



Psychiatry and Behavioral Sciences
Academic Update 2016

Contents



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The information presented in this update represents data as of March 1, 2016.

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From the Chair

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 the understanding of the nature of the brain and 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 engagement and commitment, 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 techniques, 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 who share the intent to make a difference through our efforts in science, clinical care, education, 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 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.

Everyone 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.



Laura Roberts, M.D., M.A.

Chairman

The Katharine Dexter McCormick and Stanley McCormick Memorial Professor
Department of Psychiatry and Behavioral Sciences
Stanford University School of Medicine

Department Overview

The aim of the Department of Psychiatry and Behavioral Sciences of Stanford Medicine is to enable great science, prepare great people, and inspire a great society to create a better future for all whose lives are affected by mental illness.



Our department 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.

Department Snapshot



Professionalism and Leadership

519

department
faculty

381

department
staff

5

interdependent
academic missions



Cheryl Gore-Felton, PhD, Jim Lock, MD, PhD,
Alan Louie, MD, Laura Roberts, MD, MA

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.

25%

of department faculty
are minority

60%

of department faculty
are women

26%

of tenure line faculty
are women (up from
8% in FY10)



Department Leadership



Laura Roberts, MD, MA
Chairman and
Division Co-Chief, Public Mental
Health and Population Sciences



Victor Carrion, MD
Vice Chair



Allan Reiss, MD
Vice Chair and Division Chief,
Interdisciplinary Brain Sciences



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Associate Chair -
Community Commitment
and Engagement



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Associate Chair - Psychology
and Psychology Training and
Division Co-Chief, General
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Clinician Educator
Professional Development



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Finance and Operations



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Associate Chair -
Administration



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



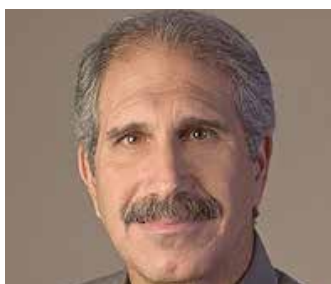
Chris Hayward, MD, MPH
Associate Chair - Translation and
Integration and Division Co-Chief,
General Psychiatry and Psychology



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



Alan Louie, MD
Associate Chair -
Education



Robert Malenka, MD, PhD
Associate Chair -
Scientific Discovery



Emmanuel Mignot, MD, PhD
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Ruth O'Hara
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Scientific and Academic
Development



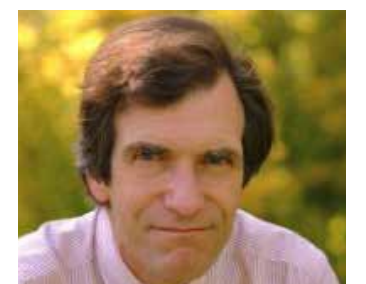
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Division Co-Chief, Public Mental
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Information Systems Analyst
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Chia-Yu Cardell

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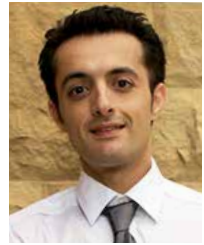
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Carlos Perez

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Meg Hardin

Senior Manager of Clinical Research
Eileen Leary



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Keith Humphreys, PhD
Professor



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Associate Professor



Booil Jo, PhD
Associate Professor



Shashank Joshi, MD
Associate Professor



Jennifer Keller, PhD
Clinical Associate
Professor



Michael Kelly, MD
Clinical Assistant
Professor



Matthew Kendra, PhD
Clinical Instructor



Moira Kessler, MD
Clinical Instructor



Douglas Levinson, MD
Professor



Steven Lindley, MD, PhD
Associate Professor



James Lock, MD, PhD
Professor



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Clinical Professor



Alan Louie, MD
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Terence Ketter, MD
Emeritus (Active)
Professor



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Clinical Assistant
Professor



Jane Kim, PhD
Instructor



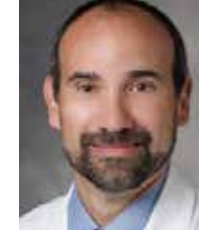
Nina Kirz, MD
Clinical Instructor



Anita Kishore, MD
Clinical Associate
Professor



David Lyons, PhD
Professor



Jose Maldonado, MD,
FAPM, FAFCE
Professor



Robert Malenka, MD, PhD
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Rachel Manber, PhD
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Professor



Megan Klabunde, PhD
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Hilit Kletter, PhD
Clinical Assistant
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Manuela Kogon, MD
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Professor



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Clinical Instructor



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Professor



Lauren Mikula Schneider, PsyD
Clinical Assistant Professor



Cleto Kushida, MD, PhD
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Scott Kutscher, MD
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Professor



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Rie Lebus, PhD
Clinical Instructor



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Assistant Professor



Shefali Miller, MD
Clinical Assistant
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Kelli Moran-Miller, PhD
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Professor



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Clinical Assistant
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Clinical Instructor



Chad Ruoff, MD
Clinical Assistant
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Srikanth Ryali, PhD
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Debra Safer, MD
Associate Professor



Manish Saggarr, PhD
Instructor



Katherine Sanborn, MD
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Professor



Mary Sanders, PhD
Clinical Associate
Professor



Gisela Sandoval, MD, PhD
Instructor



Vidushi Savant, MD
Clinical Instructor



Alan Schatzberg, MD
Professor



Julie Tinklenberg, MD
Clinical Assistant
Professor



Ranak Trivedi, PhD
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Mickey Trockel, MD, PhD
Clinical Assistant
Professor



Alexander Urban, PhD
Assistant Professor



Mytilee Vemuri, MD, MBA
Clinical Assistant
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Logan Schneider, MD
Clinical Instructor



Richard Shaw, MD
Professor



Yelizaveta Sher, MD
Clinical Assistant
Professor



Norah Simpson, PhD
Clinical Assistant
Professor



Manpreet Singh, MD, MPH
Assistant Professor



Po Wang, MD
Clinical Professor



Raziya Wang, MD
Clinical Assistant
Professor



Matthew White, MD
Clinical Assistant
Professor



Katherine Williams, MD
Clinical Associate
Professor



Nolan Williams, MD
Instructor



Hugh Solvason, MD, PhD
Clinical Associate
Professor



Barbara Sommer, MD
Emeritus (Active)
Professor



David Spiegel, MD
Professor



Nicole Starace, PhD
Clinical Instructor



Hans Steiner, MD
Emeritus (Active)
Professor



Sharon Williams, PhD
Clinical Associate
Professor



Leanne Williams, PhD
Professor



Helen Wilson, PhD
Clinical Assistant
Professor



Shannon Wiltsey Stirman, PhD
Assistant Professor



Matthew Wright, MD, PhD
Clinical Instructor



Shannon Sullivan, MD
Clinical Assistant
Professor



Edith Sullivan, PhD
Professor



Patricia Suppes, MD, PhD
Professor



Margo Thienemann, MD
Clinical Professor



Jared Tinklenberg, MD
Professor



Jerome Yesavage, MD
Professor



Jong Yoon, MD
Assistant Professor



Sanno Zack, PhD
Clinical Assistant
Professor



Laraine Zappert, PhD
Clinical Professor



Jamie Zeitzer, PhD
Assistant Professor

Secondary Appointments



Lu Chen, PhD
Professor



Karl Deisseroth, MD, PhD
Professor



Korey Hood, PhD
Clinical Professor



Mitchell Miglis, MD
Clinical Assistant
Professor

Not Pictured

Sara Gandy, MD
Clinical Associate Professor

Makoto Kawai, MD, DSc
Clinical Instructor

Sue Kim, MD, MS
Clinical Assistant Professor

Sheila Lahijani, MD
Clinical Assistant Professor

Laura Lazzeroni, PhD
Associate Professor

Kristin Luce, PhD
Clinical Associate Professor

Margaret Marnell, PhD
Clinical Associate Professor

Jason Niksch, MD
Clinical Instructor

Valaiporn Rusmintratip, MD
Clinical Instructor

Allison Thompson, PhD
Clinical Assistant Professor

Janani Venugopalakrishnan, MBBS
Clinical Instructor

M. Dhyanne Warner, MD, PhD
Clinical Professor

Tonita Wroolie, PhD
Clinical Associate Professor

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 (MCL)

Roy King, MD, PhD
Emeritus Faculty (Academic Council)

Lorrin Koran, 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)

Barbara Sommer, MD
Emeritus Faculty (MCL)

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

Michele Barry, MD, FACP
Professor

Katharine Edwards, PhD
Clinical Instructor

Ira Friedman, MD
Clinical Professor

Joseph Garner, PhD
Associate Professor (MCL)

Michael Greicius, MD
Associate Professor

Casey Halpern, MD
Assistant Professor (MCL)

Valerie Hoover, PhD
Clinical Instructor

Lynne Huffman, MD
Associate Professor (Teaching)

Safwan Jaradeh, MD
Professor (MCL)

Barbara Sourkes, MD
Professor (MCL)

Thomas Sudhof, MD
Professor

Dennis Wall, PhD
Associate Professor

Max Wintermark, MD, MAS, MBA
Professor (MCL)

Affiliated Faculty

Maheen Adamson, PhD Clinical Associate Professor (Affiliated)	John Herbert, MD Clinical Assistant Professor (Affiliated)	Ahmad Salehi , MD, PhD Clinical Professor (Affiliated)
John Ashford, MD, PhD Clinical Professor (Affiliated)	Jeanette Hsu, PhD Clinical Associate Professor (Affiliated)	Blake Scanlon, PhD Clinical Assistant Professor (Affiliated)
Peter Bayley, PhD Clinical Assistant Professor (Affiliated)	Emily Hugo, PsyD Clinical Assistant Professor (Affiliated)	Simran Singh, MD Clinical Assistant Professor (Affiliated)
Sherry Beaudreau, PhD Clinical Associate Professor (Affiliated)	Joung Won (Terri) Huh, PhD Clinical Assistant Professor (Affiliated)	Tasha Souter, MD Clinical Assistant Professor (Affiliated)
Stephen Black, PhD, PhD Clinical Assistant Professor (Affiliated)	Shaili Jain, MD Clinical Assistant Professor (Affiliated)	Keith Sudheimer, PhD Instructor (Affiliated)
Kimberly Brodsky, PhD Clinical Assistant Professor (Affiliated)	Neda Kharrazi, PsyD Clinical Instructor (Affiliated)	Joy Taylor, PhD Clinical Professor (Affiliated)
Sarah Carey, MD Clinical Assistant Professor (Affiliated)	Eric Kuhn, PhD Clinical Assistant Professor (Affiliated)	Quyen Tiet, PhD Clinical Associate Professor (Affiliated)
Jauhtai Cheng, MD, PhD Clinical Assistant Professor (Affiliated)	Malathy Kuppuswamy, MD Clinical Assistant Professor (Affiliated)	Jodie Trafton, PhD Clinical Associate Professor (Affiliated)
Marylene Cloitre, PhD Clinical Professor (Affiliated)	Tina Lee, MD Clinical Associate Professor (Affiliated)	Marina Urman-Yotam, MD Clinical Instructor (Affiliated)
Katherine Eisen, PhD Clinical Assistant Professor (Affiliated)	Bruce Linenberg, PhD Clinical Associate Professor (Affiliated)	Julie Weitlauf, PhD Clinical Professor (Affiliated)
Glen Elliott, MD, PhD Clinical Professor (Affiliated)	Shannon McCaslin-Rodrigo, PhD Clinical Associate Professor (Affiliated)	William Wilkes, MD Clinical Assistant Professor (Affiliated)
Jennifer Kaci Fairchild, PhD Clinical Assistant Professor (Affiliated)	Tamar Meidav, MD Clinical Assistant Professor (Affiliated)	Steven Woodward, PhD Clinical Professor (Affiliated)
William Faustman, PhD Clinical Professor (Affiliated)	Kalpana Nathan, MD Clinical Associate Professor (Affiliated)	Sarah Yasmin, MD, MPH Clinical Assistant Professor (Affiliated)
Howard Fenn, MD Clinical Associate Professor (Affiliated)	Cecylia Nowakowska, MD, PhD Clinical Assistant Professor (Affiliated)	Joshua Zeier, PhD Clinical Instructor (Affiliated)
Ansgar Furst, PhD Clinical Associate Professor (Affiliated)	Divy Ravindranath, MD, MS Clinical Assistant Professor (Affiliated)	Anna Nedelisky Zeman, PhD Clinical Assistant Professor (Affiliated)
Christine Gould, PhD Instructor (Affiliated)	Allyson Rosen, PhD Clinical Associate Professor (Affiliated)	
Aazaz Haq, MD Clinical Assistant Professor (Affiliated)	Josef Ruzek, PhD Clinical Professor (Affiliated)	

Adjunct Clinical Faculty

Vivien Abad, MD Adjunct Clinical Assistant Professor	Michael Brant-Zawadzki, MD, FACR Adjunct Clinical Professor	Katherine De Vault, MD Adjunct Clinical Assistant Professor
Diana Adams EdD Adjunct Clinical Assistant Professor	Neil Brast, MD (Emeritus) Adjunct Clinical Associate Professor	Norman Dishotsky, MD (Emeritus) Adjunct Clinical Professor
Richard Almond, MD Adjunct Clinical Professor	Alan Brauer, MD (Emeritus) Adjunct Clinical Associate Professor	Harvey Dondershine, MD, JD Adjunct Clinical Professor
Barbara Almond, MD (Emeritus) Adjunct Clinical Assistant Professor	John Brentar, PhD Adjunct Clinical Instructor	Kathleen Dong, MD Adjunct Clinical Assistant Professor
Mildred Ash, MD (Emeritus) Adjunct Clinical Assistant Professor	Charles Browning, MD (Emeritus) Adjunct Clinical Associate Professor	Jennifer Dore, MD Adjunct Clinical Instructor
Vandana Aspen, PhD Adjunct Clinical Instructor	Louise Buck, MD (Emeritus) Adjunct Clinical Associate Professor	Magdolna Dunai, MD Adjunct Clinical Associate Professor
Anthony Atwell, MD Adjunct Clinical Professor	David Burns, MD Emeritus Adjunct Clinical Professor	Susan Edelman, MD Adjunct Clinical Associate Professor
Richard Bale, PhD (Emeritus) Adjunct Clinical Associate Professor	Macario Camacho, MD Adjunct Clinical Assistant Professor	Jack Edelstein, MD (Emeritus) Adjunct Clinical Professor
Barbara Ballinger, MD Adjunct Clinical Assistant Professor	Charles Casella, MD (Emeritus) Adjunct Clinical Associate Professor	Elaine Ehrman, PhD (Emeritus) Adjunct Clinical Associate Professor
Daniel Becker, MD Adjunct Clinical Professor	Randolph Charlton, MD Adjunct Clinical Professor	Donald Ehrman, PhD (Emeritus) Adjunct Clinical Professor
Joseph Belanoff, MD Adjunct Clinical Instructor	Cynthia Chatterjee, MD Adjunct Clinical Assistant Professor	Kathleen Eldredge, PhD Adjunct Clinical Assistant Professor
Kimberly Bell, MD Adjunct Clinical Instructor	Shivani Chmura, MD Adjunct Clinical Assistant Professor	Mehran Farid-Moayer, MD Adjunct Clinical Assistant Professor
Peter Berman, PhD (Emeritus) Adjunct Clinical Associate Professor	Carolyn Compton, PhD (Emeritus) Adjunct Clinical Associate Professor	Stanley Fischman, MD Adjunct Clinical Associate Professor
Maria Pilar Bernal, MD Adjunct Clinical Associate Professor	James Corby, MD (Emeritus) Adjunct Clinical Professor	Shela Fisk, PhD Adjunct Clinical Assistant Professor
Elizabeth Biggart, PhD Adjunct Clinical Assistant Professor	Richard Corelli, MD Adjunct Clinical Associate Professor	Caroline Fleck, PhD Adjunct Clinical Instructor
Britney Blair, PsyD Adjunct Clinical Instructor	David Daniels, MD Adjunct Clinical Professor	Justine Forbes, MD (Emeritus) Adjunct Clinical Associate Professor
Barbara Brandt, PhD Adjunct Clinical Assistant Professor	Vanessa de la Cruz, MD Adjunct Clinical Assistant Professor	Cia Foreman, PhD Adjunct Clinical Associate Professor

Adjunct Clinical Faculty (continued)

