San Mateo and Santa Clara Counties, with their expanding community partnerships the team works to "Bring medicine to crime" in an effort to support the mental health needs of those involved with the justice system. They also provide training to agencies, courts, and community partners on mental health assessment, needs, and issues of those in the justice system.



# Therapeutic, Healing, Resilience, Inclusivity, Values, and Empowerment Clinic

Therapeutic, Healing, Resilience, Inclusivity, Values, and Empowerment (THRIVE) is a new clinical program at Stanford directed by Dr. Christina Khan that focuses on the rehabilitation and empowerment of individuals and communities that experience adversity. Those who may benefit include vulnerable populations including LGBTQ+ individuals, immigrant and refugee populations, individuals who have coped with racial discrimination, individuals and communities affected by traumatic events, and human services professionals experiencing secondary trauma. Services are personalized through an integrative and strengths-based approach to promote resilience in each individual/community served. The subspecialty clinic serving LGBTQ+ individuals will become part of Stanford's new integrated Sexual and Gender Medicine Program.



# Suicide Prevention Efforts

# Project Safety Net and the HEARD Alliance



For the past 7 years, many department members have been involved in local, regional and state suicide prevention efforts. Through partnerships with Palo Alto's Project Safety net and the regional HEARD Alliance of health and mental health professionals, departmental faculty, staff and trainees have lent support to local efforts to expand suicide prevention programs, including efforts focused on lethal means restriction. Drs. Joshi and Adelsheim continue to be involved in the leadership of these initiatives.

In addition, Dr. Joshi has been a leading partner in the efforts to expand the HEARD Alliance's highly acclaimed Suicide Prevention Toolkit, which has now become a state guide. This effort has been linked with our team's contribution to the passage of California AB 2246, The Student Suicide Prevention Bill, signed into law in the Fall of 2016. Members of our team have also led statewide webinars in suicide prevention designed specifically for school districts to implement the provisions of the bill.

# Santa Clara County EPI-AID Epidemiological Partnership



Our faculty have been consulted statewide and nationally to provide recommendations on both upstream and downstream suicide prevention measures. Dr. Rebecca Bernert, a suicidologist in our department, recently received a grant from the Stanford Center for Clinical and Translation Research and Education to create a formalized infrastructure to support monitoring of youth self-directed violence in Palo Alto and comparator districts/counties. In addition, the Santa Clara County Behavioral Health Division is supporting Dr. Bernert's efforts to develop an initial fatality statistics database along the Caltrain railway corridor to support epidemiological monitoring of youth suicides and their prevention.

### SPoT Media and Mental Health Initiative



A new initiative launched in 2018 and housed within the department's Center for Youth Mental Health & Wellbeing, the Media and Mental Health Initiative strives to better understand and improve the impact of media on youth mental health through partnerships, outreach, research and projects aimed to enhance the prosocial, safe use of media in multiple forms (news, social, entertainment). Under the direction of Center Program Director Vicki Harrison, early work of the initiative has been the development of partnerships with media platforms and researchers in suicide prevention and child development to identify actionable ways in which the power of media can better support youth health and wellbeing.

Over the past year, the initiative has collaborated with organizations that include the Center for Scholars and Storytellers, Facebook, Orygen Youth Mental Health Centre, Youth/Tech/Health, Jed Foundation, Second Muse, and Youth United for Responsible Media Reporting. In addition, due to the strong support for this effort from our Department as well as local donors, we have been able to develop additional staff support for this critical effort. With the addition our new Program Coordinator Lauren Lockhart to focus specifically on suicide prevention and media efforts, we hope to expand our collaboration with the many national suicide prevention and mental health partners working to address this effort. Through these collaborations we hope to further expand on existing partnerships with The Sophie Fund, the JED Foundation, and the American Psychiatric Association, as well as others.

# **Community Development**

# allcove Integrated Youth Mental Health Model: Youth Advisory Group

In March 2018, the Center for Youth Mental Health & Wellbeing convened an inaugural cohort of youth advisors to guide the development and implementation of an innovative integrated youth mental health model in Santa Clara County. In partnership with Santa Clara County Behavioral Health Services and their use of Innovation funds approved by the California Mental Health Services Oversight and Accountability Commission, the Center recruited 27 youth from the two communities in the County where it intends to build two centers for a four year pilot of this innovative model. This group of 16-25 year old youth advocates have served as co-designers for the model, engaging in an intensive user-centered design process with IDEO.org to develop a brand for the centers and the new name "allcove." They were also active in presenting to the community at several conferences and community events throughout the region, presenting on mental heath stigma reduction and the promise of the allcove model.



"By providing training, education, and consultative support for our community-based partners, we aim to strengthen our community capacity, to give rise to better mental health outcomes for the communities, people and populations we serve."

# **National Collaborations**

# The American Psychiatric Association Office of HIV Psychiatry



The APA Office of HIV Psychiatry coordinates the many HIV/AIDS-related educational, training, and support activities within the American Psychiatric Association and the American Psychiatric Foundation. The office provides information on the spectrum of clinical, neuropsychiatric, and psychosocial aspects of HIV disease and AIDS, and offer a myriad of trainings and services for various audiences including psychiatrists, psychiatric residents, physicians, physician assistants, nurses, social workers, substance abuse professionals, mental health providers, case managers and individuals living with HIV. Dr. Lawrence McGlynn serves in the Office of HIV Psychiatry as a member of the Steering Committee and Faculty.

# College and University Student Mental Health Leadership



Dr. Amy Alexander is currently serving as one of the Co-Chairs of the College Mental Health Caucus at the American Psychiatric Association's (APA) annual meeting. She organizes the Caucus' national meeting, which brings college mental health psychiatrists together to discuss and advocate for mental health issues that are important to the college student population. In addition, she is also one of the American Psychiatric Association's (APA) representatives to HEMHA (Higher Education Mental Health Alliance), a consortium of 9 national organizations, which includes the American Academy of Child & Adolescent Psychiatry (AACAP), the American Psychological Association (APA), and the American College Health Association (ACHA). HEMHA develops consensus guides for college administrators and college mental health providers on different topics. Current projects include Telemental Health Services on College Campuses, and Service Animals and Emotional Support Animals on College Campuses. Amyis also one of the founders of the Association for College Psychiatry (AFCP), the first such organization for college psychiatrists, and is currently serving as its President.