Sarah Forsberg, PsyD Adjunct Clinical Instructor	Robert Holaway, PhD Adjunct Clinical Assistant Professor	Gary Lapid, MD (Emeritus) Adjunct Clinical Associate Professor	Johanna Mayer, PhD (Emeritus) Adjunct Clinical Assistant Professor	Michael O'Connor, PhD (Emeritus) Adjunct Clinical Assistant Professor	Stephen Richmond, MD Adjunct Clinical Assistant Professor
Craig Forte, MSW Adjunct Clinical Assistant Professor	Suzanne Horowitz, PhD (Emeritus) Adjunct Clinical Associate Professor	Gloria Leiderman, PhD (Emeritus) Adjunct Clinical Associate Professor	Viola Mecke, PhD (Emeritus) Adjunct Clinical Professor	Mari Ormiston, MD Adjunct Clinical Instructor	Anil Rama, MD Adjunct Clinical Instructor
William Fry, MD (Emeritus) Adjunct Clinical Associate Professor	Leslie Hsu, MD (Emeritus) Adjunct Clinical Associate Professor	JoAnn LeMaistre, PhD (Emeritus) Adjunct Clinical Assistant Professor	Terry Miller, MD Adjunct Clinical Associate Professor	Chirag Pandya, MD Adjunct Clinical Instructor	David Ringo, MD, PhD (Emeritus) Adjunct Clinical Assistant Professor
Emery Fu, MD Adjunct Clinical Instructor	Nancy Haug, PhD Adjunct Clinical Associate Professor	Laurie Leventhal-Belfer, PhD Adjunct Clinical Assistant Professor	Kerry Mitchell, MD Adjunct Clinical Assistant Professor	Isabel Paret, PhD (Emeritus) Adjunct Clinical Associate Professor	Jules Riskin, MD (Emeritus) Adjunct Clinical Associate Professor
Ivan Gendzel, MD (Emeritus) Adjunct Clinical Associate Professor	Paula Jacobsen, LCSW Adjunct Clinical Professor	Jill Levitt, PhD Adjunct Clinical Instructor	Donald James Mordecai, MD Adjunct Clinical Associate Professor	Gerald Piaget, PhD (Emeritus) Adjunct Clinical Associate Professor	Beverly Rodriguez, MD Adjunct Clinical Assistant Professor
M. Rameen Ghorieshi, MD Adjunct Clinical Instructor	Vikas Jain, MD Adjunct Clinical Instructor	Jack Lewis, MD (Emeritus) Adjunct Clinical Associate Professor	Elliot Morrison, MD (Emeritus) Adjunct Clinical Associate Professor	Thomas Plante, PhD Adjunct Clinical Professor	Norman Rogers, MD (Emeritus) Adjunct Clinical Associate Professor
John Glathe, MD (Emeritus) Adjunct Clinical Professor	Michael Jaffe, MD Adjunct Clinical Instructor	Kasey Kai-Chi Li, MD, DDS Adjunct Clinical Associate Professor	James Moses, PhD (Emeritus) Adjunct Clinical Professor	Nelson Powell, MD, DDS Adjunct Clinical Professor	Deborah Rose, MD (Emeritus) Adjunct Clinical Assistant Professor
Cheryl Goodrich, PhD Adjunct Clinical Assistant Professor	Rania Johnson, MD Adjunct Clinical Instructor	Michael Loughran, PhD Adjunct Clinical Associate Professor	Anna Muelling, MD (Emeritus) Adjunct Clinical Associate Professor	Rebecca Powers, MD Adjunct Clinical Associate Professor	Jerome Rose, MD (Emeritus) Adjunct Clinical Associate Professor
Elsa Gordon, MD (Emeritus) Adjunct Clinical Associate Professor	Jonathan Kaplan, MD Adjunct Clinical Associate Professor	Elizabeth Mahler, MD Adjunct Clinical Assistant Professor	Ricardo Muñoz, PhD Adjunct Clinical Professor	Fawn Powers, PhD (Emeritus) Adjunct Clinical Assistant Professor	Alan Rosenthal, MD Adjunct Clinical Professor
Christine Gray, PhD Adjunct Clinical Assistant Professor	Gloria Kardong, MD Adjunct Clinical Associate Professor	Mark Mahowald, MD Adjunct Clinical Professor	Thomas Nagy, PhD Adjunct Clinical Associate Professor	Michael Quach, MD Adjunct Clinical Instructor	Elise Rossiter, PhD, MS Adjunct Clinical Associate Professor
John Greene, MD Adjunct Clinical Assistant Professor	Ayelet Kattan, PsyD Adjunct Clinical Instructor	Alan Maloney, MD Adjunct Clinical Associate Professor	Sharon Nash, PhD Adjunct Clinical Assistant Professor	Stacey Quo, DDS Adjunct Clinical Assistant Professor	Jacob Roth, MD Adjunct Clinical Assistant Professor
Robert Harris, MD (Emeritus) Adjunct Clinical Associate Professor	Maor Katz, MD Adjunct Clinical Instructor	Mali Mann, MD Adjunct Clinical Professor	John Neal, PhD Adjunct Clinical Assistant Professor	Ildiko Ran, MFT Adjunct Clinical Instructor	Deborah Rovine, MD Adjunct Clinical Instructor
William Hart, MD Adjunct Clinical Assistant Professor	Stewart Kiritz, PhD (Emeritus) Adjunct Clinical Assistant Professor	Tony Masri, MD Adjunct Clinical Instructor	Nicholas Ney, PhD Adjunct Clinical Assistant Professor	Manasi Rana, MD Adjunct Clinical Instructor	Jonathan Russ, MD (Emeritus) Adjunct Clinical Associate Professor
Nancy Haug, PhD Adjunct Clinical Associate Professor	Lila Kramer, MD (Emeritus) Adjunct Clinical Associate Professor	Susan Markowitz, PhD (Emeritus) Adjunct Clinical Assistant Professor	Cynthia Nguyen, MD Adjunct Clinical Associate Professor	George Reimer, MD (Emeritus) Adjunct Clinical Professor	Kenneth Seeman, MD (Emeritus) Adjunct Clinical Associate Professor
James Hawkins, MD (Emeritus) Adjunct Clinical Associate Professor	Tonja Krautter, PsyD, LCSW Adjunct Clinical Instructor	Alka Mathur, MD Adjunct Clinical Instructor	George Norbeck, MD (Emeritus) Adjunct Clinical Assistant Professor	C. June Reynolds, MD Adjunct Clinical Instructor	Alan Sidle, MD, PhD (Emeritus) Adjunct Clinical Associate Professor
Elizabeth Herb, MD (Emeritus) Adjunct Clinical Associate Professor	Kerry Kravitz, MD, PhD Adjunct Clinical Associate Professor	Franklin Matsumoto, MD (Emeritus) Adjunct Clinical Professor	Mary Ann Norfleet, PhD Adjunct Clinical Professor	Angela Riccelli, LCSW (Emeritus) Adjunct Clinical Assistant Professor	Judith Simon, PhD Adjunct Clinical Instructor
George Hogle, MD (Emeritus) Adjunct Clinical Associate Professor	Robert Landeen, MD (Emeritus) Adjunct Clinical Assistant Professor	Matthew May, MD Adjunct Clinical Instructor	Harold Novotny, MD (Emeritus) Adjunct Clinical Associate Professor	Elizabeth Richards, MD (Emeritus) Adjunct Clinical Associate Professor	Carol Slotnick MSW, PhD Adjunct Clinical Assistant Professor

Michael Smith, PhD Adjunct Clinical Assistant Professor	Saul Wasserman, MD (Emeritus) Adjunct Clinical Associate Professor
John Smolowe, MD (Emeritus) Adjunct Clinical Associate Professor	William Waterfield Jr., MD (Emeritus) Adjunct Clinical Associate Professor
Suzan Song, MD, PhD, MPH Adjunct Clinical Instructor	Randall Weingarten, MD Adjunct Clinical Professor
Dena Sorbo, MSW Adjunct Clinical Instructor	Joellen Werne, MD (Emeritus) Adjunct Clinical Associate Professor
Mary Jo Spencer, LCSW (Emeritus) Adjunct Clinical Assistant Professor	Barbara White-Huber, PhD (Emeritus) Adjunct Clinical Assistant Professor
Janet Spraggins, MD Adjunct Clinical Assistant Professor	Dana Wideman, PhD Adjunct Clinical Assistant Professor
Nicholas St. John, PhD Adjunct Clinical Instructor	George Wilkinson, MD Adjunct Clinical Associate Professor
Sheldon Starr, PhD (Emeritus) Adjunct Clinical Associate Professor	William Wittner, MD (Emeritus) Adjunct Clinical Associate Professor
Maria-Christina Stewart, PhD Adjunct Clinical Instructor	Kenneth Woodrow, MD Adjunct Clinical Associate Professor
Cary Lee Stone, LCSW (Emeritus) Adjunct Clinical Associate Professor	Frances Wren, MD Adjunct Clinical Associate Professor
Sooyeon (Aly) Suh, PhD Adjunct Clinical Instructor	Gary Wynbrandt, MD Adjunct Clinical Assistant Professor
Thomas Tarshis, MD Adjunct Clinical Assistant Professor	Helen Yeni-Komshian, MD Adjunct Clinical Instructor
Jody Thomas, PhD Adjunct Clinical Assistant Professor	Robert Yoerg, MD (Emeritus) Adjunct Clinical Associate Professor
Jacob Towery, MD Adjunct Clinical Instructor	Lenora Yuen, PhD Adjunct Clinical Assistant Professor
Dona Tversky, MD Adjunct Clinical Instructor	Kin Yuen, MD Adjunct Clinical Instructor
William Van Stone, MD (Emeritus) Adjunct Clinical Associate Professor	Adrianna Zimring, PhD Adjunct Clinical Instructor
Leon Wanerman, MD Adjunct Clinical Associate Professor	Eugene Zukowsky, PhD (Emeritus) Adjunct Clinical Associate Professor

Consulting Faculty

Thomas Anders, MD Consulting Professor	Bradley Novak, MD Consulting Assistant Professor
Jed Black, MD Consulting Associate Professor	Mary Jane Otte, PhD Consulting Assistant Professor
Bruce Bongar, PhD Consulting Professor	Brandon Peters, MD Consulting Assistant Professor
Mark Buchfuhrer, MD Consulting Assistant Professor	Kilian Pohl, PhD Consulting Associate Professor
Dean Carson, MD Consulting Assistant Professor	Joy Pollard, PhD, BCBA-D Consulting Assistant Professor
Sophia Colamarino, PhD Consulting Professor	James Reich, MD, MPH Consulting Professor
Sanjay Dube, MBBS Consulting Associate Professor	Andrea Samson, PhD Consulting Assistant Professor
John Finney, PhD Consulting Professor	Michael Bret Schneider, MD Consulting Associate Professor
Wendy Froehlich-Santino, MD Consulting Assistant Professor	Allison Siebern, PhD Consulting Assistant Professor
Steve Harris, MD Consulting Associate Professor	Christine Timko, PhD Consulting Professor
William Hewlett, MD, PhD Consulting Associate Professor	Lynn Waelde, PhD Consulting Professor
Paul Insel, PhD Consulting Associate Professor	
Jessica Megan Jones, PhD Consulting Assistant Professor	
Ahmed Khan, MD Consulting Assistant Professor	
Leena Khanzode, MD Consulting Assistant Professor	
Brian Kleis, MD Consulting Associate Professor	
Karoly Nikolich, PhD Consulting Professor	

Faculty Lecturers

Kathryn Dewitt, PhD Senior Lecturer
David Schrom, JD Lecturer

Recognition of Service

Professoriate Retirements since September 1, 2010



William Dement, MD, PhD, DSc



Carl Feinstein, MD



Terence Ketter, MD



Roy King, MD, PhD



Cheryl Koopman, PhD



Greer Murphy, MD, PhD



Seiji Nishino, MD, PhD



Barbara Sommer, MD



Craig Barr Taylor, MD

Faculty Honors

National Academy of Sciences



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

Institute of Medicine



Michele Barry, MD, FACP
Stanford University School of Medicine
Elected 2002
California

Karl Deisseroth, MD, PhD
Stanford University
Elected 2010
California

William Dement, MD, PhD, DSc
Stanford University
Elected 1983
California

Helena Chmura Kraemer, PhD
Stanford University
Elected 2003
California

Robert Malenka, MD, PhD
Stanford University School of Medicine
Elected 2004
California

Emmanuel Mignot, MD, PhD
Stanford University School of Medicine
Elected 2005
California

Allan Reiss, MD
Stanford University School of Medicine
Elected 2009
California

Alan Schatzberg, MD
Stanford University School of Medicine
Elected 2003
California

David Spiegel, MD
Stanford University School of Medicine
Elected 2012
California

Thomas Sudhof, MD
Stanford University School of Medicine
Elected 2007
California



Listed Alphabetically: Barry, Deisseroth, Dement, Kraemer, Malenka, Mignot, Reiss, Schatzberg, Spiegel, Sudhof

Annual Chairman's Awards

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. Candidates for the Annual Chairman's Awards are nominated each year by the faculty and are vetted by the Advisory Committee on Annual Awards and Nominations before being selected by the chair.

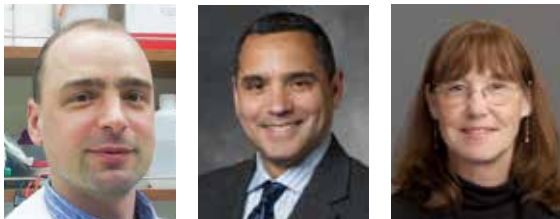
2012

- Rachel Manber, PhD
Clinical Innovation and Advancing Science
- Shashank Joshi, MD
Community Commitment and Engagement
- Booil Jo, PhD
Leadership and Unsung Hero



2013

- Alexander Urban, PhD
Clinical Innovation and Advancing Science
- Victor Carrion, MD
Community Commitment and Engagement
- Linda Lotspeich, MD, MEd
Leadership and Unsung Hero



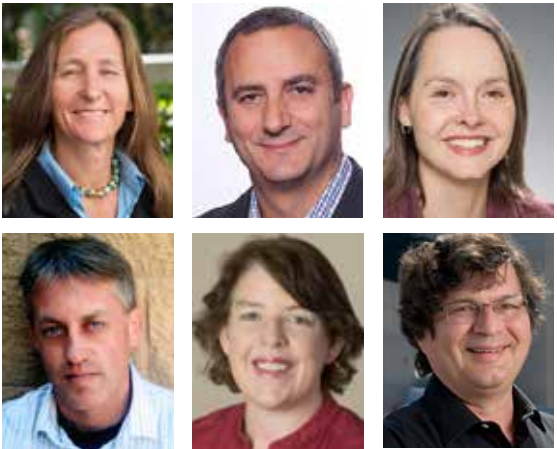
2014

- Amit Etkin, MD, PhD and Shelli Kesler, PhD
Clinical Innovation and Advancing Science
- Sallie De Golia, MD, MPH
Educational Excellence
- Steven Adelsheim, MD
Community Commitment and Engagement
- Kimberly Hill, PhD and Tina Lee, MD
Leadership and Unsung Hero
- Professor John Etchemendy
Unsung Hero



2015

- Anna Lembke, MD
Clinical Innovation
- Antonio Hardan, MD
Advancing Science
- Sherry Beaudreau, PhD
Educational Excellence
- Daryn Reicherter, MD
Community Commitment and Engagement
- Ruth O'Hara, PhD
Leadership and Professionalism
- Joachim Hallmayer, MD, Dr med
Unsung Hero



2016

- Jacob Ballon, MD, MPH and Yelizaveta Sher, MD
Clinical Innovation
- Leanne Williams, PhD
Advancing Science
- Belinda Bandstra, MD, MA
Educational Excellence
- Daryn Reicherter, MD
Community Commitment and Engagement
- Cheryl Gore-Felton, PhD and Sanno Zack, PhD
Leadership and Professionalism
- Jennifer Phillips, PhD
Unsung Hero



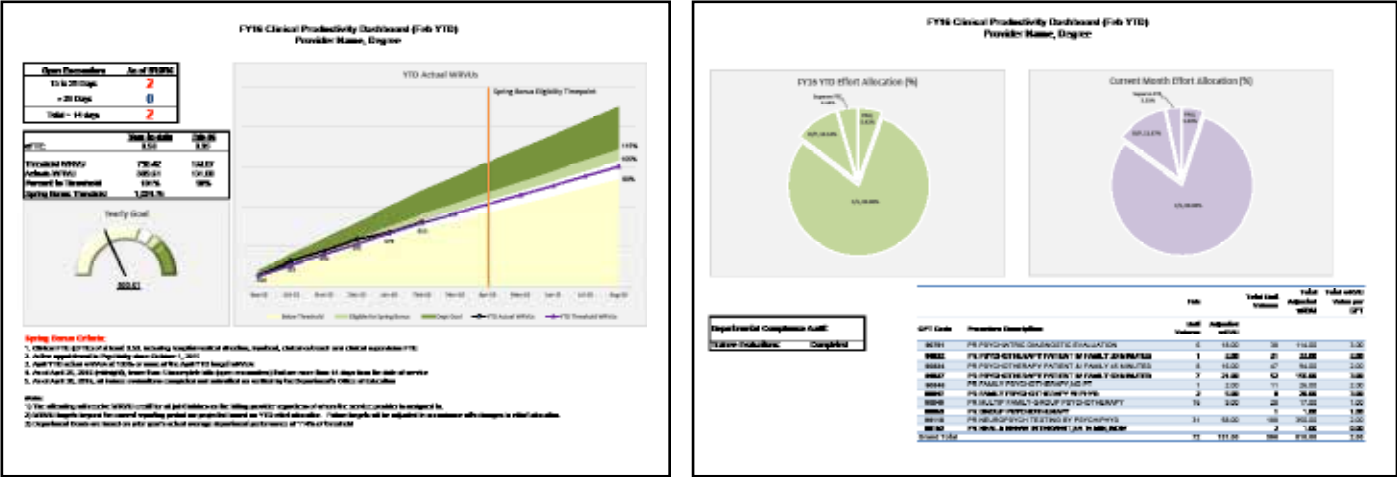
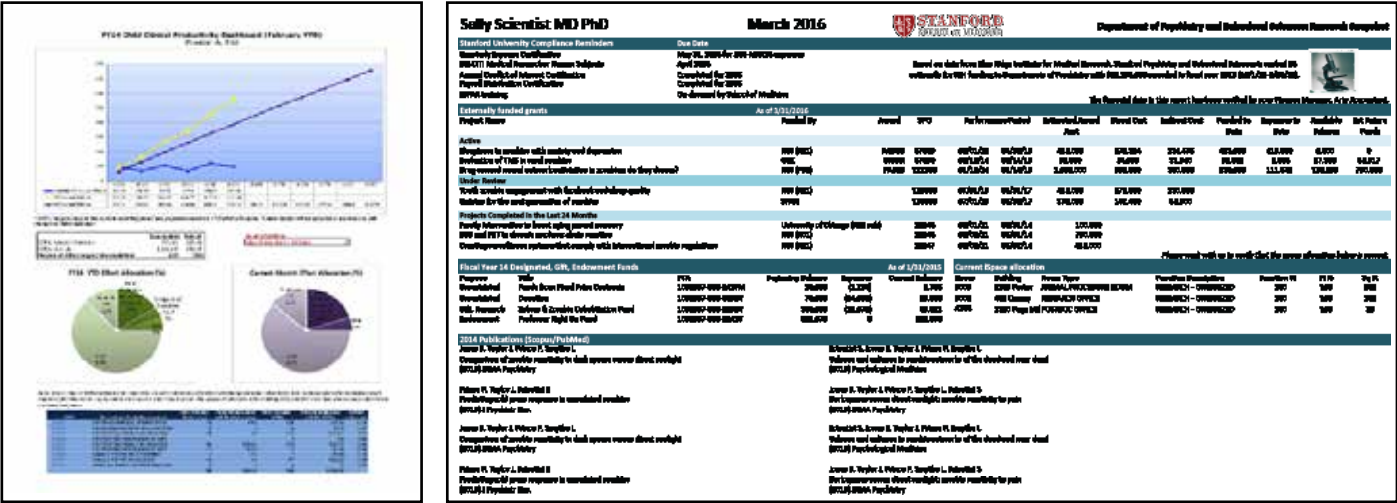
Intentional Model of Academic Excellence

Our Department has sought to demonstrate an intentional model of excellence in modern academic department leadership and organization. We have recently restructured our Department in order to bring greater academic coherence, organizational alignment and accountability, and transparency to our governance. The new configuration brings new opportunities for greater cross collaboration within the Department and also with other programs in the School of Medicine and the University and with our hospital and community partners.

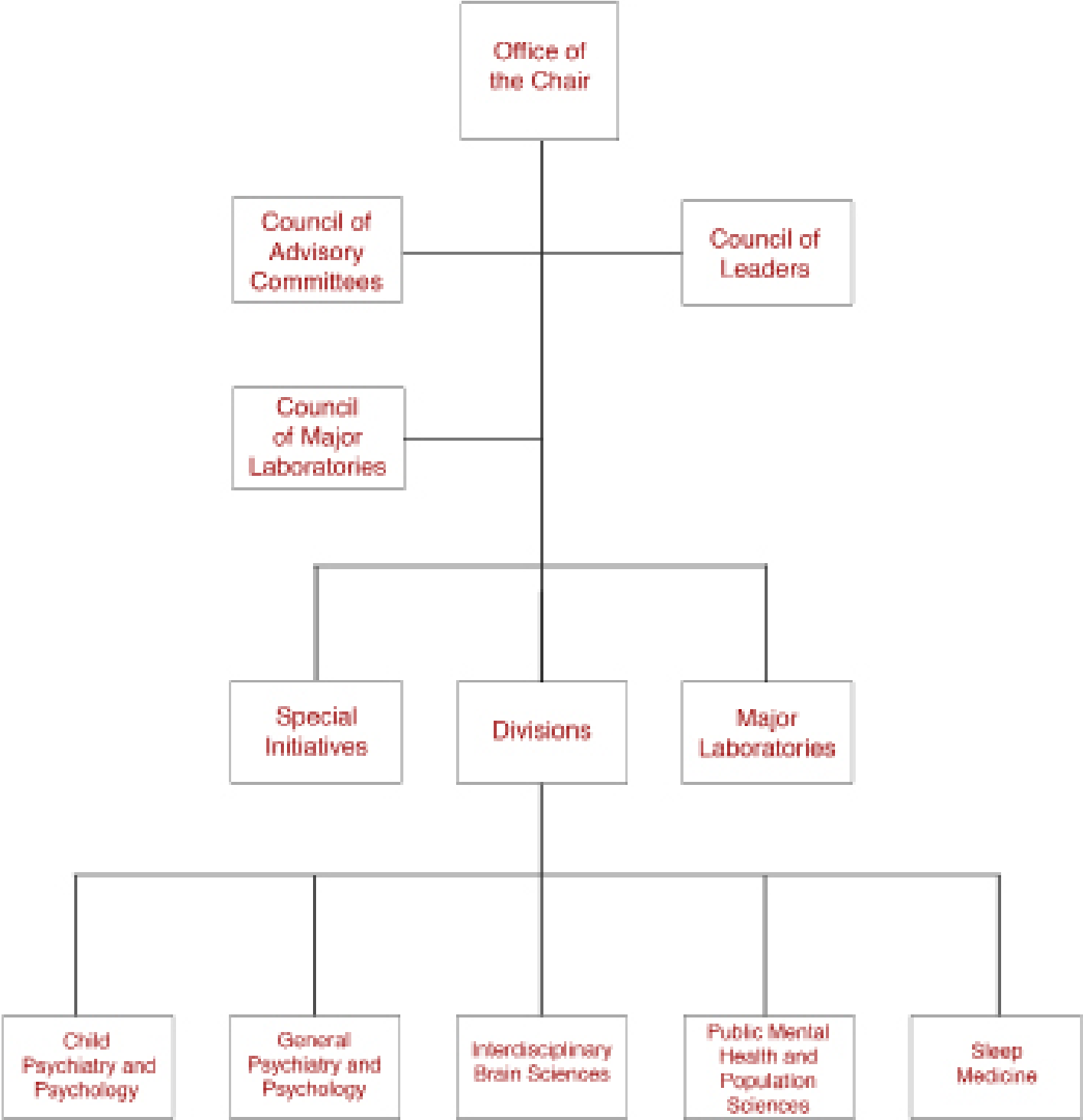
In developing strategy and reaching key decisions, the Chair works in close partnership with the Vice Chairs, Associate Chairs, Division Chiefs, and the Senior Staff Leadership Team of the Department and with key leaders across the School of Medicine and our affiliated hospitals, Stanford Health Care, Stanford Children's Health, and Palo Alto Veterans Affairs Health Care System. Advisory Committees have been established to facilitate or assist in oversight of key departmental functions and responsibilities, such as faculty appointments and promotions, clinical executive and operations, and space use and allocation. Most recently, the Council of Major Laboratories has been created to enhance strategic development and representation of scientific perspectives in department leadership dialogue. The Senior Staff Leadership Team, established over the past three years, is robust, is aligned with the five-mission model, continues to evolve, and prioritizes best practices and the highest standards of professionalism.

The fundamental work of the Department occurs in our Major Laboratories, our Divisions, and our Special Initiatives. The Major Laboratories include the Early Life Stress and Pediatric Anxiety Program, the Personalized and Translational Neuroscience Lab (PanLab), the Program on Genetics of Brain Function, the Nancy Friend Pritzker Laboratory, the Stanford Cognitive and Systems Neuroscience Lab, the Center on Stress and Health, 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 densely with the clinical, education, and community programs of the Department.

The Department has five divisions that have a full academic portfolio 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 and the Stanford Center for Sleep Sciences and Medicine. The Special Initiatives of the Chair represent novel and diverse academic activities of special priority to the Department, such as Community Outreach Activities, Precision Mental Health, and The Stanford Center for Youth Mental Health and Wellbeing.



Department Structure



Council of Advisory Committees

- Clinical Executive Committee
- Clinical Operations Committees
- Appointments and Promotions Advisory Committees
- Adjunct Clinical Faculty Advisory Committee
- Strategic Space Use and Allocation Advisory Committee
- Departmental Community Engagement Advisory Committee
- Grand Rounds/CME Committee
- Advisory Committee on Awards and Nominations
- Education Leadership and Integration Advisory Committee

Council of Leaders

- Vice Chairs
- Associate Chairs
- Senior Staff Leadership Team

Council of Major Laboratories

- Early Life Stress and Pediatric Anxiety Program
- Williams PanLab
- Program on the Genetics of Brain Function
- Nancy Friend Pritzker Laboratory
- Stanford Cognitive & Systems Neuroscience Lab
- Center on Stress and Health
- Sullivan Lab
- de Lecea Lab

Special Initiatives of the Chair

- The Belonging Project
- The Bike Beyond Project
- Clinical Neuroscience Internship Experience (CNI-X)
- Community Outreach Activities
- Editor in Chief, Books: American Psychiatric Association
- Editorial Office: Academic Psychiatry
- Forensic Psychiatry
- Humanities and Medicine
- Lyme Disease Working Group
- Pegasus Physician Writers at Stanford
- Precision Mental Health
- Project Catalyst for Mental Health
- Reimagining Mental Healthcare
- Small Grants Project
- Stanford Center for Youth Mental Health and Wellbeing
- WellConnect

Divisions

Child and Adolescent Psychiatry and Child Development

- Autism
- Eating Disorders
- General
- Mood & Anxiety
- Psychosomatic
- Special Programs & Nested Laboratories

General Psychiatry & Psychology

- Addiction
- Clinical Trials
- General
- Geriatric
- Inpatient & Acute
- Interventional
- Psychosomatic
- Psychosocial
- Special Programs & Nested Laboratories

Interdisciplinary Brain Sciences

- Clinical Neuroscience
- Behavioral Neuroscience
- Research

Public Mental Health & Population Sciences

- Epidemiology
- Evaluation & Measurement Tools
- Health Policy
- Student Health & Wellbeing
- Veteran & Military
- Vulnerable & Special Populations
- Special Programs & Nested Laboratories

Sleep Medicine

- General Sleep & Insomnia
- Narcolepsy
- Parasomnias
- Sleep Dental
- Sleep Surgery
- Special Programs & Nested Laboratories

Divisions of the Department

Division of Child and Adolescent Psychiatry and Child Development

Our Clinics and Hospital-Based Services are an integral part of one of the preeminent child and adolescent mental health treatment consortiums in the country, which includes the Stanford Children's Health and Lucile Packard Children's Hospital, Stanford Hospital & Clinics, and Stanford University School of Medicine.

Our faculty provide comprehensive clinical services using evidence-based intervention to achieve excellence in patient care while implementing innovative approaches 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 post-doctoral psychology fellows, and general psychiatry residents, provides 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. The Comprehensive Pediatric Care Unit is a 15-bed unit that serves children and adolescents with eating disorder related medical problems severe enough to require hospitalization. The Pediatric Psychiatry Consultation Service provides inpatient and outpatient psychiatric consultation and treatment to the general pediatric and pediatric and surgical subspecialty services at Lucile Packard Children's Hospital and covers the emergency room at Stanford University Medical Center.

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. 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.

Finally, the Child and Adolescent Psychiatry Faculty are very active academically with, on average, more than 45 manuscripts published yearly in peer-reviewed journals and more than 100 scientific lectures presented at regional, national, and international meetings.



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 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 Post-Doctoral 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, Medical Psychotherapy, 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), Time-limited Psychodynamic Therapy, and Couples/Family Therapy for patients with a wide range of presenting problems. Subspecialties include Eating Disorders, Sports Medicine, Adult DBT, Couples and Family Therapy, and the Wellness Program for Stanford faculty and trainees. The Individual Psychotherapy Clinic 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.

Division of Interdisciplinary Brain Sciences

The Division of Interdisciplinary Brain Sciences (DIBS) provides specialized clinical services that combine evidence-based practices with innovation in research. These services focus on the intersection between cognitive development and behavior, as commonly seen in individuals with neurodevelopmental disorders, such as Attention Deficit Hyperactivity Disorder and Learning Disorders, but also include syndromic conditions such as Fragile X Syndrome, Turner Syndrome, Klinefelter Syndrome, Williams Syndrome, 22q Deletion (VCFS) Syndrome, Prader-Willi Syndrome, and behavioral and neuropsychiatric symptoms associated with Intellectual Disability. Developmental disorders associated with medical risk factors, such as fetal alcohol exposure, preterm birth, diabetes, and disorders of sex development are treated as well. Treatments encompass a broad range of modalities, including behavioral therapy, family therapy and parent training, cognitive-behavioral therapy, and psychopharmacology.



In recent years, the Division has established the Stanford Executive Function Clinic, which provides consultation services and comprehensive evaluation for individuals with executive function deficits and symptoms associated with Attention Deficit Hyperactivity Disorder. The clinic also offers guidance on pharmacological intervention and provides Organizational Skills Therapy, an individual therapy focused on enhancement of executive functioning skills for school-aged children whose symptoms affect adaptive functioning.

The Division of Interdisciplinary Brain Sciences also provides clinical services for individuals with syndrome-based neurodevelopmental disorders, particularly those that have a significant impact on cognitive functioning or result in disruptive behaviors, including Fragile X syndrome, intellectual disability and sex chromosome aneuploidies. Complementing an extensive research program in these conditions, clinical services in the Division adopt a developmental approach that accounts for dynamic differences across life stages in order to provide comprehensive evaluation and treatment services for these patient populations.

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 three 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 objectives 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 Well Being 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 have 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.

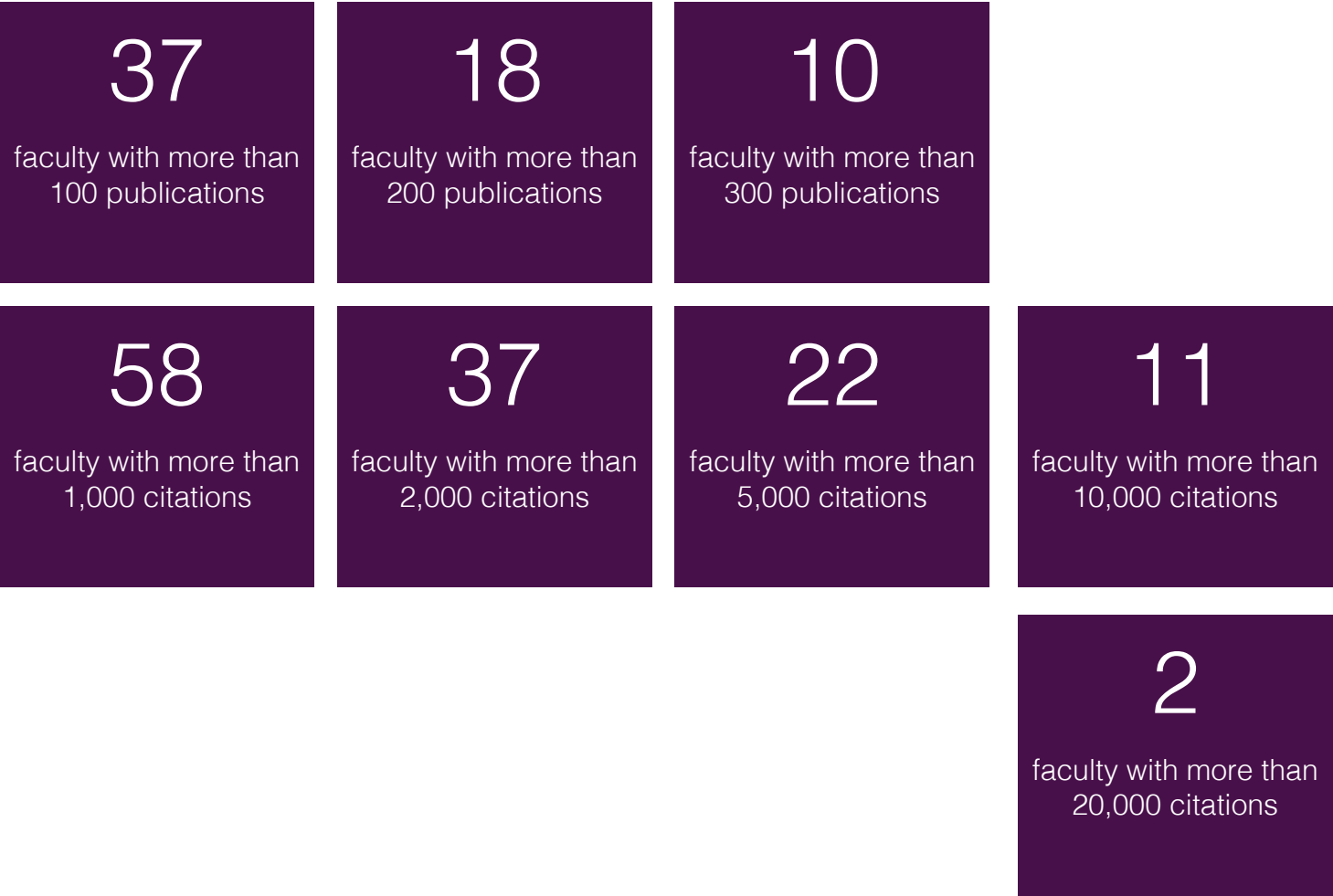
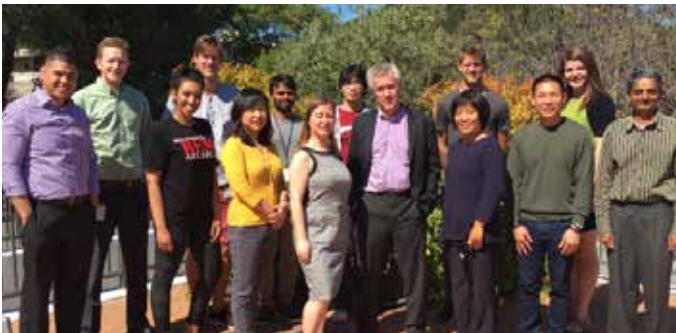
The Division encourages the development of professionals as well as trainees, students, and psychiatry residents. The faculty engage in the development of new science in the area of population psychiatry, as well as dissemination of that knowledge and application to communities locally and globally.

Division of Sleep Medicine

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.