# Muslim American Mental Health Leadership



Dr. Rania Awaad continues to be recognized for her national leadership in Muslim mental health. In April of 2016, by invitation of President Obama, the Secretary of Health and Human Services, Sylvia Burwell and SAMHSA leadership, she represented the Stanford Muslims and Mental Health Lab at a convening at the Department of Health in DC to discuss matters relating to Muslim Mental Health.

# Psychosis-Risk and Early Psychosis Program Network (PEPPNET): National

PEPPNET, the national Psychosis-risk and Early Psychosis Program Network, continues to grow and expand as interest in clinical high risk and early psychosis programs grow across the country. PEPPNET continues to be the leading effort to link clinical providers and team members within these programs to cutting edge information and support. In October of 2018, PEPPNET partnered with the National Institute of Mental health and SAMHSA to create the very first conference on early psychosis for US Programs. Over 300 people attended the meeting in Boston from across the US. We are now talking with partners about trying to make this an annual event. Our PEPPNET team is pleased to be partnering with our colleagues at NTTAC at the University of Maryland and EASA at the Oregon Health Sciences University on developing the national learning community for Clinical High Risk in early psychosis. Kate Hardy, PsyD, our INSPIRE early psychosis clinic co-director, is leading this effort, along with Dr. Adelsheim.



# School Mental Health Leadership

Dr. Shashank Joshi continues as the Co-Chair of the Schools Committee of the American Academy of Child and Adolescent Psychiatry (AACAP). In this capacity, Dr. Joshi guides the direction for child psychiatrists working in schools across the country. He is also currently serving a term on the National Council for AACAP.



# Women in Psychiatry Leadership

Dr. Christina Khan and Dr. Amy Alexander are the Secretary and Treasurer, respectively, of the Association of Women Psychiatrists (AWP), a national organization that meets annually at the American Psychiatry Association meeting. The AWP advocates for women's issues in the field of psychiatry. Dr. Alexander is also part of a group from the APA Women's Caucus working on a joint national project developing a position statement and advocating for parental leave policies. Dr. Khan is also a founding member of the Women in Child and Adolescent Psychiatry Committee of the American Academy of Child and Adolescent Psychiatry.



# International Collaborations

# Building Capacity for Mental Health in Rural Guatemala



Dr. Christina Khan leads a global health partnership in the department to address stigma and build capacity for mental health care and research in rural Guatemala. Through collaboration with ALAS Pro Salud Mental and other partners in Guatemala, this partnership offers training opportunities for undergraduates, medical students, residents and fellows as well as Guatemalan students, community health workers, and clinicians to learn mental health outreach, promotion and treatment in low-resource settings. The lab has helped train all public sector physicians in Sololá province, Guatemala in an evidence-based WHO curriculum for management of depression, suicide, psychosis, and anxiety in primary care.

### Global Caregiving: iSupport for Dementia Family Caregivers



Dr. Dolores Gallagher-Thompson and colleagues have teamed up with the World Health Organization to develop an interactive web-based caregiver support tool (iSupport) that is accessible via computer, tablet and mobile phone. The pilot study is taking place in Bangalore, India where internet penetration is high and collaboration is secured with the NIMHANS Alzheimer research center. The study will determine if English speaking dementia family caregivers in India will use this website and if they benefit from the resources. Following that, the website and accompanying technological information will be released to countries globally, on request with modifications as necessary to ensure that it is culturally relevant and likely to be used in their countries.

# The Human Rights in Trauma Mental Health Laboratory



The Human Rights in Trauma Mental Health Laboratory, led by Dr. Daryn Reicherter, is a Stanford based, multidisciplinary program, committed to advancing and applying scholarly work on the physical and psychiatric impact of trauma on survivors of human rights abuses with an eye towards informing transitional justice and judicial processes. Examples of work include providing psychiatric consultation and assessments for a multi-disciplinary resettlement project for survivors of the Syrian war, working on two projects about the mental health outcomes of human rights violations from post-conflict Sierra Leone and under British rule in Kenya, collaborating with the International Criminal Court in the case of the Lord's Resistance Army in Uganda. As a member of the program, Dr. Ryan Matlow engages in consultation and advocacy related to human rights violations against migrants at the U.S.-Mexico border and has been involved in the evaluation of psychological harms resulting from practices of family separation and child detention.

# Refugee Mental Health

In collaboration with colleagues from CPR-Alalusi Foundation, Dr. Rania Awaad has traveled to Amman, Jordan to provide refugee mental health aid and help develop a "train the trainers" curriculum for clinicians working with Syrian and Iraqi refugees in Jordan. To date, the annual conference sponsored by the Alalusi Foundation has trained over 100 clinicians, therapists and social workers who work with refugee populations in Jordan.



### Science and Service for Disaster Relief

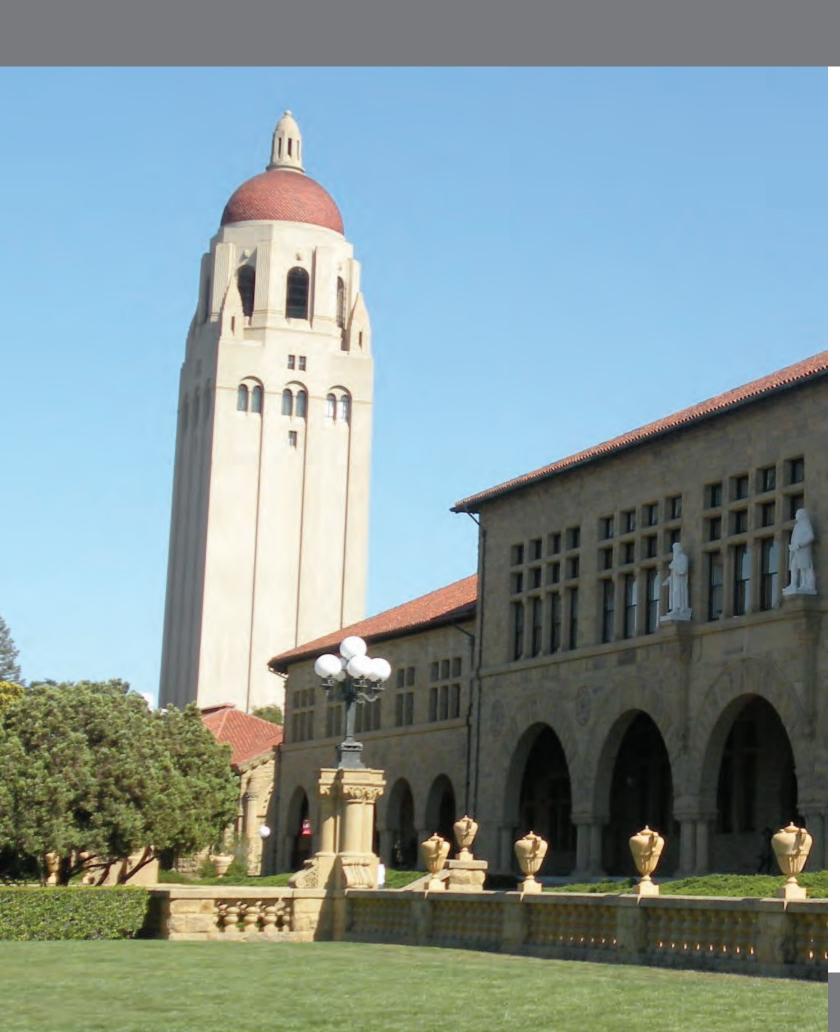
Dr. Victor Carrion and the Early Life Stress and Pediatric Program are partnered in an effort to respond to the needs of international communities affected by recent natural disasters. In collaboration with international academic and community partners, this project is engaging in a mental health needs and resource assessment in response to: Hurricane Maria in Puerto Rico; the September 17 earthquake in Mexico City; and the October fires in Napa and Sonoma counties. Based on the needs assessment, a program of service, training, and resource delivery will be offered to affected communities, followed by ongoing evaluation of outcomes.



### Stanford Global Mental Health Initiative

The Global Mental Health Initiative was created with the mission to integrate clinical, research, service, leadership, and educational efforts in the department focused on global mental health. This program, led by Drs. Christina Khan and Daryn Reicherter, unites existing faculty efforts and provides opportunities for new partnerships and initiatives. A core component of the Initiative is to utilize information technology tools to scale up mental health activities on a global level, taking advantage of the expertise available in Silicon Valley. As part this effort, Dr. Christina Khan is co-leading the Research, Education, and Training Discussion Group of the American Psychiatric Association's Global Mental Health Caucus, which brings together global mental health scholars from around the world.





## Special Initiatives of the Chair

Together we are integrating and accelerating our five missions of scientific discovery, clinical innovation and service, educational excellence, community engagement and commitment, and professionalism and leadership.

In pursuit of the five shared missions of the Department of Psychiatry and Behavioral Sciences, Chairman Laura Roberts has designated a number of projects as Special Initiatives of the Chair. These initiatives span a wide array of foci and scales, but are bound together by a shared capacity to grow the profile of the department while enhancing the public trust which makes all of our work possible.

Projects are designated as Special Initiatives in one of several ways: they may reflect strong ideas which need a foothold within the department in order to identify stakeholders and appropriate collaborators, they may embody ongoing efforts which exceed any one lab or unit, or they may represent a commitment to highlighting research which holds transformative promise for innovation.

The 2019 Psychiatry and Behavioral Sciences Special Initiatives of the Chair include:

- allcove
- The Belonging Project at Stanford
- Brain-Mind Initiative
- Brainstorm: The Stanford Laboratory for Entrepreneurship in Mental Health
- Clinical Neuroscience Internship Experience (CNI-X)
- Clinical Neuroscience Research Experience (CNR-X)
- Community Outreach Activities
- Editor in Chief, Books, APA
- Editorial Office: Academic Psychiatry
- Forensic Psychiatry
- Humanities and Medicine: Growing the Heart and Mind of Medicine
- Innovator Grants Program
- LGBTQ Mental Health
- Lyme Disease Working Group
- Media and Mental Health Initiative
- Pegasus Physician Writers at Stanford
- Precision Mental Health
- Project Catalyst for Mental Health
- Reimagining Mental Healthcare
- Small Scope High Impact Partnerships
- Stanford Center for Youth Mental Health and Wellbeing
- Stanford Mental Health Technology & Innovation Hub
- Stanford Neurodiversity Project
- Suicide Prevention through Outreach
- Wellbeing and Self-Care
- WellConnect
- YogaX

We are all touched by mental illness.

27

special initiatives in our department

Our department is creating the path to a better future.

## Special Initiatives of the Chair

## Department of Psychiatry and Behavioral Sciences



allcove

Inspired by the Headspace and Foundry models, allcove was developed to create stand-alone, integrated care sites for young people ages 12-25 to access early mental health support, along with school support and web-based connectivity.

These programs improve young people's mental, social, and emotional wellbeing through the provision of high quality, integrated, age-appropriate care for teenagers, young adults, and their families who are facing early life challenges—whether they are issues like relationship breakups, bullying, sexual orientation, depression, anxiety, or other mild-moderate health conditions. allcove, the very first US implementation of the model, approaches youth wellness in a comprehensive and youth-friendly way, reaching them in clinical sites, online, and in schools.

Stanford Psychiatry's Center for Youth Mental Health and Wellbeing, in collaboration with many youth co-creators, partners, and supporters, has led the journey to bring allcove to life in the first centers in the United States. Inspired and supported by our partners and friends at headspace in Australia, Foundry and Frayme in Canada, and other international collaborators, the Stanford team is excited to support youth and families, schools, communities, counties, and other partners to bring allcove centers to life in California, and beyond.



The Belonging Project at Stanford

The importance of a sense of belonging has been demonstrated through empirical work on human resilience and factors that protect emotional health and personal wellbeing, even in the context of adversity and trauma. Individuals develop a sense of belonging when they feel connected to other people, especially those who share their distinct life experiences, interests, or goals. University activities that foster a sense of belonging promote mental and physical health and help individuals to flourish in all aspects of their lives. Conversely, clear evidence has shown that individuals in distress who feel that they are disconnected and are not part of a larger community ("thwarted belongingness") are especially vulnerable to poor outcomes, including impulsive or self-harmful behavior. For all of these reasons, we have launched the "The Belonging Project at Stanford" - a broadly-engaged, multidimensional effort to promote emotional health and personal wellbeing through connection with the communities of our campus and beyond.