Under the division leadership of Dr. Emmanuel Mignot and the medical direction of Dr. Clete Kushida, the Stanford Sleep Medicine Center encompasses the diverse specialties required to effectively treat patients with sleep issues. The Center has more than 100 physicians, psychologists, researchers, staff, and trainees who are devoted to the study and treatment of sleep and sleep disorders. Our clinical faculty comprises psychologists, psychiatrists, neurologists, pulmonologists, and pediatricians, and our clinic attracts patients worldwide for its specialized consultations in Sleep Surgery, Insomnia, Narcolepsy, Restless Legs Syndrome, Parasomnias, and Dental Sleep Medicine. In 2009, the Stanford Sleep Medicine Center moved to a state-of-the-art facility in the Stanford Medicine Outpatient Center in Redwood City. The facility has 18 bedrooms, 14 designated for clinic patients and 4 for research studies; we also perform home-based sleep studies. We conduct approximately 10,000 clinic visits and 3,000 in-laboratory sleep studies per year.



Advancing a Continuum of Science

The pathophysiology of virtually all mental illnesses ranging from autism to depression to schizophrenia remains enigmatic in part because of the complexity of the underlying genetic and environmental causes and, more importantly, because of our poor knowledge of how the brain normally functions to generate thoughts, feelings, and behavior. Despite these obstacles, because of major methodological advances in how scientists can study and manipulate the brain, it is clear that by combining the best basic neuroscience with thoughtful clinical research, we will make major progress in understanding the pathophysiology of mental illness and this in turn will lead to novel, more efficacious treatments.

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 Stanford Neurosciences Institute. In these roles, he advances fundamental neuroscience from the platform of the Nancy Friend Pritzker Laboratory and the Department more broadly. His scientific leadership is based on the premise that the most important progress will derive from elucidating the neural circuits that mediate adaptive, useful behaviors and how dysfunctions in these circuits generate the major symptoms of mental illness. Neural circuits are composed of complex populations of individual neurons that are connected by synapses with specific properties. Large scale human genetic studies have demonstrated that many of the genes associated with mental illness encode for proteins that influence synapse function and neuronal connectivity. Because the molecular basis of circuit function has been robustly conserved over evolution from animals to humans as has the connectivity of many critical behavioral circuits, basic science researchers can study how the abnormal genes that contribute to mental illness malfunction in specific synapses and specific circuits in model animal species to cause pathological behaviors. Basic neuroscientists can also use sophisticated molecular genetic approaches and complex imaging methods to define in unprecedented detail new brain circuits that may be involved in causing mental illness symptoms. The information garnered from this type of basic neuroscience research provides a critical guide for human researchers so that they know where and when to look for human brain malfunctions that cause mental illness. Indeed it is now possible for basic and clinical/human neuroscience researchers to work together so that in an iterative fashion, the information collected by basic science researchers will influence and guide clinical researchers while the findings from human research will help basic scientists focus on the questions and topics that have the most direct relevance to understanding and curing mental illnesses. By advancing the best basic and clinical neuroscience, we will revolutionize the practice of psychiatry and eventually help alleviate the suffering of the millions of individuals who suffer from brain disorders.



A new initiative of the Department of Psychiatry and Behavioral Sciences is the Major Laboratories and Clinical Translational Neurosciences Incubator. Dr. Leanne Williams is the inaugural Chair of the steering committee for this new initiative. The Clinical Translational Neurosciences incubator pursues 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.

Advancing Science: Professoriate Faculty



Treatment of Mood Disorders
Bruce Arnow, PhD
Professor

Dr. Arnow's research interests include 1) treatment outcome in depression; 2) predictors and moderators of outcome in the treatment of depression; 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 pharmacologic treatment.

RECENT WORKS:

Arnow, B.A., Blasey, C., Williams, L.M., Palmer, D., Rekshan, W., Schatzberg, A.F., Etkin, A., Kulkarni, J., & Rush, A.J. (2015). Are depression subtypes relevant in predicting antidepressant response?: A report from the iSPOT-D trial. *American Journal of Psychiatry*, 172, 743-750.

Arnow, B.A., Steidtmann, D., Blasey, C., Manber, R., Constantino, M.J., Klein, D.N., Markowitz, J.C., Rothbaum, B.O., Thase, M.E., Fisher, A.J., & Kocsis, J.H. (2013). The relationship between the therapeutic alliance and outcome in two distinct psychotherapies for chronic depression. *Journal of Consulting and Clinical Psychology*, 81, 627-638.

Steidtmann, D., Manber, R., Blasey, C., Markowitz, J.C., Klein, D.N., Rothbaum, B.O., Thase, M.E., Kocsis, J.H., & Arnow, B.A. (2013). Detecting critical decision points in psychotherapy and psychotherapy + medication for chronic depression. *Journal of Consulting and Clinical Psychology*, 81, 783-792.

Arnow, B.A., Blasey, C., Hunkeler, E., Lee, J., & Hayward, C. (2011). Does gender moderate the relationship between childhood maltreatment and adult depression? *Child Maltreatment*, 16, 175-183.



Science of Suicide Prevention
Rebecca Bernert, PhD
Assistant Professor

The Suicide Prevention Research Laboratory is focused on the elucidation of evidence-based risk factors and warning signs for suicide and the identification of novel therapeutic targets for suicide prevention across the lifespan. Our program utilizes cognitive, biologic (e.g., fMRI), and behavioral testing paradigms, with an emphasis on translational therapeutics. Delineating non-stigmatizing risk factors that may enhance risk detection, access to care, and intervention opportunity is central to our ongoing work. This includes several suicide prevention clinical trials which are underway, funded by NIH and DOD, testing the preliminary efficacy of a non-pharmacologic insomnia treatment on depression and suicidal behaviors among civilians and military veterans. A special focus of our work includes investigation of transdiagnostic risk factors and biomarkers that promise to inform the pathogenesis of risk and treatment innovation. This has led to research bridging the field of sleep medicine with suicidology, and the investigation of underlying behavioral and neurobiological treatment targets that lie at the intersection of sleep and emotion. An additional subspecialty and interest of our program includes standardized suicide risk assessment frameworks, best practice management, and gold standards in the use of evidence-based clinical practice parameters, emergency referrals, and lethal means restriction, and the way in which these guide public health policy, dissemination, and national strategies for suicide prevention.

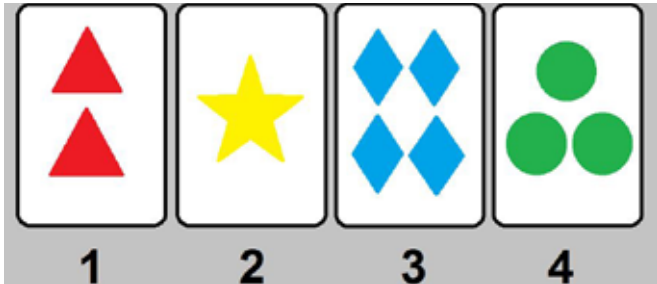
RECENT WORKS:

Bernert RA, Turvey C, Conwell Y, Joiner TE (2014). Association of poor subjective sleep quality with risk for death by suicide during a 10-year period: A longitudinal, population-based study of late life. *JAMA Psychiatry*, 71(10): 1129-37.

Bernert RA, Hom MA, Roberts LW (2014). A review of multidisciplinary clinical practice guidelines in suicide prevention: Toward an emerging standard in suicide risk assessment and management, training and practice. *Academic Psychiatry*, 38(5): 585-92.

Bernert RA, Kim JK, Iwata NG, Perlis ML (2015). Sleep disturbances as an evidence-based suicide risk factor. *Current Psychiatry Reports*, 17(3): 551-58.

Hom MH, Joiner TE, Bernert RA (2015). Limitations of a single-item assessment of suicide attempt history: Implications for standardized suicide risk assessment. *Psychological Assessment*. October 26 <http://dx.doi.org/10.1037/1pas0000241>.



Neural Bases of Eating Disorders and Obesity
Cara Bohon, PhD
Assistant Professor

Dr. Bohon’s research is focused on the brain basis of disordered eating, with a specific focus on binge eating, obesity, and food restriction. She is particularly interested in the impacts of emotion and reward on eating, as well as underlying neurocognitive processes that lead to symptom expression in eating disorders. Her current research projects include a study investigating implicit emotion regulation and response to reward in women engaging in binge eating using both functional magnetic resonance imaging (fMRI) and positron emission tomography (PET), and a study comparing neurocognitive and reward function in adolescent females with anorexia nervosa to those with obsessive compulsive disorder using fMRI. In these studies, she is utilizing established experimental paradigms, such as the emotion conflict task to assess implicit emotion regulation, and the monetary incentive delay task to assess reward processing, in order to provide clearer interpretations of findings and allow for improved comparison across psychiatric diagnoses. Dr. Bohon is also interested in the development of obesity and recently completed a pilot fMRI study on the neural response to taste in young children who are overweight and thus potentially at-risk for developing childhood obesity.

RECENT WORKS:
Bohon, C. (2014). Greater emotional eating scores associated with reduced frontolimbic activation to palatable taste in adolescents. *Obesity*, 22, 1814-1820.

Madsen, S.K., Bohon, C., & Feusner, J.D. (2013). Visual processing in anorexia nervosa and body dysmorphic disorder: Similarities, differences, and future research directions. *Journal of Psychiatric Research*, 47, 1483-1491.

Bohon, C., & Stice, E. (2012). Negative affect and neural response to palatable food intake in bulimia nervosa. *Appetite*, 58, 964-970.

Bohon, C., & Stice, E. (2011). Reward abnormalities among women with full and subthreshold bulimia nervosa: A functional magnetic resonance imaging study. *International Journal of Eating Disorders*, 44, 585-595.



Early Life Stress and Pediatric
Anxiety Program (ELSPAP)
Victor Carrion, MD
Professor

Dr. Victor Carrion’s research focuses on 1) improving understanding of the biological, psychological, and behavioral correlates of early life stress and trauma, and 2) 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 developmental neuroscience research 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. These neuroscience tools evaluate outcomes related to stress and trauma exposure in childhood, as well as responses to individual- and systems-level interventions. Current research projects aim to develop and evaluate interventions including Cue-Centered Treatment, a manualized therapy protocol for youth exposed to chronic adversity and trauma; school-wide yoga and mindfulness-based health education; mental health consultation and wellness programming in community settings; virtual reality for the treatment of anxiety disorders; and therapy services delivered in outpatient care at a large children’s hospital. Through the empirically-supported, neuroscience-based evaluation of these interventions, Dr. Carrion and his team seek to disseminate results regarding promising, efficacious practices in order to inform and impact institutional, state, and national policies that address the needs of children and families exposed to trauma and adversity.

RECENT WORKS:
Carrion, V. G., Kletter, H., Weems, C. F., Rialon Berry, R., & Rettger, J. P. (2013). Cue-Centered Treatment for Youth Exposed to Interpersonal Violence: A Randomized Controlled Trial. *Journal of Traumatic Stress*, 26, 654-662.

Weems, C. F., Scott, B. G., Russell, J. D., Reiss, A. L., Carrión, V. G. (2013). Developmental Variation in Amygdala Volumes among Children with Posttraumatic Stress. *Developmental Neuropsychology*, 38, 481-495.

Walker E, Carrion VG. (2015). The Center for Youth Wellness: a community-based approach to holistic Healthcare in San Francisco. In *Professionalism and Ethics in Medicine: A Study Guide for Physicians-in-Training* (Roberts, Ed.).

Weems CF, Klabunde M, Russell JD, Reiss AL, Carrion VG (2015). Post-traumatic stress and age variation in amygdala volumes among youth exposed to trauma. *Social Cognitive and Affective Neuroscience*, 1-7.



Pediatric Bipolar Disorders Program
Kiki Chang, MD
Professor

As Director of the Pediatric Bipolar Disorders Program, Dr. Chang conducts research into various facets of bipolar disorder. He is currently conducting phenomenologic, biologic, pharmacologic, and genetic studies of bipolar disorder in adults and children. These studies include brain imaging (MRI, MRS, fMRI) and medication and therapy trials. He is particularly interested in detecting prodromal bipolar disorder in children who might then be treated in order to prevent the development of full bipolar disorder. To do this, he has been studying children of parents with bipolar disorder who are at high risk for developing the disorder themselves.

As Director of Pediatric Acute-onset Neuropsychiatric Syndrome (PANS) Psychiatry Research, Dr. Chang is investigating underlying causes for the acute neuropsychiatric symptoms in these children. In conjunction with the PANS Clinic at Lucile Packard Children’s Hospital, he is collecting phenomenological, immunologic, and brain imaging data, in the first study ever to investigate this illness in this way.

RECENT WORKS:
Intrinsic Amygdala Functional Connectivity in Youth With Bipolar I Disorder *JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY* Singh, M. K., Kelley, R. G., Chang, K. D., Gotlib, I. H. 2015; 54 (9): 763-770.

Using neuroimaging to evaluate and guide pharmacological and psychotherapeutic treatments for mood disorders in children *CNS SPECTRUMS* Singh, M. K., Garrett, A. S., Chang, K. D. 2015; 20 (4): 359-368.

Association of Anxiety Symptoms in Offspring of Bipolar Parents with Serotonin Transporter-Linked Polymorphic Region (5-HTTLPR) Genotype *JOURNAL OF CHILD AND ADOLESCENT PSYCHOPHARMACOLOGY* Park, M., Sanders, E., Howe, M., Singh, M., Hallmayer, J., Kim, E., Chang, K. 2015; 25 (6): 458-466.

Childhood-compared to adolescent-onset bipolar disorder has more statistically significant clinical correlates *JOURNAL OF AFFECTIVE DISORDERS* Holtzman, J. N., Miller, S., Hooshmand, F., Wang, P. W., Chang, K. D., Hill, S. J., Rasgon, N. L., Ketter, T. A. 2015; 179: 114-120.

Widespread white matter tract aberrations in youth with familial risk for bipolar disorder. *Psychiatry research* Roybal, D. J., Barnea-Goraly, N., Kelley, R., Bararpour, L., Howe, M. E., Reiss, A. L., Chang, K. D. 2015; 232 (2): 184-192.



Neurobiology of Brain States
Luis de Lecea, PhD
Professor

Imbalances in arousal are at the core of most neuropsychiatric disorders. A goal in our laboratory is to define the arousal construct from the neurobiological perspective. In particular, we are deciphering the neuronal circuits underlying arousal state transitions. Stemming from our discovery of the hypocretins (also known as orexins), two neurotransmitters essential for arousal stability, we have uncovered multiple neuronal pathways that integrate multiple metabolic, circadian, and limbic variables into a coherent output that responds appropriately to salient stimuli. Several compounds originating from our discoveries have been approved by the FDA to treat insomnia and increased vigilance. We are also studying neuronal circuits associated with hyperarousal such as anxiety, alcohol, and drug abuse.

RECENT WORKS:
Li SB, Jones JR, de Lecea L. Hypocretins, Neural Systems, Physiology, and Psychiatric Disorders. *Curr Psychiatry Rep*. 2016 Jan;18(1):7. doi: 10.1007/s11920-015-0639-0.

Rolls A, Pang WW, Ibarra I, Colas D, Bonnavion P, Korin B, Heller HC, Weissman IL, de Lecea L. Sleep disruption impairs haematopoietic stem cell transplantation in mice. *Nat Commun*. 2015 Oct 14;6:8516. doi: 10.1038/ncomms9516.

Bonnavion P, Jackson AC, Carter ME, de Lecea L. Antagonistic interplay between hypocretin and leptin in the lateral hypothalamus regulates stress responses. *Nat Commun*. 2015 Feb 19;6:6266. doi: 10.1038/ncomms7266.

Carter ME, Yizhar O, Chikahisa S, Nguyen H, Adamantidis A, Nishino S, Deisseroth K, de Lecea L. Tuning arousal with optogenetic modulation of locus coeruleus neurons. *Nat Neurosci*. 2010 Dec;13(12):1526-33. doi: 10.1038/nn.2682. Epub 2010 Oct 31.



Depression Research Clinic
Charles DeBattista, MD, DMH
Professor

Dr. DeBattista’s current research interests focus on treatment resistant depression, developing novel biological interventions in the treatment of mental illness, studying anti-glucocorticoid 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 (or combinations of them) that predict specific response to a range of antidepressants treatment in patients diagnosed with major depressive disorder. Investigate Efficacy & Safety of RO4995819 vs. Placebo as Adjunct Tx in Patients with Major Depressive Disorder explores the efficacy of a 6-week treatment with an investigational medication, RO4995819, versus placebo as adjunctive therapy in patients with major depression. 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. Treatment Trial for Psychogenic Nonpileptic Seizures aims to investigate report rates of nonepileptic seizures in patients who receive targeted pharmacotherapy (sertraline) or focused psychotherapy (cognitive behavioral therapy-informed psychotherapy or combined treatment (CBT-ip + sertraline) compared to patients who receive community care or treatment as usual.

RECENT WORKS:
Cognitive and emotional biomarkers of melancholic depression: An iSPOT-D report JOURNAL OF AFFECTIVE DISORDERS Day, C. V., Gatt, J. M., Etkin, A., DeBattista, C., Schatzberg, A. F., Williams, L. M. 2015; 176: 141-150.

Impairment and distress patterns distinguishing the melancholic depression subtype: An iSPOT-D report JOURNAL OF AFFECTIVE DISORDERS Day, C. V., Rush, A. J., Harris, A. W., Boyce, P. M., Rekshan, W., Etkin, A., DeBattista, C., Schatzberg, A. F., Arnow, B. A., Williams, L. M. 2015; 174: 493-502.