The goals of the Belonging Project at Stanford are four-fold:

- 1. Advancing conceptual and empirical work on belonging, including the effects of positive belonging and related issues, such as negative belonging, paradoxical fragility of belonging, and threats to belonging.
- 2. Serving as a repository for practical tools, evidence-driven strategies, and multidisciplinary scholarship on belonging as a resource for diverse stakeholders.
- 3. Convening conversations related to belonging among stakeholders with a particular focus on cultures of belonging among undergraduates at Stanford.
- 4. Celebrating and reinforcing those aspects of Stanford life that support a culture that is inclusive and supportive of positive belonging.



#### **BrainMind Initiative**

In September 2016 the Department of Psychiatry and Behavioral Sciences was one of several co-hosts of the first ever BrainMind Summit, bringing together neuroscientists, entrepreneurs, philanthropists, and community stakeholders in a collaborative environment to foster innovation. In 2018, another of the co-hosts of that original event, Dr. Michael McCullough, founded the BrainMind Ecosystem, a not-for-profit organization dedicated to making good on the promise of the summit according following principles:

- 1. Create a high-consciousness community of powerful and influential people to drive a cultural shift valuing ideas principally on their potential human impact.
- 2. Establish a roadmap for effective forward progress maximizing impact in brain science, focusing special attention on areas and ideas that are currently undersupported relative to their importance.
- 3. Infuse these under-supported ideas with high consciousness capital, leadership, and network support to grow and scale from the lab to society.

The Department has continued to play a large role in this mission by co-hosting a follow up Summit in September 2018 as well as one being planned for Fall 2019. Additionally, faculty members will represent the department at a Summit at MIT in 2019 and at numerous smaller events around the Bay Area, and planning is underway for an event at Asilomar in May 2020 focused on the ethics and regulation of biotechnology and brain science. As the BrainMind Ecosystem continues to grow, the department marks its foundational role in this exciting endeavor through the BrainMind initiative within the department, helping to ensure that these efforts serve to advance the departments five missions for years to come.



# Brainstorm: The Stanford Laboratory for Entrepreneurship in Mental Health

Mental illness is the greatest thief of human potential today. By harnessing the power of medicine, entrepreneurship, and technology, Brainstorm hopes to help return that potential to the 2 billion people suffering around the world. We believe effective consumer tech products can uniquely address mental health's biggest challenges -- stigma, access, scale, measurement, quality -- allowing us to improve lives and make an impact in a way that nothing else can.

Brainstorm partners with entrepreneurs and tech companies to design and build products that have the potential to transform the way we view, diagnose, and treat mental health. Strategically positioned in the heart of Stanford & Silicon Valley, we're uniting academia and industry to give our patients the products they dream of and that their health and wellbeing demands. We're the clinical-to-business beacon that translates cutting edge research and clinical insights for business and tech innovators, co-designing products that not only make patients feel better, but also that they love to use. We can't redesign the future of mental healthcare without a solid foundation of research, practice, and expertise, so we're building that too - by building an ecosystem and establishing the guidelines that will enable this field to flourish.

Brainstorm's faculty leadership includes Founder & Executive Director Nina Vasan, MD, MBA; Chief Research Officer Neha Chaudhary, MD; and Chief Clinical Officer Gowri Aragam, MD. The lab has a multidisciplinary team of fellows from Stanford's Graduate Schools of Business, Engineering, Law, and Medicine. We're the product innovation and entrepreneurship core of Stanford's Mental Health Technology Hub.



## Clinical Neuroscience Immersion Experience (CNI-X)

Co-directed by Dr. Laura Roberts and Dr. Alan Louie, the Clinical Neuroscience Immersion Experience (CNI-X) at Stanford University is an intensive summer program following the sophomore, junior, or senior years in high school. Participants are introduced to the amazing breadth of research found in the Stanford Department of Psychiatry and Behavioral Sciences. Now in its fifth year, the program will expand to offer three week long sessions.

Packed back-to-back are sessions and lab trips which demonstrate how creativity is visualized with brain waves, miniature human brains are grown in dishes, apps and virtual reality are treating eating disorders, cognition is studied in flight simulators, psychiatric testimony supports human rights at the World Court, and more.

Interactive seminars introduce the students to the principles of neuroscience, neuropsychiatric diagnosis, neuropsychological testing, and psychiatric epidemiology. An adaptive and agile mind is encouraged as one session plumbs the intricacies of neuroscience, while the next involves diagnosis of a neuropsychiatric syndrome from a video, and then the following inspires one to find "flow" in one's life. Much of the material is clearly at a collegiate or higher level.

Self-reflection and self-directed learning are emphasized with independent inquiry assignments asking for students to write about their learning objectives and career goals and to draft a curriculum vitae. Each student creates a project, often in a team, to self-express some lesson taken from the week that is verbally presented at a final capstone session for themselves and their families. The experience is fast-paced, intense, challenging, creative, and creates lasting bonds between students.



### Clinical Neuroscience Research Experience (CNR-X)

Co-directed by Dr. Laura Roberts and Dr. Alan K. Louie, the Clinical Neuroscience Research Experience (CNR-X) is an immersive residential summer program for high school students from China who are interested in advancing their knowledge in the fields of neuroscience, psychiatry, and psychology.

In the first year of the program, thirteen high-achieving students from all across China came together in Stanford's Department of Psychiatry and Behavioral Sciences for two weeks of immersive lectures on the principles of neuroscience, clinical neuropsychiatry, neuroscience research, psychiatric epidemiology, behavioral and social sciences, and more. The lectures were diverse and engaging and challenged the students to think critically about many fields of research that they had not been exposed to previously.

Throughout the course of the program, students also spent time working in small groups to develop innovative, novel solutions to social issues related to psychiatry, psychology, or neuroscience. The students spent two full weeks developing, testing, and refining their product ideas, which they then presented to a panel of faculty judges in a 15-minute business-style pitch.

Beyond the academics, CNR-X also offered international students an opportunity to experience life as an undergraduate on Stanford's campus. During their two weeks in the United States, they lived in shared dormitories, ate in the dining halls, and spent their free time exploring the campus and surrounding areas.

Now in its third year, the CNR-X program will be expanding to host nearly 40 Chinese students for this powerful educational experience.

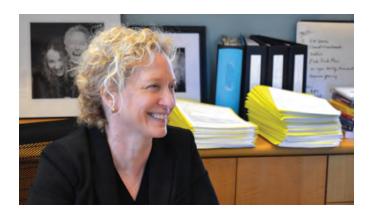


#### **Community Outreach Activities**

Community engagement and commitment is a core pillar of the Department's mission. For us, community is defined broadly, ranging from our shared commitment to building academic collaboration and support among our own faculty and staff, to partnerships with international colleagues, to building behavioral health care systems for those with mental health needs across the globe.

Our department has recently expanded community experiences for our own trainees in county and local agency settings, while also welcoming experts in community psychiatry administration to Stanford to build understanding and collaboration. Our Department's faculty have served as leaders in response to local community crises and provided guidance on developing new behavioral health systems of care for county, state, and regional partners. This past year our departmental faculty have developed new programs and labs to support communities of people with early psychosis, children and adults who have faced trauma, the United States Muslim community, people with Alzheimer Disease, and international victims of torture, just to name a few areas of expansion. In partnership with others, we continue to expand our community engagement efforts to increase broad access to culturally appropriate, cutting-edge mental health care.

By integrating community engagement strategies throughout the Department's efforts, we create opportunities for co-learning and collaboration within the Department, across Stanford University, and beyond. Faculty and trainees in the department feel privileged to have the opportunity to contribute to their ongoing efforts. Community engagement effectively aligns the mission of the department with the surrounding area, our nation, and the world, thereby reinforcing opportunities for partnership for decades to come.



## Editor-in-Chief, Books: American Psychiatric Association

Dr. Laura Roberts is the Editor in Chief, Books for the American Psychiatric Association. She works with the Publisher, Acquisitions Editor, Editorial Board, and other APA staff in overseeing the editorial development of print books and electronic products, preparing and implementing book program strategy and policy, driving content direction, reviewing previous publications in consideration of new editions, and preparing new titles, including by soliciting and reviewing book proposals and manuscripts from key researchers, clinicians, and academics in mental health care.

Dr. Roberts also oversees and ensures the rigorous and equitable peer review of book manuscripts – selecting reviewers, monitoring modifications of revised and resubmitted manuscripts, and making final publication recommendations.

As Editor in Chief, Books, Dr. Roberts hosts the podcast series Psychiatry Unbound, which features interviews with authors of books recently published by the APA, as well as interviews with representative readers of those texts. This podcast offers insights into the personal motivations that inform psychiatric research and reflects on the ways that professionals in the field put these books to use.





Academic Psychiatry is a bi-monthly, international academic medical journal sponsored by the American Association of Chairs of Departments of Psychiatry, American Association of Directors of Psychiatric Residency Training, Association for Academic Psychiatry, and Association of Directors of Medical Student Education in Psychiatry. Dr. Laura Roberts has served as Editor in Chief of the Journal since 2002, and has since been joined by Dr. Alan Louie as a Deputy Editor. Other members of the Department of Psychiatry and Behavioral Sciences of Stanford serve as editorial team members.

Academic Psychiatry features original, scholarly work focused on academic leadership and innovative education in psychiatry, behavioral sciences, and the health professions at large. The Journal's mission supports work that furthers knowledge and stimulates evidence-based advances in academic medicine in six key domains: education, leadership, finance and administration, career and professional development, ethics and professionalism, and health and wellbeing.

The Journal, which publishes full and brief empirical reports alongside educational columns, commentaries, and original artwork and poetry, has grown as an international resource, with contributors, reviewers, and readers hailing from over 50 countries across the globe.



Program in Psychiatry and the Law

Department of Psychiatry and Behavioral Sciences

#### Forensic Psychiatry

Forensic Psychiatry is a subspecialty of psychiatry that works at the interface between the law and psychiatry. A forensic psychiatrist can provide evaluations for numerous legal purposes, including competency to stand trial and mental state opinions among others.

The Program in Psychiatry and the Law at Stanford comprises a multidisciplinary team of world-class faculty who combine clinical experience and specialized knowledge and experience in medicine, mental health, and ethics. They are able to work on queries related to mental health issues that arise in criminal or civil law, on an individual, corporate, or government level.

Our mission is to provide the highest level of ethical, comprehensive, unbiased, and evidence-based forensic assessments possible. We embrace the core values of integrity, excellence, and professionalism in all of our cases. We review all pertinent information and apply clinical expertise to each case to ensure that we are providing the most objective psychiatric assessments and expert opinions.

We work to ensure that all evaluations and/or assessments address clinical and forensic considerations. Our program's faculty members are nationally recognized in their respective fields for high quality clinical care, research, education, and evaluation. As such, we are able to provide expert testimony in many areas of specialization and have considerable experience with depositions and trial testimony in both civil and criminal proceedings.



## Humanities and Medicine: Growing the Heart and Mind of Medicine

Medicine is the most human of the sciences. The physicianpatient relationship is at the heart of medical practice. Developments in science, technology, and the economics of health care, while essential to medicine and the delivery of care, also pose significant challenges to the nature, quality, and maintenance of this relationship and to medicine as a discipline. Evidence suggests that clinical outcomes, satisfaction (for both patients and physicians), and costs are negatively affected when the human side of medicine is neglected, marginalized, or otherwise disregarded. In addition, medicine is a cultural force that wields powerful effects on knowledge and values and promotes actions in broader society that are often underappreciated and poorly understood. Stanford Medicine sets itself apart from most medical schools by being located in an active university campus with scholars in humanities and social sciences at the doorstep, giving rise to opportunities to promote interdisciplinary work at the interface of medicine and the humanities at an exceptionally high level. Many historians, anthropologists, philosophers, and literary scholars at Stanford have intellectual and academic commitments to enlightening these aspects of medicine. Their insights and wisdom seldom find their way to the medical campus, however.

The Humanities and Medicine initiative is based in the Chair's Office and entails identifying key stakeholders and collaborating with them to learn about their interests and priorities related to humanities and medicine campus wide; developing a working group of thought leaders committed to the importance of growing humanities medicine to provide stimulus and leadership for these types of academic and clinical efforts; identifying key opportunities for enhancing the relationship between medicine and the humanities.



**Innovator Grants Program** 

The Department of Psychiatry and Behavioral Sciences Innovation Awards Program, launched in 2015, promotes research and collaborative scholarly projects that advance the academic interests of our faculty and the strategic themes of our department. Projects across the full spectrum of science and scholarship are encouraged.