Deisseroth Lab
Karl Deisseroth, MD, PhD
Professor

Karl Deisseroth is the D.H. Chen Professor of Bioengineering and of Psychiatry and Behavioral Sciences at Stanford University, and Investigator of the Howard Hughes Medical Institute. He received his undergraduate degree from Harvard, his PhD from Stanford, and his MD from Stanford. He also completed postdoctoral training, medical internship, and adult psychiatry residency at Stanford, and he is board-certified by the American Board of Psychiatry and Neurology. He continues as a practicing psychiatrist at Stanford with specialization in affective disorders and autism-spectrum disease, employing medications along with neural stimulation. In the engineering school he developed and launched the undergraduate degree in Bioengineering at Stanford, and continues to serve as Director of Undergraduate Education in Bioengineering, while also teaching yearly medical physiology and optics courses. National-scale service has included the NIH BRAIN Initiative Working Group and nonprofit disease foundations including the Brain and Behavior Research Foundation (NARSAD) and the Michael J. Fox Foundation for Parkinson’s Research.

His laboratory created and developed both optogenetics (a technology for precisely controlling millisecond-scale activity patterns in specific cell types using microbial opsin genes and fiberoptic-based neural interfaces) and CLARITY (a technology for creating composites of biological molecules in tissue covalently linked to polymer hydrogels, allowing removal of unlinked tissue elements to create transparency and accessibility to macromolecular labels; the resulting new structure allows high-resolution optical access to structural and molecular detail within intact tissues without disassembly). He also has employed his technologies to discover the neural cell types and connections that cause adaptive and maladaptive behaviors, and has disseminated the technologies to thousands of laboratories around the world.

RECENT WORKS:
Deisseroth K (2015). Optogenetics: ten years of microbial opsins in neuroscience. Nature Neuroscience 18:1213-25.

Rajasethupathy P, Sankaran S, Marshel JH, Kim C, Ferenczi F, Lee SY, Berndt A, Jaffe A, Lo M, Liston C & Deisseroth K (2015). Projections from neocortex recruit hub neurons in hippocampus: targeted top-down control of memory retrieval. Nature 526:653-9.

Adhikari A, Lerner T, Finkelstein J, Pak S, Jennings JH, Davidson TJ, Ferenczi E, Gunaydin LA, Mirzabekov JM, Ye L, Kim SY, Lei A & Deisseroth K (2015). Basomedial amygdala: deep brain target of prefrontal cortex for top-down control of anxiety and fear. Nature 527:179-85.



Stress - Protective Versus Harmful Effects
Firdaus Dhabhar, PhD
Associate Professor

The Dhabhar Laboratory conducts transdisciplinary studies involving human as well as mouse models of “good” versus “bad” stress and its effects on health and disease. We proposed the novel idea that a short-term stress response is nature’s fundamental survival system that may be harnessed clinically to increase protective immunity during wound healing, vaccination, infection, and some forms of cancer therapy. We elucidate psycho-neuro-immune mechanisms that mediate the protective effects of short-term stress and the harmful effects of long-term stress. We also investigate mechanisms through which chronic inflammation (e.g., induced by chronic stress or by cancer progression & treatment) can induce depressive symptoms and dysregulate circadian rhythms through cytokine actions on the brain. We have identified pathways through which hormones and neurotransmitters modulate immune cell trafficking, cytokine and chemokine gene and protein expression, and innate and adaptive immunity in vivo. One major goal is to harness the physiology of the fight-or-flight response by manipulating behavior and/or biology in order to enhance protective immune responses during surgery, vaccination, infection, or cancer. A second major goal is to develop interventions that minimize harmful pro-inflammatory responses that are exacerbated during chronic stress and are thought to contribute to stress-related disorders such as depression and PTSD.

RECENT WORKS:
Dhabhar, F.S., A. N. Saul, C. Daugherty, T. H. Holmes, D. M. Bouley, and T. M. Oberyszyn. (2010) Short-Term stress enhances cellular immunity and increases early resistance to squamous cell carcinoma. Brain, behavior, and Immunity, 24: 127-137. Highlighted by Faculty of 1000.

Fredericks, C.A., Drabant, E.M., Edge, M.D., Tillie, J.M., Hallmayer, J., Ramel, W., Kuo, J.R., Mackey, S., Gross, J.J., and Dhabhar, F.S. (2010) Healthy young women with serotonin transporter 5T Polymorphism show a pro-inflammatory bias under resting & stress conditions. Brain, behavior, and Immunity, 24: 350-357. Highlighted by journal editorial.

Aschbacher, K., E. Epel, O. M. Wolkowitz, A. A. Prather, E. Puterman, and Dhabhar, F.S. (2012) Maintenance of a positive outlook during acute stress protects against pro-inflammatory reactivity and future depressive symptoms. Brain, behavior, and Immunity, 26:346-352. Highlighted by Faculty of 1000.

Dhabhar, F.S., Saul, A.N., Holmes, T.H., Daugherty, C., Neri, E., Tillie, J.M., Kusewitt, D., Oberyszyn, T.M. (2012) High anxious individuals show increased chronic stress burden, decreased protective immunity, and increased cancer progression in a mouse model of squamous cell carcinoma. PLoS ONE, 7(4): e33069.doi:10.1371/journal.pone.0033069.



Etkin Lab
Amit Etkin, MD, PhD
Assistant Professor

The overarching aim of the Etkin lab is to understand the neural basis of emotional disorders and their treatment, and to leverage this knowledge to develop novel treatment interventions. The lab’s work is organized around the neuroscientific study of emotion and its regulation in healthy subjects and in individuals with psychiatric disorders. Ongoing work includes basic neuroscience of emotional and cognitive neurocircuitry, cross-sectional neuroimaging of a range of psychiatric disorders (anxiety, depression and post-traumatic stress disorder), investigation of the neural mechanisms of psychotherapeutic, pharmacological, and brain stimulation treatments for these disorders, and trials of neuroscience-based brain training interventions developed in the lab. Additional work using concurrent transcranial magnetic stimulation (TMS) with fMRI is used to understand how activity in one brain region causally translates into activation in interconnected regions and networks, and how communication within defined neural circuits can be more specifically manipulated by repetitive TMS protocols, both in healthy subjects and in patients.

RECENT WORKS:
Goodkind M, Eickhoff SB, Oathes DJ, Jiang Y, Chang A, Jones-Hagata LB, Ortega BN, Zaiko YV, Roach EL, Korgaonkar MS, Grieve SM, Galatzer-Levy I, Fox PT, Etkin A. “Identification of a common neurobiological substrate for mental illness”. JAMA Psychiatry, 72(4):305-15 (2015).

Chen AC, Oathes DJ, Chang C, Bradley T, Zhou Z-W, Williams LM, Glover GH, Deisseroth K, Etkin A. “Causal interactions between fronto-parietal central executive and default-mode networks in humans.” Proceedings of the National Academy of Sciences, 110(49): 19944-9 (2013).

Etkin A, Schatzberg AF. “Common abnormalities and disorder-specific compensation during implicit regulation of emotional processing in generalized anxiety versus major depressive disorders” American Journal of Psychiatry, 168(9): 968-978. (2011).

Etkin A, Prater KE, Hoeft F, Menon V and Schatzberg AF. “Failure of Anterior Cingulate Activation and Connectivity with the Amygdala During Implicit Regulation of Emotional Processing in Generalized Anxiety Disorder” American Journal of Psychiatry, 167(5) 545-554. (2010).



Stanford Geriatric Education Center
Dolores Gallagher Thompson, PhD, ABPP
Professor

The Geriatric Education Center focuses primarily on the processes and outcomes of providing day-to-day unpaid assistance (emotional, practical, financial, and social) to a family member or close friend with Alzheimer's disease or another form of dementia. For the past 20 years, we have developed and tested new models of improving quality of life for dementia caregivers. Several of these programs are now considered "evidence-based" and are used by researchers and clinicians both elsewhere in the US and internationally. In the past decade, we have focused more specifically on unique issues facing families from diverse ethnic, cultural, and linguistic groups, such as Latinos, Chinese, Vietnamese, Persian, and Asian Indian. In this work we've found that many of the same issues surface – stress management, dealing with difficult behaviors, communicating more effectively with family and health care providers – but the form they take, and the acceptable coping strategies that can be employed, vary widely from one group to another. In addition to this work, we are actively engaged with the Stanford Alzheimer's Disease Research Center (ADRC). Dr. Gallagher Thompson is director of the outreach, recruitment, and education "core" of that center which focuses on recruitment and retention of Latino families, as well as individuals with mild cognitive impairment and Parkinson's disease with and without cognitive impairment.

RECENT WORKS:
Gallagher Thompson, D., Kesler, S.R., Sudheimer, K., Mehta, K.M., Thompson, L.W., Marquett, R.M., Holland, J.M., Reiser, R., Rasgon, N., Schatzberg, A., & O'Hara, R.M. (2014). fMRI activation during executive function predicts response to cognitive behavioral therapy in older, depressed adults. *American Journal of Geriatric Psychiatry*, 23(1), 13-22.

Turner, R.M., Tran, C., Hinton, L., Gallagher-Thompson, D., Tzuang, M., Tran, C.H., & Valle, R.J. (2015). Using an emic lens to understand how Latino families cope with dementia behavioral problems: A focus group study. *American Journal of Alzheimer's Disease & Other Dementias*. Published online before print, Jan. 19, 2015 as DOI: 10.1177/1533317515566115.

Gallagher-Thompson, D., Tzuang, M., Hinton, L., Alvarez, P., Rengifo, J.R., Valverde, I., Chen, N., Emrani, T., & Thompson, L.W. (2015). Effectiveness of a Fotonovela for reducing depression and stress in Latino dementia family caregivers. *Alzheimer's Disease and Associated Disorders*, 29(2), 146-153.

Au, A., Gallagher Thompson, D., Wong, M., Leung, J., Chan, W-C., Chan, R., Lu, H-J., Lai, S., & Chan, K. (2015). Behavioral activation for dementia caregivers: Scheduling pleasant events and enhancing communications. *Clinical Interventions in Aging*, 10, 611-619.



Psychology and Biobehavioral
Sciences Laboratory
Cheryl Gore-Felton, PhD
Professor

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.

RECENT WORKS:
Hendriksen, E., Williams, E., Sporn, N., Greer, J., DeGrange, A., Koopman, C. (2015). Worried together: a qualitative study of shared anxiety in patients with metastatic non-small cell lung cancer and their family caregivers. *SUPPORTIVE CARE IN CANCER*; 23 (4): 1035-1041.

Kamen, C., Arganbright, J., Kienitz, E., Weller, M., Khaylis, A., Shenkman, T., Smith, S., Koopman, C., Gore-Felton, C. (2015). HIV-related stigma: implications for symptoms of anxiety and depression among Malawian women. *AJAR-AFRICAN JOURNAL OF AIDS RESEARCH*; 14 (1): 67-73.

Yiaslas, T. A., Kamen, C., Arteaga, A., Lee, S., Briscoe-Smith, A., Koopman, C., Gore-Felton, C. (2014).The Relationship Between Sexual Trauma, Peritraumatic Dissociation, Posttraumatic Stress Disorder, and HIV-Related Health in HIV-Positive Men. *JOURNAL OF TRAUMA & DISSOCIATION*; 15 (4): 420-435.

Gore-Felton, C., Ginzburg, K., Chartier, M., Gardner, W., Agnew-Blais, J., McGarvey, E., Weiss, E., Koopman, C. (2013). Attachment style and coping in relation to posttraumatic stress disorder symptoms among adults living with HIV/AIDS. *JOURNAL OF BEHAVIORAL MEDICINE*; 36 (1): 51-60.



Translational Applied Behavior Analysis Lab
Scott Hall, PhD
Associate Professor

The Translational Applied Behavior Analysis Laboratory is dedicated to understanding the behavioral and neuropathological underpinnings of severe problem behaviors, such as aggression, self-injury, and social skills deficits, commonly shown by children and adults diagnosed with intellectual and developmental disabilities (IDD). Led by Dr. Scott Hall, PhD, the lab utilizes state-of-the-art neuroimaging and behavioral assessments based on the principles of applied behavior analysis. The primary goals of the lab are to determine how environmental and biological factors affect the development of aberrant behaviors and to develop targeted treatments. Our research portfolio includes studies on the use of telemedicine to allow treatments to be conducted in areas where trained behavior analysts or other appropriate treatment providers are not available or financially feasible. Other studies include the integration of social skills training, state-of-the-art eye tracking, and multimodal brain imaging. Genetic conditions that cause IDD, such as fragile X syndrome, Prader-Willi syndrome, and Cornelia de Lange syndrome, among others, are utilized as valuable study models for broadly understanding problem behaviors in individuals with IDD. 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.

RECENT WORKS:
Hall SS, Jiang H, Reiss AL & Greicius MD (2013). Identifying large-scale brain networks in fragile X syndrome. *JAMA Psychiatry*, 70, 1215-1223.

Hall SS, Hammond JL, Hirt M, Hustyi K, & Reiss AL (2014). Using discrete trial training to identify specific learning impairments in boys with fragile X syndrome. *Journal of Autism and Developmental Disorders*, 44, 1659-1670.

Klabunde M, Saggar M, Hammond JL, Hustyi KM, Reiss AL, & Hall SS (2015). Neural correlates of skin-picking behavior in Prader-Willi syndrome. *Human Brain Mapping*, 36, 4135-4143.

Klabunde M, Saggar M, Hustyi KM, Kelley RG, Reiss AL & Hall SS (2015). Examining the neural correlates of emergent equivalence relations in fragile X syndrome. *Psychiatry Research: Neuroimaging*, 233, 373-379.



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

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.

RECENT WORKS:
Hallmayer J, Cleveland S, Torres A, Phillips J, Cohen B, Torigoe T, Miller J, Fedele A, Collins J, Smith K, Lotspeich L, Croen LA, Ozonoff S, Lajonchere C, Grether JK, Risch N (2011). Genetic Heritability and Shared Environmental Factors Among Twin Pairs With Autism. *Arch Gen Psychiatry* 68(11):1095-102.

Pasca S, Portmann T, Yazawa M, Voineagu I, Pasca A, Cord B, Palmer T, Chikahisa S, Seiji N, Bernstein JA, Hallmayer J, Geschwind D, Dolmetsch RE (2011) Using iPS cell-derived neurons to uncover the cellular basis of autism in patients with Timothy Syndrome *Nat Medicine* 27;17(12):1657-62.

Froehlich-Santino W, Londono Tobon A, Cleveland S, Torres A, Phillips J, Cohen B, Torigoe T, Miller J, Fedele A, Collins J, Smith K, Lotspeich L, Croen LA, Ozonoff S, Lajonchere C, Grether JK, O'Hara R, Hallmayer J. Prenatal and perinatal risk factors in a twin study of autism spectrum disorders. *J Psychiatr Res*. 2014 Jul;54:100-8.



Autism and Developmental Disorders
Research Program
Antonio Hardan, MD
Professor

The Autism and Developmental Disorders Research Program (ADDRP) focuses on the examination of the neurobiology of autism spectrum disorder (ASD), and on the development of innovative treatment for individuals with developmental disorders. Investigators involved in the ADDRP include several faculty members from the division of child psychiatry including Drs. Grace Gengoux, Jennifer Phillips, Kari Berquist, Lawrence Fung, and Antonio Hardan. Over the years, this 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 (e.g., anatomical MRI, magnetic resonance spectroscopy, and positron emission tomography) 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.



Addictions and Health Policy
Keith Humphreys, PhD
Professor

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. 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.

RECENT WORKS:
Humphreys, K., Blodgett, J., & Roberts, L. (2015). The exclusion of people with psychiatric disorders from medical research. *Journal of Psychiatric Research*, 70, 28-32.

Humphreys, K., Blodgett, J. C. & Wagner, T.H. (2014). Estimating the efficacy of Alcoholics Anonymous without self-selection bias: An instrumental variables re-analysis of randomized clinical trials. *Alcoholism: Clinical and Experimental Research*, 11, 2688-2694.

Humphreys, K., Maisel, N.C., Blodgett, J.C., Fuh, I.L., & Finney, J.W. (2013). Extent and reporting of patient non-enrollment in influential randomized clinical trials, 2002-2010. *JAMA Internal Medicine*, 173, 1029-1031.

Strang, J. S., Babor, T., Caulkins, J., Foxcroft, D., Fischer, B., & Humphreys, K. (2012). Drug policy and the public good: Evidence for effective interventions. *The Lancet*, 378, 71-83.



School Mental Health and Community-based
Participatory Research
Shashank Joshi, MD
Associate Professor

This past year, we have implemented and evaluated peer-led (and adult-mentored) mental health interventions for two communities traumatized by a suicide cluster (two high schools in Palo Alto and St. Ignatius College Preparatory HS in San Francisco) and two schools that have not experienced a cluster but that are eager to implement universal suicide prevention (Sacred Heart Preparatory School in Menlo Park and Saratoga High School). Research from the project has helped validate the peer-led suicide prevention program model in school districts affected by clusters. Since we started this work in 2011, we have experienced a dramatic increase in referrals made by peers to get help for their friends in distress. This year, over 4,400 students were involved in this specific intervention. Statistically significant findings across both sites indicate that teens are more able to name trusted adults they would go to when seeking help for themselves or for peers. The result has been a much earlier sense of urgency to seek help for a friend, and a number of teen lives have been saved because a peer acted on their behalf.

At the East Palo Alto Academy High School, we have run a full service school mental health clinical team, utilizing a combination of Psychiatry Faculty, Psychology Doctoral Student, Psychiatry Resident, and Child & Adolescent Psychiatry trainees. In this venue we have learned a great deal about what specific mental health factors may impact a student's learning, such as trauma, loss, depression, anxiety, and emotional distress in general.