The Innovation Awards Program has two offerings: Pilot Studies in novel scientific areas that have high potential to lead to competitive grant applications and Small Scholarly Projects related to areas including education, clinical care, community and health systems, and professional development. Pilot Study applications are systematically evaluated by senior faculty who assess significance of the scientific question, strengths of the investigator(s), degree of innovation, methodological approach, salience to departmental missions, and likelihood of leading to future funding. Small Scholarly Projects are systematically evaluated for overall quality, salience to the departmental missions, and feasibility. Assessments by individual faculty raters are kept separate and confidential and are submitted as guidance to the Chair.

Since its inaugural year the Innovation Awards Program has received over 145 applications and has funded nearly 60 projects in part or in whole. In so doing the Innovation Awards Program has leveraged departmental resources to fund worthy scholarly projects and has paved the way for external funding of ongoing research. The Innovation Awards Program occurs annually, with applications due each November.



LGBTQ Mental Health

Lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals experience unique healthcare needs and face significant health disparities. Lack of cultural competence by healthcare providers contributes to these disparities by deterring LGBTQ individuals from seeking medical care, or by providing suboptimal care. Over the past 5-10 years, attention to LGBTQ health disparities has intensified nationwide, with widely-hailed reports from the Institute of Medicine and the Joint Commission serving to catalyze funding and research. More locally, Santa Clara County recently completed the first needs assessment of the LGBTQ population, which confirmed troubling trends in healthcare discrimination and highlighted significant mental health needs, with more than 42% of respondents indicating the desire to see a healthcare professional to address emotional or substance abuse issues. Despite the pressing demand, there is a dearth of LGBTQfocused health clinics or expertise at Stanford or in the entire Peninsula and South Bay.

This special initiative, founded by Dr. Lawrence McGlynn, aims to expand local resources for the LGBTQ community and train a new generation of providers. We have four ongoing projects. First, through collaborations with local nonprofits and Santa Clara County government, we are working to launch an LGBTQ health clinic. Second, we are conducting research among Stanford trainees and faculty on knowledge and comfort caring for the LGBTQ population, as well as interest in further training opportunities. Third, we are compiling and publicizing existing resources for LGBTQ mental health to educate the local community. Fourth, we are leading efforts within the residency program to expose trainees and faculty to issues relevant to the LGBTQ community, informally through events such as lunchtime talks, as well as through our formal didactic curriculum.



Lyme Disease Working Group

Lyme Disease is a serious and prevalent condition with physical, cognitive, and affective consequences. This condition and other tickborne conditions are poorly understood and have received insufficient scientific attention. With the encouragement of a number of Lyme Disease organizations, we have initiated philanthropically focused efforts to support current research and clinical projects and catalyze new work.

Our Lyme Disease Working Group is interested in developing more accurate diagnostic tests, improving medical understanding of the course of illness, evaluating the effectiveness of innovative therapies, expanding clinical services, and building greater knowledge and awareness of how to prevent illness. Over 30 Stanford colleagues representing expertise in basic sciences, translational sciences, and clinical care comprise the interdisciplinary team partnering to tackle Lyme and other tick-borne illnesses.

In 2018, Dr. Laura Roberts joined an impressive lineup of leading researchers and clinicians in an educational video initiative providing scientific perspectives on the serious nature of Lyme and tick-borne disease. William Robinson, Stanford Professor of Immunology and Rheumatology at Stanford was named Co-Director of the Lyme Disease Working Group, and recently announced that the group will host a tick-borne disease conference in the fall of 2019 to highlight cutting-edge research in and the advances in care for tick-borne disease. The conference will be at Stanford University and will feature world-renown speakers from multiple disciplines.

Continuing research, education and institutional collaboration in this area is a key strategy for resolving this debilitating public health concern.

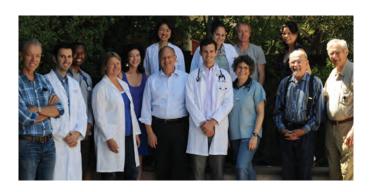




Launched in 2018 and housed within the department's Center for Youth Mental Health & Wellbeing, the Media and Mental Health Initiative strives to better understand and improve the impact of media on youth mental health through partnerships, outreach, research and projects aimed to enhance the prosocial, safe use of media in multiple forms (news, social, entertainment).

Under the direction of Center Program Director Vicki Harrison, early work of the initiative has been the development of partnerships with media platforms and researchers in suicide prevention and child development to identify actionable ways in which the power of media can better support youth health and wellbeing. Over the past year, the initiative has collaborated with organizations that include the Center for Scholars and Storytellers, Facebook, Orygen Youth Mental Health Centre, Youth/Tech/Health, Jed Foundation, Second Muse, and Youth United for Responsible Media Reporting.

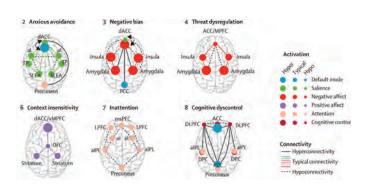
In addition, due to the strong support for this effort from our Department as well as local donors, we have been able to develop additional staff support for this critical effort. With the addition our new Program Coordinator Lauren Lockhart to focus specifically on suicide prevention and media efforts, we hope to expand our collaboration with the many national suicide prevention and mental health partners working to address this effort. Through these collaborations we hope to further expand on existing partnerships with The Sophie Fund, the JED Foundation, and the American Psychiatric Association, as well as others



Pegasus Physician Writers at Stanford

The Pegasus Physician Writers at Stanford are a group of academic and private practice physicians in various stages of career development who also are creative writers. The group was founded in 2008 by Audrey Shafer, MD (Anesthesia), Hans Steiner, MD (Psychiatry and Human Development), Irvin Yalom, MD (Psychiatry), and Larry Zaroff, MD, PhD (Cardiac Surgery). This independent group closely collaborates with the Medicine & the Muse, an arts and humanities program at the Stanford School of Medicine. Jennifer Pien, MD (Psychiatry) is the current assistant director of the program. She also is the editor-in-chief of the new medical literary journal, The Pegasus Review. The group currently has over 100 members from all branches of medicine participating in monthly meetings, workshops, and annual events. The group has published almost 100 books over the past 10 years. Members write poetry, fiction, fictionalized memoirs, op-ed pieces, and educational texts for the public with the intent to broaden public understanding of the science and art of medicine. Other goals of the group are to bring the insights of humanistic arts to the practice of medicine, to inform creative writing by the practice of medicine, to educate medical students and young physicians in the humanistic dimensions of medical practice, and to celebrate the lives of patients through their writing.

The Pegasus Physician Writers have been featured on a wide variety of social platforms and members have published regularly in medical humanistic journals, such as The Intima, A Journal of Narrative Medicine Ars medica; and medical specialty journals, such as JAMA, and Academic Psychiatry, among many others. The group welcomes new members who are passionate in their pursuit of medicine and creative writing.



#### **Precision Mental Health**

Mental wellbeing is fundamental to human health. The biomedical revolution, led by Stanford Medicine, will change the trajectory and impact of the biomedical sciences through precision health for individuals and for populations. Precision psychiatry is part of this revolution.

Depression, anxiety disorders, cognitive disorders, addiction, and other conditions are common. Though treatment is remarkably effective in improving quality of life and reducing the burden of symptoms and impairment, stigma and insufficient resources are a dramatic barrier to appropriate care. Moreover, mental disorders may complicate and worsen the risks associated with other health conditions. For example, depression increases the risk of cardiovascular-related deaths threefold.

Mitigating such mental health statistics will require the best cutting-edge prediction, prevention, and preemption that population science can possibly provide. Stanford University is uniquely positioned to spearhead this effort. The Department of Psychiatry and Behavioral Sciences in the School of Medicine has launched two major initiatives to advance precision health.

In addition, in 2013 we initiated a new unit, the Division of Public Mental Health and Population Sciences, to harness the tremendous academic resources of Stanford University, encompassing computer science and biomedical data, biomedical sciences, and engineering, coupled with renowned schools of medicine, business and economics, law, education, statistics, social sciences and ethics, and design. Advances in these fields hold the promise of revolutionizing the diagnosis and treatment of mental illness with greater precision – personalized for special populations and eventually individuals.



Project Catalyst for Mental Health

Mental disorders are the second leading cause of disability and premature mortality throughout the world and the first leading cause in economically established countries, and yet the profound consequences of these conditions remain underrecognized.

Project Catalyst for Mental Health is a new effort of the Department of Psychiatry and Behavioral Sciences. The intent of Project Catalyst for Mental Health is to foster innovation to address and lessen the impact of mental disorders and related conditions.

Bringing to bear the insights of diverse disciplines, Project Catalyst seeks to improve health outcomes through scholarly work conducted initially in six areas: 1) suicide; 2) co-occurring disorders, including physical, mental, and addiction related conditions; 3) grief and survivorship; 4) computational neuroscience; 5) social and economic determinants and consequences of mental disorders and related conditions; and 6) health disparities and health policy



### Reimagining Mental Healthcare

This special initiative seeks to bring together people and resources to dream into the future of mental healthcare through educational venues and forums, learning communities, and social networks. Participants are encouraged to bring to bear theories, tools, and expertise from diverse fields – in particular, information technology, design thinking, and implementation science. "Reimagining Mental Healthcare" challenges us to put aside what we know and to start from scratch – to reimagine mental healthcare and to then accelerate the translation of discoveries and ideas to our society with maximal impact.

By Information technology, we mean the broad spectrum of possible applications including m-health apps and biometrics, virtual and augmented reality, serious computer games, big data and machine learning, and web-based interventions. Direct applications to care and education include telemental health, measurement-based care, technological adjuncts to treatments, virtual extenders, technology-assisted medical education with simulations, online and blended learning.

**Design thinking** is inspired by Stanford's Hasso Plattner Institute of Design, or "d.school," and our reimagining will be catalyzed by many of the d.school tenets, like need-focused approach, user-centered design, and techniques to harness a creative mindset, including brainstorming and rapid prototyping. By infusing design thinking throughout, we may better understand the needs of our patients and the myriad array of providers and craft solutions required to impact mental healthcare.

**Implementation science** is the study of the dissemination and actualization of research findings for the benefit of patients, in the real world. This science will be core to accelerating the translation (from T1 to T4) of discoveries into clinical practices and the care of populations, here and globally.



## Small Scope High Impact Partnerships (S<sup>2</sup>HIP)

S²HIP initiates collaborations with community partners to leverage departmental resources for high-impact results in underserved communities. These collaborations seek to build upon clinical and population health research observations about the need to engage community partners by deploying community participatory research principles such as mutualism, respect, and inclusion.

These nascent collaborations provide the seeds for ongoing partnerships in local communities in the greater Bay Area by inviting members of historically marginalized communities to the table to participate in the development of research questions, methods, and delivery options appropriate to their communities.

Preliminary conversations under this initiative are underway with community arts organizations, food justice groups, sustainable transportation advocates, and environmental schools. Community Participatory Research has demonstrable success in improving health and academic outcomes outside of the ivory tower and outside of traditional clinical settings. S²HIP provides a setting and support for incubation of potential collaborations between the Department of Psychiatry and Behavioral Sciences and a variety of community partner organizations.



### Stanford Center for Youth Mental Health and Wellbeing

The Center for Youth Mental Health and Wellbeing (CYMHWB) is working with state and local partners to bring integrated youth mental health programs to Santa Clara County, the state of California and other communities across the nation. These integrated care sites for young people ages 12-25 create access to early mental health support, primary care, early substance abuse treatment and education/school support in a standalone setting. These "no wrong door" programs have proven effective internationally as sites for improving the access that young people have to mental health resources, as well as providing a comfortable and welcoming community context in which young people can thrive. Part of their success has been that youth see the program as their own independent place for mental health/health care. In bringing this integrated youth mental health model to our region, the CYMHWB has developed a strong partnership with Santa Clara County in order to implement these models in appropriate locations with culturally appropriate features and design that will help effectively connect the sites with local youth.

Critical to breaking down stigma and other barriers to access is strategic marketing and advertising campaigns that include the involvement and voice of youth leaders, and ties to activities of interest to adolescents and young adults. In addition, the CYMHWB is partnering with the Mental Health Services Oversight and Accountability Commission and others to bring this valuable model to counties across California. The CYMHWB, with technical collaboration from international partners at headspace and Foundry, will continue to lead the effort to bring these models locally, statewide and across the US by building partnerships that will ultimately create critical access to integrated mental health, primary care and coordinated services for our young people.