RECENT WORKS:
Joshi SV and Pumariega AJ (2016). Engaging Diverse Families in School-based Mental Health interventions using a Modified Medical Model; under review, *The International Journal for School-Based Family Counseling*.

Joshi SV, Merrell S, Dunlap P, Hartley S, and Kataoka SE. Community collaboration in school-based suicide prevention. In Roberts LW, Reicherter D, Adelsheim S, Joshi SV (eds.) *Partnering in Mental Health: A Guide to Community and Academic Collaboration*. 2015; Philadelphia, Springer, pp163-178.

Roberts LW, Reicherter D, Adelsheim S, Joshi SV (eds.) *Partnering in Mental Health: A Guide to Community and Academic Collaboration*. 2015; Philadelphia, Springer.

Hartley S, Kessler M, Barstead M and Joshi SV (2015). School-based Suicide Prevention: Content, Process and the Role of Trusted Adults and Peers. *Child & Adolescent Psychiatry Clinics of North America*, 2015; 24 (2): 353-370.



Center for Human Sleep Research
Clete Kushida, MD, PhD
Professor

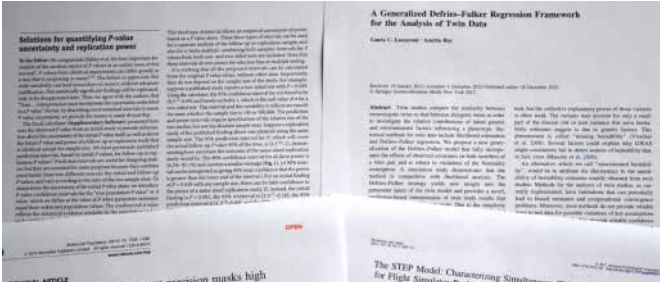
The Center for Human Sleep Research focuses on conducting large-scale clinical trials in sleep medicine and developing the electronic network informatics infrastructure to support these trials. They are currently conducting a PCORI-supported study: Sustainable Methods, Algorithms, and Research Tools for Delivering Optimal Care Study (SMART DOCS). This study is designed to: 1) develop a new patient-centered outcomes and coordinated-care management (PCCM) approach for sleep medicine, enabling providers and patients access to specific and relevant information and resources, thereby allowing patients to make informed health care decisions and providers to assist patients in achieving their preferred outcomes; and 2) conduct a randomized trial that will test the PCCM approach for sleep medicine against a conventional diagnostic/treatment outpatient medical care approach with assessment of patient satisfaction and perception of care in 1,806 enrolled patients. The analyses are completed on AHRQ-supported Comparative Outcomes Management with Electronic Data Technology (COMET) Project, in which they 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 obstructive sleep apnea (OSA) patients. They are also conducting industry-sponsored trials on a novel nasal stent for treating OSA, a new medication for adolescent patients with restless legs syndrome, and innovative wearable devices for detecting sleep-wake patterns.

RECENT WORKS:
Kushida CA, Nichols DA, Holmes TH, Miller R, Griffin K, Cardell C-Y, Hyde PR, Cohen E, Manber R, Walsh JK. SMART DOCS: A new patient-centered outcomes and coordinated-care management approach for the future practice of sleep medicine. *Sleep*. 2015 Feb 1;38(2):315-26.

Holmes TH, Zulman DM, Kushida CA. Adjustment for variable adherence under hierarchical structure: Instrumental variable modeling through compound residual inclusion. *Med Care*. 2016 Jan 13. (Epub ahead of print).

Quan SF, Budhiraja R, Clarke DP, Goodwin JL, Gottlieb DJ, Nichols DA, Simon RD, Smith TW, Walsh JK, Kushida CA. Impact of treatment with continuous positive airway pressure (CPAP) on weight in obstructive sleep apnea. *J Clin Sleep Med*. 2013 Oct 15;9(10):989-93.

Kushida CA, Nichols DA, Holmes TH, Quan SF, Walsh JK, Gottlieb DJ, Simon RD, Guilleminault C, White DP, Goodwin JL, Schweitzer PK, Leary EB, Hyde PR, Hirshkowitz M, Green S, McEvoy LK, Chan C, Gevins A, Kay GG, Bloch DA, Crabtree T, Dement WC. Effects of continuous positive airway pressure on neurocognitive function in obstructive sleep apnea patients: The Apnea Positive Pressure Long-term Efficacy Study (APPLES). *Sleep*. 2012 Dec 1;35(12):1593-602.



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

A major theme in Dr. 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.

RECENT WORKS:
Lazzeroni LC, Ray A. The cost of large numbers of hypothesis tests on power, effect size and sample size. *Molecular Psychiatry* 2012; 17 (1): 108-114.

Lazzeroni LC, Lu Y, Belitskaya-Levy I. P-values in genomics: Apparent precision masks high uncertainty. *Molecular Psychiatry* 2014; 19 (12): 1336-1340.

Lazzeroni LC, Lu Y, Belitskaya-Levy I. Solutions for quantifying p-value uncertainty and replication power. *Nature Methods* 2016; 13 (2): 107-108.

Lazzeroni LC. Evaluating the evidence of replication for genetic associations with schizophrenia. *JAMA Psychiatry* 2014; 71 (1): 94-5.

Lazzeroni, LC, Ray, A. A generalized DeFries-Fulker regression framework for the analysis of twin data. *Behavior Genetics* 2013; 43 (1): 85-96.



Stanford Addiction Medicine Program (SAMP)
Anna Lembke, MD
Assistant Professor

The Lembke Lab at Stanford University is focused on addiction prevention, diagnosis, and treatment. We recently completed a study, published in *JAMA Internal Medicine* (December 2015) analyzing Medicare Part D opioid prescribing. We found that prolific opioid prescribers are not isolated to any one type of health care provider or medical specialty. Based on sheer volume alone, family medicine doctors prescribe the most opioids. Educational efforts to curb opioid prescribing will need to target a broad swath of prescribers. To that end, we are publishing a review of risks, benefits, and alternatives in chronic opioid therapy in *American Family Physician*, a journal which reaches nearly 200,000 family physicians. We are exploring how people use the Internet (twitter, chat rooms, online support groups) to exchange information about substance use, including a paper published on Naloxone discussion on Twitter, and peer recovery in online recovery rooms. We are collaborating with international partners to examine addiction treatment in China. We just completed a study looking at stigma and loss of freedom among treatment-seeking heroin users in China. We are just embarking on establishing a smoking cessation group at the Stanford Cancer Center, and measuring how this behavioral intervention will impact smoking outcomes.

RECENT WORKS:
Maclean D, Gupta S, Lembke A, Manning CD, Heer J. Forum77: An Analysis of an Online Health Forum Dedicated to Addiction Recovery. *ACM Computer-Supported Cooperative Work (CSCW)*, 2015.

Lembke, A, Humphreys, K. A Call to Include People with Mental Illness and Substance Use Disorders Alongside 'Regular' Smokers in Smoking Cessation Research. *Tobacco Control*, 2015.

Lembke, A, Cheng, Niushen. A Qualitative Study of Treatment-Seeking Heroin Users in Contemporary China. *Addiction Science and Clinical Practice*, 2015; 10:23.

Chen, J., Humphreys, K., Shah, N.H., Lembke, A. Distribution of Opioids by Different Types of Medicare Prescribers. *JAMA Internal Medicine*, published online December 14, 2015.

Haug, N. A., Bielenberg, J., Linder, S. H., Lembke, A. Assessment of provider attitudes toward #naloxone on Twitter. *Substance Abuse*, 2016.



Program on the Genetics Of Brain Function
Douglas Levinson, MD
Professor

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

- The Levinson lab is currently involved in the following projects:
- Large-scale meta-analysis of genome-wide association study data for psychiatric disorders (major depressive disorder, schizophrenia, anorexia nervosa, post-traumatic stress disorder, cross-disorder analyses) carried out by the Psychiatric Genomics Consortium and other consortia (Levinson, Duncan).
 - 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).
 - Large-scale study of association of schizophrenia with DNA sequence variation in the HLA region of chromosome 6 (Levinson, Mignot, Mindrinos, Fernandez-Vina).
 - Detection of somatic mutations of mobile elements (retrotransposon sequences) in the brain, using whole-genome sequencing (Levinson, Urban, Snyder).
 - Psychopathology and genetics of early-onset schizophrenia (Laurent-Levinson and Levinson).
 - Genetics of learning disabilities (Laurent-Levinson).

RECENT WORKS:
The Influence of Age and Sex on Genetic Associations with Adult Body Size and Shape: A Large-Scale Genome-Wide Interaction Study. Winkler TW, Justice AE, Graff M, Barata L, Feitosa MF, Chu S, Czajkowski J, Esko T, Fall T, Kilpeläinen TO, Lu Y, Mägi R, Mihailov E, Pers TH, Rieger S, Teumer A, Loos RJ, et al. *PLoS Genet*. 2015 Oct 1;11(10):e1005378. doi: 10.1371/journal.pgen.1005378. eCollection 2015 Oct.

New data and an old puzzle: the negative association between schizophrenia and rheumatoid arthritis. Lee SH, Byrne EM, Hultman CM, Kähler A, Vinkhuyzen AA, Ripke S, Andreassen OA, Frisell T, Gusev A, Hu X, Karlsson R, Mantzioris VX, McGrath JJ, Mehta D, Stahl EA, Zhao Q, van Riel P, et al. *Int J Epidemiol*. 2015 Aug 18. pii: dyv136.

Genetic Differences in the Immediate Transcriptome Response to Stress Predict Risk-Related Brain Function and Psychiatric Disorders. Arloth J, Bogdan R, Weber P, Frishman G, Menke A, Wagner KV, Balsevich G, Schmidt MV, Karbalai N, Czamara D, Altmann A, Trümbach D, Wurst W, Mehta D, Uhr M, Klengel T, Erhardt A, Carey CE, Conley ED; Major Depressive Disorder Working Group of the Psychiatric Genomics Consortium (PGC), Ruepp A, Müller-Myhsok B, Hariri AR, Binder EB; Major Depressive Disorder Working Group of the Psychiatric Genomics Consortium PGC. *Neuron*. 2015 Jun 3;86(5):1189-202. doi: 10.1016/j.neuron.2015.05.034.

EIF3G is associated with narcolepsy across ethnicities. Holm A, Lin L, Faraco J, Mostafavi S, Battle A, Zhu X, Levinson DF, Han F, Gammeltoft S, Jennum P, Mignot E, Kornum BR. *Eur J Hum Genet*. 2015 Nov;23(11):1573-80. doi: 10.1038/ejhg.2015.4. Epub 2015 Feb 11.



Eating Disorders Research Program
James Lock, MD, PhD
Professor

The Eating Disorder Research Group is a translational laboratory examining genetic, neuroanatomical, neuro-functional, neuro-cognitive, behavioral, and cognitive interventions, as well as dissemination and implementation of evidence based treatments related to eating disorders across the age spectrum. Recent major completed studies document neuroanatomical differences and neurocognitive inefficiencies in this clinical group. Cognitive processing related to central coherence and set-shifting differ in youth with anorexia nervosa and may contribute to risk for the disorder and decrease treatment response. In addition, our treatment studies have made major contributions to the evidence base for effective treatments for anorexia nervosa, bulimia nervosa, and binge eating disorder. We have found that a specific form of family therapy is superior to individual therapy for adolescents with anorexia nervosa and more cost effective than other family therapies for this disorder. We also found that this same specific family therapy is superior to cognitive behavioral therapy for adolescents with bulimia nervosa. Finally, for adults with binge eating disorder, we have developed and tested a novel treatment, integrative response therapy, that shows clinical promise.

RECENT WORKS:
Lock, J., et al., Aberrant Brain Activation during a Response Inhibition Task in Adolescent Eating Disorder Subtypes. *Am J Psychiatry*, 2011. 168: p. 55-64.

Garrett, A., et al., Predicting Clinical Outcome Using Brain Activation Associated with Set-Shifting and Central Coherence Skills in Anorexia Nervosa. *Journal of Psychiatric Research*, 2014. 27: p. 26033.

Fitzpatrick, K., et al., Neurocognitive processes in adolescent anorexia nervosa. 2012: p. 12 JUN 2012 | DOI: 10.1002/eat.22027.

Agras, W., et al., Comparison of 2 family therapies for adolescent anorexia nervosa: A randomized parallel trial. *JAMA Psychiatry*, 2014. 72(11): p. 1279-1286.

Lock, J., et al., A randomized clinical trial comparing family based treatment to adolescent focused individual therapy for adolescents with anorexia nervosa. *Arch Gen Psychiatry*, 2010. 67(10): p. 1025-1032.

Le Grange, D., et al., Randomized clinical trial comparing family based treatment and cognitive behavioral therapy for adolescent bulimia nervosa. *JAACAP*, 2015.

Robinson, A., Integrative Response Therapy for Binge Eating Disorder. *Cognitive and Behavioral Practice*, 2013. 20(1): p. 93-105.



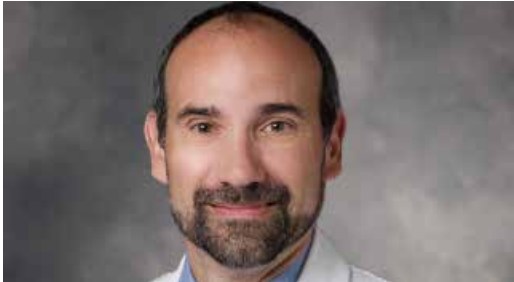
Behavioral Neuroscience
David Lyons, PhD
Professor

A major focus of our 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, we extended the generality of our 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.

RECENT WORKS:
Lee AG, Nechvatal JM, Shen B, Buckmaster CL, Levy MJ, Chin FT, Schatzberg AF, Lyons DM. Striatal dopamine D2/3 receptor regulation by stress inoculation in squirrel monkeys. *Neurobiology of Stress* 2016; 3: 68-73.

Lee MS, Kim YH, Park WS, Park OK, Kwon SH, Hong KS, Rhim H, Shim I, Morita K, Wong DL, Patel PD, Lyons DM, Schatzberg AF, Her S. (2016). Temporal variability of glucocorticoid receptor activity is functionally important for the therapeutic action of fluoxetine in the hippocampus. *Molecular Psychiatry* 2016; 21: 252-60.

Brockhurst J, Cheleuitte-Nieves C, Buckmaster CL, Schatzberg AF, Lyons DM. Stress inoculation modeled in mice. *Translational Psychiatry* 2015; 5: e537.



Neuropsychiatry
Jose Maldonado, MD, FAPM, FACFE
Professor

Dr. Maldonado's current 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.

RECENT WORKS:
Prolonged neuropsychiatric effects following management of chloroquine intoxication with psychotropic polypharmacy. Clinical case reports Maxwell, N. M., Nevin, R. L., Stahl, S., Block, J., Shugarts, S., Wu, A. H., Dominy, S., Solano-Blanco, M. A., Kappelman-Culver, S., Lee-Messer, C., Maldonado, J., Maxwell, A. J. 2015; 3 (6): 379-387

An Insatiable Desire for Tofu: A Case of Restless Legs and Unusual Pica in Iron Deficiency Anemia *PSYCHOSOMATICS* Sher, Y., Maldonado, J. R. 2014; 55 (6): 680-685

The "Prediction of Alcohol Withdrawal Severity Scale" (PAWSS): Systematic literature review and pilot study of a new scale for the prediction of complicated alcohol withdrawal syndrome *ALCOHOL* Maldonado, J. R., Sher, Y., Ashouri, J. F., Hills-Evans, K., Swendsen, H., Lolak, S., Miller, A. C. 2014; 48 (4): 375-390.

Neuropathogenesis of Delirium: Review of Current Etiologic Theories and Common Pathways *AMERICAN JOURNAL OF GERIATRIC PSYCHIATRY* Maldonado, J. R. 2013; 21 (12): 1190-1222.

Broken Heart Syndrome (Takotsubo Cardiomyopathy) Triggered by Acute Mania: A Review and Case Report *PSYCHOSOMATICS* Maldonado, J. R., Pajouhi, P., Witteles, R. 2013; 54 (1): 74-79.



Nancy Friend Pritzker Laboratory
Robert Malenka, MD, PhD
Professor

Long-lasting activity-dependent changes in the efficacy of synaptic transmission, commonly known as synaptic plasticity, play an important role in the development of neural circuits and all forms of adaptive and pathological experience-dependent plasticity. One major goal of the Malenka laboratory is to elucidate the detailed molecular mechanisms underlying the various forms of synaptic plasticity found in the mammalian brain. To accomplish this we use cellular electrophysiological recording techniques and cell biological imaging assays combined with genetic manipulations of critical synaptic proteins. These efforts include studying synaptic function and plasticity in a broad range of mutant mouse lines in which it is possible to genetically delete and replace specific synaptic proteins in a temporally and spatially controlled fashion. A related area of research is to explore synaptic function and plasticity in key nodes of brain circuitry underlying motivated behaviors with the goal of defining synaptic changes that contribute to the pathological circuit adaptations that underlie neuropsychiatric disorders including addiction, depression, autism, and Parkinson's disease. In these research efforts we use a wide range of state-of-the-art molecular genetic techniques in rodents to define novel circuit elements that contribute to a variety of motivated behaviors and how these circuits contribute to the pathological behaviors observed in experience-induced and genetically based models of neuropsychiatric disorders. These research programs will help advance our understanding of the pathophysiology of major mental illnesses and eventually lead to novel and more efficacious treatments.

RECENT WORKS:
Jurado, S., Goswami, D., Zhang, Y., Molina, A.J., Sudhof, T.C. & Malenka, R.C. LTP requires a unique postsynaptic SNARE fusion machinery. *Neuron* 77: 542-558, 2013. (PMCID: PMC3569727).