## Stanford Mental Health Technology & Innovation Hub

Stanford Psychiatry and Behavioral Sciences continues to be on the cutting edge of innovation in the field of technology and mental health. Positioned in the heart of Silicon Valley, and with the vast array of technology partners across the Stanford campus, our Department brings cutting edge technological science together with clinical expertise to create an array of unique and innovative solutions for those facing mental health challenges.

In addition, we are fortunate to have a close collaboration with Psychiatry and Behavioral Science faculty partners from the VA Palo Alto Health Care System. Departmental faculty and staff are utilizing technology to provide support for people of all age groups and diagnostic categories with interventions ranging from web based tools and telehealth models to mental health apps, virtual reality, augmented reality, and artificial intelligence.



#### Stanford Neurodiversity Project

Led by Dr. Lawrence Fung, the Stanford Neurodiversity Project was established to promote neurodiversity, empower neurodiverse individuals, and maximize the potential of neurodiversity. Neurodiversity is a concept that regards individuals with differences in brain function and behavioral traits as part of normal variation in the human population.

Examples of neurodiverse individuals include those with dyslexia, attention deficit hyperactivity disorder, and autism spectrum disorder. There are four key components for this project: Education, Service, Research, and Advocacy. The current plans for the Stanford Neurodiversity Project include the following three projects: (1) Neurodiversity Awareness and Education Initiative, (2) Neurodiversity at Work and Wellness Initiative, and (3) Neurodiversity Independent Living Skills Initiative.

The Neurodiversity Awareness and Education Initiative focuses on raising the awareness on neurodiversity within Stanford University through activities designed to optimize acceptance and maximize impact for neurodiverse individuals and Stanford University in general. The Neurodiversity at Work and Wellness Initiative is designed to attract talented neurodiverse individuals to work at Stanford University. Instead of going through the traditional interview process, individuals are selected based on their technical skills and abilities. This initiative is designed not only to prepare neurodiverse individuals for their careers, but also trains the next generation of professionals who will serve the neurodiverse population in the decades to come. While we have commenced our efforts in the first two initiatives, we anticipate that the Neurodiversity Independent Living Skills Initiative will be implemented in the near future.



## Suicide Prevention through Outreach

The Stanford University School of Medicine Department of Psychiatry & Behavioral Sciences in collaboration with the Lucile Packard Children's Hospital Stanford and the Stanford Medicine Child Health Research Institute invited applications for special projects focused on suicide prevention among youth in our community in 2017. We sought innovative and collaborative projects for each category that are responsive to the CDC report and the need to provide resources and support for our local and regional community.

In March 2017, in response to a request from the Santa Clara County Public Health Department, the Centers for Disease Control and Prevention (CDC) with their partners released a special report on suicide among youth in Santa Clara County.

The CDC Report found that the rate of suicide among young people in our community is similar to other areas across our state and our nation, although many of the suicides have occurred in temporal and geographic "clusters." The 2017 report highlighted under-recognized risk factors that may contribute to this devastating health threat.

In response, leaders across Stanford Medicine came together to found Suicide Prevention through Outreach (SPOt). This newly established program in the Department of Psychiatry will initially focus on two factors identified in the recently published report: better understanding the greater suicide risk experienced among young men, and the role of the media in the context of youth suicide.



Wellbeing and Self-Care

Our mission to improve the health of individuals, communities, and populations begins with improvement of our own health. With every choice we make to contribute to our own wellbeing, we invest in our own capacity for sustainable contribution to each of our five missions. With every endeavor we engage in collectively to support the wellbeing of our colleagues and team-members, we invest in our collective capacity that multiplies our contributions to our patients, our community, and the world. Wellbeing adds inspiration and creativity to the advancement of science, meaning and purpose to clinical innovation and service, and enduring integrity to educational excellence.

With unwavering commitment to our own wellbeing and the wellbeing of those we love and those work with, we create a compelling pattern for others to emulate in our community engagement efforts.

Only with sustained commitment to wellbeing might we rise to the height of opportunity for professionalism and leadership capable of inspiring others to play full part in preventing and relieving suffering, and solving societal problems that vex humanity.



WellConnect

Stanford WellConnect is a confidential mental health referral and consultation program for residents and fellows that was created by Dr. Laura Roberts in 2011 to address three main objectives: 1) mental health and wellbeing of residents and fellows, 2) educational needs that align with the Accreditation Council for Graduate Medical Education requirements, and 3) administrative support and guidance associated with health issues.

At times stressors experienced by resident and fellow physicians can get in the way of balancing the demands of professional and personal life, and without help, problems can intensify, affecting emotional and physical wellbeing and professional success. Although emotional distress often manifests in obvious ways, the symptoms of many psychological problems can be subtle. Services for residents and fellows include the following:

- Individual counseling
- Couples counseling
- Substance abuse assessment and counseling
- Medication evaluation
- Medication management

Services for program directors, faculty, and staff include consultation to assist in recognizing mental health concerns of residents and fellows and serving as a resource for decision making that balances the needs of trainees and programs. They also offer wellness curriculum consultations and provide lectures and workshops on the following topics:

- Work-life balance
- Sleep hygiene
- Stress and anger management
- Team building and interpersonal effectiveness
- Accepting and giving feedback
- Identifying the signs of burnout, anxiety, and depression



YogaX

YogaX is a Stanford project integrating science and spirituality to inspire individual and community health and wellbeing. Its mission is the integration of therapeutic yoga in health and allied healthcare settings. The project has three aims:

**Certification** prepares care providers and students in medicine, psychology, physical therapy, and more, to become concurrent yoga professionals. Graduates work collaboratively on behalf of their patients and facilitate integrated and continuous healthcare experiences.

**Education** offers innovative workshops, online activities, and retreats about health and wellbeing-related topics. It provides continuing education credits and deep learning for yoga teachers, therapists, practitioners, and teachers. These are also available to individuals who seek to enhance their wellbeing through body, mind, spirit integration and care providers who seek to integrate evidence-based yoga skills into their clinical work.

**Services** include therapeutic yoga classes, workshops, seminars, retreats, and materials for home practice on the Stanford campus and online, addressing health, resilience, and wellbeing-related topics relevant to academic contexts. Experiences promote integration of self-care strategies into graduate training and development of sustainable self-care practices for current and future health professionals at Stanford Medical School and beyond.