Lammel, S., Lim, B.K., Ran, C. Huang, K.W., Betley, M.J., Tye, K., Deisseroth, K. & Malenka, R.C. Input-specific control of reward and aversion in the ventral tegmental area. *Nature* 491: 212-217, 2012. (PMCID: PMC3493743).

Dolen, G., Darvishzadeh, A., Huang, K.W. & Malenka, R.C. Social reward requires coordinated activity of nucleus accumbens oxytocin and serotonin. *Nature* 501: 179-184, 2013. (PMCID: PMC4091761).

Schwartz, N., Temkin, P., Jurado, S., Lim, B.K., Heifets, B.D., Polepali, J.S. & Malenka, R.C. Decreased motivation during chronic pain requires long-term depression in the nucleus accumbens. *Science* 345: 535-542, 2014. (PMCID: PMC4219555).



Depression and Insomnia
Research Program
Rachel Manber, PhD
Professor

Research in the Sleep Health & Insomnia Program (PI: Rachel Manber) aims to improve sleep of individuals suffering from insomnia using non-pharmacological approaches. Our lab conducts clinical research to answer questions with immediate clinical implications for diverse populations. Much of our research is focused on testing short and long term efficacy, including outcomes beyond sleep (e.g., depressive symptom severity, hypnotic medication use), as well as predictors and mediators of treatment response. Our current research initiatives include: 1) a randomized controlled study (RCT) aiming to improve perinatal insomnia, infant sleep, and the quality of maternal-infant interactions; 2) an RCT of the effectiveness of cognitive behavioral therapy for insomnia (CBT-I) for patients with dual diagnosis of depression and insomnia; 3) an RCT of the effectiveness of CBT-I for those with dual diagnosis of sleep apnea and insomnia; and 4) exploring issues related to the delivery and dissemination of CBT-I to patients, including veterans, and to mental health providers.

RECENT WORKS:
Trockel, M. Karin, BE. Taylor, CB. Manber R. (2015). Effects of cognitive behavioral therapy for insomnia on suicidal ideation in Veterans sleep. *SLEEP*, 38(2):259–265. PMC4288607.

Bei B, Ong JC, Rajaratnam SMW, & Manber R. (2015) Chronotype and improved sleep quality independently predict depressive symptom reduction after group cognitive behavioral therapy for insomnia. *J Clinical Sleep Medicine*, 11(9):1021-7 PMID: 25845891.

Manber R, Buysse DJ, Edinger J, Krystal A, Luther JF, Wisniewski SR, Trockel M, Kraemer HC, & Thase ME. (2016). Efficacy of CBT for Insomnia Combined With Antidepressant Pharmacotherapy in Patients with Comorbid Depression and Insomnia: A Randomized Controlled Trial. *Journal of Clinical Psychiatry*. In press.



Cognitive and Systems
Neurosciences Laboratory
Vinod Menon, PhD
Professor

Dr. Menon's lab uses advanced imaging and computational techniques to investigate the functional and structural architecture of cognitive networks in the human brain. His lab also investigates how disruptions in specific brain circuits impact behavior, cognition, emotion, and learning in individuals with neurodevelopmental, psychiatric, and neurological disorders.

Current projects include: 1) typical and atypical development of large-scale brain networks; 2) disruption of large-scale brain networks in psychopathology; 3) cognitive, affective, and social information processing systems in children with autism; 4) neural basis of learning disabilities in children; 5) brain training and interventions to remediate poor cognitive skills in children with learning disabilities; 6) computational methods for probing dynamic functional circuits; and 7) computational modeling of large-scale functional and structural brain networks.

RECENT WORKS:
Remediation of Childhood Math Anxiety and Associated Neural Circuits through Cognitive Tutoring JOURNAL OF NEUROSCIENCE Supekar, K., Iuculano, T., Chen, L., Menon, V. 2015; 35 (36): 12574-12583.

Cognitive tutoring induces widespread neuroplasticity and remediates brain function in children with mathematical learning disabilities NATURE COMMUNICATIONS Iuculano, T., Rosenberg-Lee, M., Richardson, J., Tenison, C., Fuchs, L., Supekar, K., Menon, V. 2015; 6.

Brain Structural Integrity and Intrinsic Functional Connectivity Forecast 6 Year Longitudinal Growth in Children's Numerical Abilities. Journal of neuroscience Evans, T. M., Kochalka, J., Ngoon, T. J., Wu, S. S., Qin, S., Battista, C., Menon, V. 2015; 35 (33): 11743-11750.

Cognitive tutoring induces widespread neuroplasticity and remediates brain function in children with mathematical learning disabilities. Nature communications Iuculano, T., Rosenberg-Lee, M., Richardson, J., Tenison, C., Fuchs, L., Supekar, K., Menon, V. 2015; 6: 8453-7.

Dissociable Roles of Right Inferior Frontal Cortex and Anterior Insula in Inhibitory Control: Evidence from Intrinsic and Task-Related Functional Parcellation, Connectivity, and Response Profile Analyses across Multiple Datasets JOURNAL OF NEUROSCIENCE Cai, W., Ryali, S., Chen, T., Li, C. R., Menon, V. 2014; 34 (44): 14652-14667.

Hippocampal-neocortical functional reorganization underlies children's cognitive development NATURE NEUROSCIENCE Qin, S., Cho, S., Chen, T., Rosenberg-Lee, M., Geary, D. C., Menon, V. 2014; 17 (9): 1263-1269.



Center for Narcolepsy & KLS
Research Center
Emmanuel Mignot, MD, PhD
Professor

The major focus of the Mignot laboratory is the study of sleep disorders, most notably narcolepsy. The laboratory uses three different approaches: genetics, immunology, and signal processing/machine learning. A major project is aiming at identifying the target of T cells that are responsible for the autoimmune destruction of hypocretin/orexin cells in narcolepsy, and to understand why the disorder is triggered by specific influenza strains. We are also looking at the genetics of narcolepsy, Kleine –Levin syndrome and Periodic Leg movements during sleep using GWAS, and exome sequencing, and functionally characterizing these genetic effects. Finally, we are using analytics on large clinical datasets of online sleep questionnaire response patterns, activity monitoring, and polysomnography (PSG) recordings. This ranges from simple statistics and epidemiology to deep learning algorithms of the EEG and polysomnography (PSG) signals.

RECENT WORKS:
Narcolepsy in African Americans. Kawai M, O'Hara R, Einen M, Lin L, Mignot E. Sleep. 2015 Nov 1;38(11):1673-81. doi: 10.5665/sleep.5140. PMID: 26158891.

HLA-DPB1 and HLA class I confer risk of and protection from narcolepsy. Ollila HM, Ravel JM, Han F, Faraco J, Lin L, Zheng X, Plazzi G, Dauvilliers Y, Pizza F, Hong SC, Jennum P, Knudsen S, Kornum BR, Dong XS, Yan H, Hong H, Coquillard C, Mahlios J, Jolanki O, Einen M, Arnulf I, Högl B, Frauscher B, Crowe C, Partinen M, Huang YS, Bourgin P, Vaarala O, Désautels A, Montplaisir J, Mack SJ, Mindrinos M, Fernandez-Vina M, Mignot E. Am J Hum Genet. 2015 Jan 8;96(1):136-46. doi: 10.1016/j.ajhg.2014.12.010. Erratum in: Am J Hum Genet. 2015 May 7;96(5):852. Lavault, Sophie [removed]; Arnulf, Isabelle [added]. PMID: 25574827.

Genome wide analysis of narcolepsy in China implicates novel immune loci and reveals changes in association prior to versus after the 2009 H1N1 influenza pandemic. Han F, Faraco J, Dong XS, Ollila HM, Lin L, Li J, An P, Wang S, Jiang KW, Gao ZC, Zhao L, Yan H, Liu YN, Li QH, Zhang XZ, Hu Y, Wang JY, Lu YH, Lu CJ, Zhou W, Hallmayer J, Huang YS, Strohl KP, Pollmächer T, Mignot E. PLoS Genet. 2013 Oct;9(10):e1003880. doi: 10.1371/journal.pgen.1003880. Epub 2013 Oct 31. PMID: 24204295.

ImmunoChip study implicates antigen presentation to T cells in narcolepsy. Faraco J, Lin L, Kornum BR, Kenny EE, Trynka G, Einen M, Rico TJ, Lichtner P, Dauvilliers Y, Arnulf I, Lecendreux M, Javidi S, Geisler P, Mayer G, Pizza F, Poli F, Plazzi G, Overeem S, Lammers GJ, Kemlink D, Sonka K, Nevsimalova S, Rouleau G, Désautels A, Montplaisir J, Frauscher B, Ehrmann L, Högl B, Jennum P, Bourgin P, Peraïta-Adrados R, Iranzo A, Bassetti C, Chen WM, Concannon P, Thompson SD, Damotte V, Fontaine B, Breban M, Gieger C, Klopp N, Deloukas P, Wijmenga C, Hallmayer J, Onengut-Gumuscu S, Rich SS, Winkelmann J, Mignot E. PLoS Genet. 2013;9(2):e1003270. doi: 10.1371/journal.pgen.1003270. Epub 2013 Feb 14. PMID: 23459209.



Genetics, Neurobiology, and Computational
Analysis of Sleep and Associated Behaviors
Philippe Murrain, PhD
Associate Professor

Because the human brain harbors trillions of synapses, the impact of psychiatric and sleep disorders on such an immense synapse landscape has been out of reach. To model the complex human brain and its diseases, our laboratory uses "simpler" fish and rodent species. We investigate the mechanisms underpinning common vertebrate behaviors and associated defects at the genetic, synaptic, network, and whole brain levels with the latest techniques such as CRISPR-Cas9, GCaMPs light sheet microscopy and array tomography imaging. Recently, using a novel approach combining super-resolution microscopy and protein markers to profile >30 proteins within each individual synapse, we analyzed over 1 million normal and fragile X syndrome (FXS) synapses and found that the intellectual impact of FMR1 silencing is mediated by heterogeneous molecular changes in the synapse populations of the FXS brain. Importantly, we found that mGluR5 antagonism (a molecular mechanism recently targeted in two clinical trials) rescued only a subset of the molecular deficits experienced in the total synapse population. This observation provided a quantitative explanation to the cessation of clinical trials of mGluR5 antagonists for FXS, and strongly suggests that a complete treatment for FXS must require a combination of synergistic drugs that rescue the diverse FXS synaptic deficits. This approach now validated on a cortical model of mental retardation, is mature to uncover the complex synaptic landscape of other pathological contexts or normal behavioral states such as sleep.

RECENT WORKS:
Juntti SA, Hilliard AT, Kent KR, Kumar A, Nguyen A, Jimenez MA, Loveland JL, Murrain P, Fernald RD. A Neural Basis for Control of Cichlid Female Reproductive Behavior by Prostaglandin F2a. Current Biology 2016 PMID: 26996507.

Kim CK, Miri A, Leung LC, Berndt A, Murrain P, Tank DW, Burdine RD. Prolonged, brain-wide expression of nuclear-localized GCaMP3 for functional circuit mapping. Front Neural Circuits. 2014 8:138. PMID: 25505384.

Leung LC, Wang GX, Murrain P. Imaging zebrafish neural circuitry from whole brain to synapse. Front Neural Circuits. 2013 PMID: 23630470.

Colas D, Manca A, Delcroix JD, Murrain P. Orexin A and orexin receptor 1 axonal traffic in dorsal roots at the CNS/PNS interface. Front Neurosci. 2014 PMID: 24574957.

Wang GX, Smith SJ, Murrain P. Fmr1 KO and fenobam treatment differentially impact distinct synapse populations of mouse neocortex. Neuron. 2014 PMID: 25521380.



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

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.

RECENT WORKS:
Kawai M, Beaudreau SA, Gould CE, Hantke NC, Jordan JT, O'Hara R. Delta Activity at Sleep Onset and Cognitive Performance in Community-Dwelling Older Adults. In Press. Sleep.

Garrett A, Gupta S, Reiss AL, Waring J, Sudheimer K, Anker L, Sosa N, Hallmayer J, and O'Hara R. Impact of 5-HTTLPR on Hippocampal Subregional Activation in Older Adults. Translational Psychiatry. 2015 Sep 22;5:e639. doi: 10.1038/tp.2015.131. PMID: 26393485.

Etkin A, Gyurak A, O'Hara R. A neurobiological approach to the cognitive deficits of psychiatric disorders. Dialogues Clinical Neuroscience. 2013 Dec;15(4):419-29. Review. PMID: 24459409.

Gershon A, Sudheimer K, Tirouvanziam R, Hallmayer JF, O'Hara R. The long-term impact of early life adversity on late-life psychiatric disorders. Current Psychiatry Reports. 2013 Apr; 15(4):352. PMID: 23443532.



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

Dr. Ohayon's current research and scholarly interests focus on epidemiology of sleep and psychiatric disorders in the general population and clinical settings: 1) sleep habits and patterns; 2) prevalence, diagnosis, co-morbidity, treatment and Public Health impact of sleep disorders; 3) pain, posttraumatic stress disorder, social phobia, panic disorder and generalized anxiety; and 4) epidemiology of narcolepsy and hypersomnia.

RECENT WORKS:
Ohayon MM, Roberts LW. Challenging the validity of the association between oversleeping and overeating in atypical depression. J Psychosom Res. 2015; 78(1):52-57.

Spira AP, Kaufmann CN, Kasper JD, Ohayon MM, Rebok GW, Skidmore E, Parisi JM, Reynolds CF. Association between insomnia symptoms and functional status in U.S. older adults. J Gerontol B Psychol Sci Soc Sci. 2014; 69:S35-41.

Ohayon MM, Roberts LW. Pain and Sleep Disturbances in the United Kingdom. Ann Neurol. 2014; 76:S132-S132.

Ohayon MM. Evolution of Narcolepsy Symptomatology and Mortality in a Longitudinal Study of Family Members of Narcoleptic Individuals. Ann Neurol. 2014; 76: S132-S132.

Ohayon MM, Mahowald MW, Leger D. Are confusional arousals pathological? Neurology. 2014; 83(9):834-841.



Cancer Control and Cancer
Survivorship Research
Oxana Palesh, PhD
Assistant Professor

Researchers in the Palesh Cancer Survivorship Laboratory at Stanford University focus on understanding the etiology and psychophysiology of treatment side effects in cancer with the goal of developing and testing novel therapeutic approaches to improve clinical outcomes and reduce symptoms, premature aging, and mortality. Our ongoing clinical research includes testing novel behavioral and pharmacological interventions as well as innovative delivery approaches for management of sleep, cancer related fatigue, circadian disruption, cancer-related cognitive impairments, and health-related quality of life functioning during and subsequent to cancer treatment. We are interested in developing interventions that can also be delivered widely in community oncology settings across the US, and therefore we are testing these interventions' feasibility and acceptability in such settings.

RECENT WORKS:
Innominato PF, Spiegel D, Ulusakarya A, Giacchetti S, Bjarnason GA, Lévi F, Palesh O. Subjective sleep and overall survival in chemotherapy-naïve patients with metastatic colorectal cancer. Sleep Med. 2015 Mar; 16(3):391-8. doi:10.1016/j.sleep.2014.10.022. Epub 2015 Jan 22. PubMed PMID: 25678361.

Palesh O, Aldridge-Gerry A, Bugos K, Pickham D, Chen JJ, Greco R, Swetter SM. Health behaviors and needs of melanoma survivors. Support Care Cancer. 2014 Nov; 22(11):2973-80. doi: 10.1007/s00520-014-2286-0. Epub 2014 May 31. PubMed PMID: 24879390.

Palesh O, Aldridge-Gerry A, Zeitzer JM, Koopman C, Neri E, Giese-Davis J, Jo B, Kraemer H, Nouriani B, Spiegel D. Actigraphy-measured sleep disruption as a predictor of survival among women with advanced breast cancer. Sleep. 2014 May 1; 37(5):837-42. doi: 10.5665/sleep.3642. PubMed PMID: 24790261; PubMed Central PMCID: PMC3985107.

Palesh OG, Roscoe JA, Mustian KM, Roth T, Savard J, Ancoli-Israel S, Heckler C, Purnell JQ, Janelins MC, Morrow GR. Prevalence, demographics, and psychological associations of sleep disruption in patients with cancer: University of Rochester Cancer Center-Community Clinical Oncology Program. J Clin Oncol. 2010 Jan 10; 28(2):292-8. doi: 10.1200/JCO.2009.22.5011. Epub 2009 Nov 23. PubMed PMID: 19933917; PubMed Central PMCID: PMC2815717.



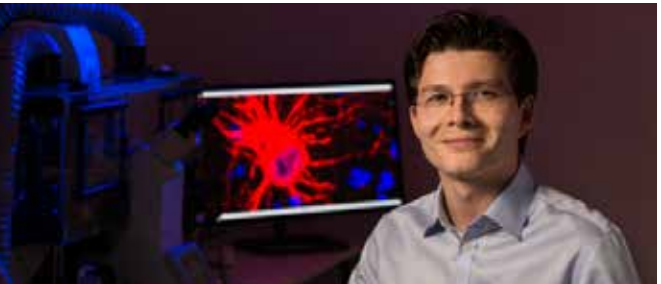
Parker Lab
Social Neurosciences Research Program
Karen Parker, PhD
Associate Professor

Research in the Parker Lab Social Neurosciences Research Program at Stanford University spans primate models to patients with autism spectrum disorder (ASD). They are currently developing several innovative monkey models of social impairments, including studies of rhesus monkeys that “spontaneously” exhibit social deficits and common marmoset monkeys which are engineered to do so. Their clinical research studies include biomarker discovery in cerebrospinal fluid and blood samples collected from children with and without ASD, and clinical trials that test the efficacy of novel pharmacotherapies to improve social functioning in children with ASD. The Parker Lab is particularly interested in testing whether “social” neuropeptide (e.g., oxytocin and arginine vasopressin) signaling pathways are robust biomarkers of, and treatment targets for, social impairments in ASD.

RECENT WORKS:
Carson DS, Garner JP, Hyde SA, Libove RA, Berquist SW, Hornbeak KB, et al. (2015) Arginine Vasopressin Is a Blood-Based Biomarker of Social Functioning in Children with Autism. PLoS ONE 10 (7): e0132224. doi:10.1371/journal.pone.0132224.

DS Carson, SW Berquist, TH Trujillo, JP Garner, SL Hannah, SA Hyde, RD Sumiyoshi, LP Jackson, JK Moss, MC Strehlow, SH Cheshier, S Partap, AY Hardan, KJ Parker. Cerebrospinal fluid and plasma oxytocin concentrations are positively correlated and negatively predict anxiety in children. Molecular Psychiatry advance online publication, 4 November 2014; doi:10.1038/mp.2014.132.

Karen J. Parker, Joseph P. Garner, Robin A. Libove, Shellie A. Hyde, Kirsten B. Hornbeak, Dean S. Carson, Chun-Ping Liao, Jennifer M. Phillips, Joachim F. Hallmayer, and Antonio Y. Hardan. Plasma oxytocin concentrations and OXTR polymorphisms predict social impairments in children with and without autism spectrum disorder. PNAS 2014 111 (33) 12258-12263; published ahead of print August 4, 2014, doi:10.1073/pnas.1402236111.



Cellular Mechanisms of Neuropsychiatric
Disorders Laboratory
Sergiu Pasca, MD
Assistant Professor

The Pasca Laboratory at Stanford University is primarily focused on the development of in vitro cellular models for studying human brain development and for identifying neuronal phenotypes for specific neuropsychiatric diseases. We are currently pursuing questions in three major inter-related areas. Firstly, we are interested in understanding human brain development and deciphering what makes human corticogenesis unique. We recently developed a novel 3D approach for generating a functional human cortex in vitro and we are generating tools to explore this unique 3D platform. Second, we are using state-of-the-art stem cell biology and neuroscience approaches in combination with high-throughput assays to identify phenotypes associated with neuropsychiatric disorders on the autism and schizophrenia spectrum, such as 22q11.2 deletion syndrome or Timothy syndrome. Third, we recognize the role of the immune system in modulating neuropsychiatric disease and are developing in vitro cellular models that capture the neuro-immune crosstalk.

RECENT WORKS:
Pasca A.M., Sloan S. (co-first), Clarke L.E., Tian Y., Makinson C., Huber N., Kim C-H., Park J-Y., O'Rourke N.A., Nguyen K., Smith S.J., Huguenard J., Geschwind D.H., Barres B.A., and Pasca S.P*. Functional cortical neurons and astrocytes from human pluripotent stem cells in 3D cultures. Nature Methods, 12(7): 671-8, 2015.

Paşca S.P*. Personalized human cortical spheroids. American Journal of Psychiatry, 173:1–2, 2016 (in press).

Deverman B.E., Pravdo P.L., Simpson B.P., Kumar S.R., Chan K.Y., Banerjee A., Wu W-L., Yang B., Huber N., Paşca S.P., Gradinaru V. Cre-dependent capsid selection yields AAVs for global gene transfer to the adult brain. Nature Biotechnology, 34(2): 204-209, 2016.

Paşca S.P.*, Panagiotakos G., and Dolmetsch R.E. Generating human neurons in vitro and using them to understand psychiatric disorders. Annual Review of Neuroscience, 37:479-501, 2014.



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

Led by Dr. Natalie Rasgon, the Center for Neuroscience in Women’s Health research is focused on neuroendocrine correlates in various models of affective and cognitive neuroscience. Specifically, the Center’s research builds upon Dr. Rasgon’s earlier investigative experience related to the role of Insulin Resistance (IR) in brain function. Dr. Rasgon’s team have demonstrated: 1) high rates of IR, independent of medication status; 2) increase in IR with duration of treatment; 3) high rates of depression in women with primary IR syndrome, 4) significant association between IR and depression severity; 5) mood enhancing effects of PPAR-gamma agonist in treatment resistant patients with major depression, and sex differences in lipid profiles in patients with bipolar disorder. Dr. Rasgon’s team, since 1999, have also utilized structural (sMRI) and functional brain imaging (FDG-PET), and cognitive testing to study the effects of reproductive steroids on biomarkers of brain function in persons at genetic risk for Alzheimer’s disease. Previously published work from the Center supports a negative association between hippocampal volume and IR in women at risk for Alzheimer’s disease, as well as produced pilot data on compensatory regional hypermetabolism and disrupted connectivity in default mode network in IR women in comparison to insulin sensitive women. Recently published work from a double-blind placebo-controlled study indicates an association between longer leukocyte telomere length and greater declines in depression severity in subjects receiving pioglitazone, but not placebo. In addition, leukocyte telomere length predicted improvement in insulin sensitivity in the group overall and did not differ between intervention arms.

RECENT WORKS:
Rasgon NL, Watson, KL, Epel, E, Blackburn, E, & Lin, J. Telomere length as a predictor of response to Pioglitazone in patients with unremitted depression: A preliminary study. Translational Psychiatry. 2016; 6: e709.

Woolie, TE, Kenna, HA, Watson, K, & Rasgon, N. Cognitive effects of hormone therapy continuation or discontinuation in a sample of women at risk for Alzheimer’s disease. American Journal of Geriatric Psychiatry. 2015; 23(11): 1117-26.

Rasgon NL, Kenna HA, Woolie TE, Williams KE, Demuth BN, Silverman DH. Insulin resistance and medial prefrontal gyrus metabolism in women receiving hormone therapy. Psychiatry Res. 2014; 223(1): 28-36.

Kenna H, Hoeft F, Kelley R, Woolie T, Demuth B, Reiss A, Rasgon N. Fasting plasma insulin and the default mode network in women at risk for Alzheimer’s disease. Neurobiology of Aging. 2012; 32(3): 641-649.



Center for Interdisciplinary
Brain Sciences Research (CIBSR)
Allan Reiss, MD
Professor

The Center for Interdisciplinary Brain Sciences (CIBSR) is the research arm of the Division of Interdisciplinary Brain Sciences in the Department of Psychiatry and Behavioral Sciences. Research groups in CIBSR uses advanced methods to determine how biological and environmental factors affect brain structure, connectivity and function, and how this ultimately impacts cognitive-behavioral outcome in individuals with typical and atypical development. A particularly important focus of this work is to derive new methods and explanatory computational models that can inform the development of more specific and effective interventions for persons with brain disorders. Another focus is on the neuroscience of cognition and behavior in typically developing persons including studies of humor, creativity, social interaction, executive function, resilience, driving, and territorial behavior. CIBSR serves as a model for interdisciplinary brain sciences collaboration as research in the laboratory is carried out or facilitated by faculty and staff from numerous fields including psychiatry, neurology, pediatrics, psychology, neuroscience, mathematics, genetics, radiology, computer science, education, engineering, and biostatistics. Individual PI’s comprising CIBSR include Dr. Allan Reiss (Director), Dr. Amy Garrett, Dr. Tamar Green, Dr. Scott Hall, Dr. David Hong, Dr. Hadi Hosseini, Dr. Booil Jo, Dr. Manish Saggar, and Dr. Gisela Sandoval.

RECENT WORKS:
Fung LK, Reiss AL: Moving towards integrative, multi-dimensional research in modern psychiatry: lessons learned from fragile X syndrome. Biological Psychiatry 2015 Dec 18 [Epub ahead of print]. PMID: 26868443.

Klabunde M, Saggar M, Hustyi KM, Hammond JL, Reiss AL, Hall SS: Neural correlates of self-injurious behavior in Prader-Willi syndrome. Human Brain Mapping 2015 Jul 14. [Epub ahead of print] PMID: 26173182.

Mazaika P, Weinzimer S, Mauras N, Buckingham B, White N, Tsalikian E, Hershey E, Cato A, Aye T, Fox L, Wilson L, Tansey M, tamborlane W, Peng D, Raman M, Marzelli M, Reiss AL: Variations in brain volume and growth in young children with type 1 diabetes. Diabetes 2015 Oct 28. [Epub ahead of print]. PMID: 26512024.

Saggar M, Quintin EM, Kienitz E, Bott NT, Sun Z, Hong D, Chien YH, Liu N, Dougherty RF, Royalty A, Hawthorne G, Reiss AL: Pictionary-based fMRI paradigm to study the neural correlates of spontaneous improvisation and figural creativity. Scientific Reports 5:10894, 2015. PMID: 26018874. PMCID: PMC4446895.

Stuart EA, Jo B. Assessing the sensitivity of methods for estimating principal causal effects. Statistical Methods in Medical Research. 2015 Dec;24(6):657-74. PMID: 21971481; PMCID: PMC3253203.



Roberts Laboratory
Laura Roberts, MD, MA
Professor

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. The team is led by Dr. Laura Roberts, who serves as Chairman and the Katharine Dexter McCormick and Stanley McCormick Memorial Professor in the Department of Psychiatry and Behavioral Medicine at the Stanford University School of Medicine.

Dr. 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.

The laboratory was originally established as the Empirical Ethics Group at the University of New Mexico in 1997 where Dr. Roberts was appointed the inaugural Jack and Donna Rust Professor of Biomedical Ethics and founded the University of New Mexico’s Institute for Ethics.

RECENT WORKS:
Roberts LW, Kim JP. Are individuals living with mental illness and their preferred alternative decision-makers attuned and aligned in their attitudes regarding treatment decisions? Journal of Psychiatric Research. 2016;78:42-47.

Roberts LW. Advancing science in the service of humanity: professionalism and ethical safeguards. JAMA Internal Medicine. 2015;175:1506-8.

Roberts LW. A Clinical Guide to Psychiatric Ethics. Arlington, VA: American Psychiatric Publishing, Inc., 2016.

Roberts LW, Reicherter D, Adelsheim S, Joshi SV (editors). Partnerships for Mental Health: Narratives of Community and Academic Collaboration. New York: Springer Science+Business Media, LLC, 2015.

Roberts LW, Reicherter D (editors). Professionalism and Ethics in Medicine: A Study Guide for Physicians and Physicians-in-Training. New York: Springer Science+Business Media, LLC, 2015.



Translational Therapeutics Lab
Carolyn Rodriguez, MD, PhD
Assistant Professor

The Rodriguez Lab (Translational Therapeutics Lab) utilizes an interdisciplinary approach to finding treatment for patients suffering from compulsive behaviors such as Obsessive-Compulsive Disorder (OCD) and hoarding disorder. Our numerous studies aim to gain understanding of these behaviors at multiple levels of analysis (from molecular to behavioral).

On the OCD front, the lab is focusing on the ability of ketamine, an NMDA receptor antagonist, to quickly and effectively quell obsessive thoughts. We use a variety of imaging techniques to observe the effects of ketamine on neurotransmitter systems and brain activity in human patients, in addition to investigating the benefits of combining ketamine administration with therapy.

On the hoarding disorder front, our interests include understanding the underlying brain mechanisms involved in hoarding behaviors and how these differ from normal collecting behavior. With support from the Department of Psychiatry and Behavioral Sciences’ Small Grant Program, and with our community partners, we are providing free trainings for individuals who want to learn how to help individuals with hoarding disorder. We are also testing a novel treatment intervention consisting of skills-based group treatment targeting hoarding behaviors in the San Mateo and Santa Clara counties.

In addition, we aim to educate the public about compulsive behaviors and anxiety disorders by contributing to The Huffington Post on topics such as clutter, ketamine, and the science of fear.

RECENT WORKS:
Rodriguez, C.I., Kegeles, L., Levinson, A., Ogden, R., Mao, X., Milak, M., Vermes, D., Xie, S., Hunter, L., Flood, P., Moore, H., Shungu, D., Simpson, H.B. In vivo Effects of Ketamine on Glutamate-Glutamine and Gamma-aminobutyric Acid in Obsessive-Compulsive Disorder: Proof of Concept. Psychiatry Research: Neuroimaging, 2015. August 30; 233(2): 141-7. PMID: 26104826.

Rodriguez, C.I., Kegles, L.S., Levinson, A., Feng, T., Marcus, S., Flood, P., Simpson, H.B. Randomized Controlled Crossover Trial of Ketamine in OCD: Proof of Concept. Neuropsychopharmacology. 2013 Nov, 38(12):2475-83 PMID: 23783065.

Rodriguez, C.I., Simpson, H.B., Liu, S., Levinson, A., Blanco, C. Prevalence and Correlates of Difficulty Discarding: Results from a National Sample of the U.S. Population. Journal of Nervous and Mental Disease. 2013 Sept; 201(9): 795-801. PMID: 23995036.

Rodriguez, C.I., Bender, J., Morrison, S., Mehendru, R., Tolin, D., Simpson, H.B. Does Extended Release Methylphenidate Help Adults with Hoarding Disorder? A Case Series. Journal of Clinical Psychopharmacology. 2013 June; 33(3): 444-7 PMID:23609401.



Mood Disorders Center and Depression
Research Clinic
Alan Schatzberg, MD
Professor

At some time in our lives, one in five of us will develop a mood disorder, such as depression or bipolar disorder. Its impact will reverberate far beyond any individual's life. Families, friends, communities, economies — all are affected by these diseases. By 2020, depression will rank second in morbidity among all illnesses worldwide; bipolar disorder will rank fifth. Tragically, suicide, often triggered by a mood disorder, takes more than one million lives worldwide every year.

Although the incidence and impact of mood disorders are undeniably on the rise, hope for solutions has never been higher. Through the Stanford Mood Disorders Center and Research Program, scientists and physicians are building on Stanford's traditions of excellence, healing, and innovation. They are leveraging new knowledge of genetics and the brain's molecular processes, and drawing on new techniques for imaging and healing the brain. Merging Stanford's expertise across disciplines—psychiatry, biology, engineering, and myriad other fields—they are streamlining the process of translating laboratory discoveries into breakthrough treatments.

For the past 24 years, Stanford has led the quest for new knowledge and therapies for mood disorders. Today, the center is expanding its reach and mobilizing Stanford's diverse expertise toward a powerful shared mission: to overcome mood disorders through innovation and compassion.

RECENT WORKS:
A Cognitive-Emotional Biomarker for Predicting Remission with Antidepressant Medications: A Report from the iSPOT-D Trial NEUROPSYCHOPHARMACOLOGY Etkin, A., Patenaude, B., Song, Y. J., Usherwood, T., Rekshan, W., Schatzberg, A. F., Rush, A. J., Williams, L. M. 2015; 40 (6): 1332-1342.

Decreased Hypothalamic Functional Connectivity with Subgenual Cortex in Psychotic Major Depression NEUROPSYCHOPHARMACOLOGY Sudheimer, K., Keller, J., Gomez, R., Tennakoon, L., Reiss, A., Garrett, A., Kenna, H., O'Hara, R., Schatzberg, A. F. 2015; 40 (4): 849-860.

Circadian dysregulation of clock genes: clues to rapid treatments in major depressive disorder MOLECULAR PSYCHIATRY Bunney, B. G., Li, J. Z., Walsh, D. M., Stein, R., Vawter, M. P., Cartagena, P., BARCHAS, J. D., Schatzberg, A. F., Myers, R. M., Watson, S. J., Akil, H., Bunney, W. E. 2015; 20 (1): 48-55.

Psychiatric genome-wide association study analyses implicate neuronal, immune and histone pathways NATURE NEUROSCIENCE O'Dushlaine, C., Rossin, L., Lee, P. H., Duncan, L., Parikshak, N. N., Schatzberg, A. F., et al. 2015; 18 (2): 199-209.



Pediatric Affective Resilience Lab (PEARL),
Pediatric Mood Disorders Program
Manpreet Singh, MD, MPH
Assistant Professor

The Pediatric Mood Disorders Program at the Stanford University School of Medicine is dedicated to improving the lives and well being of children, adolescents, and families with or at risk for developing major mood disorders. The program strives to improve knowledge of healthy brain and behavioral development through a deeper understanding of how children adapt to stress associated with a mood disorder. Our program is dedicated to identifying biological and environmental risk factors, understanding disease pathophysiology and developmental outcomes, and developing new treatments for mood disorders of childhood onset. Our research is multi- and interdisciplinary, bringing together experts from the fields of psychiatry, psychology, computer science, biostatistics, and genetics to explore and seek answers for complex questions about brain-emotion-behavior relations in developing youth. Our research studies are currently supported by both intramural and extramural funding sources, including Stanford's Child Health Research Institute (CHRI), the National Institute of Mental Health, and the Office of Research in Women's Health. Ongoing work includes investigation of: 1) factors that involve risk for and resilience from developing mood problems in youth with family histories of depression and bipolar disorder; 2) neurobiological and genetic mechanisms for sex differences in the development of psychopathology; 3) neurobehavioral trajectories of pediatric depression and insulin sensitivity; and 4) mechanisms of antidepressant-related dysfunctional arousal in high risk youth. Our vision is a program that strives to improve the mental health of children and adolescents with mood disorders and to transform delivery of care through fully integrated, globally recognized research, education, and innovation.

RECENT WORKS:
Singh MK, Kesler S, Husseini H, Kelley R, Amatya D, Hamilton J, Chen M, Gotlib I. Anomalous Gray Matter Structural Networks in Major Depressive Disorder. Biological Psychiatry. 2013;74(10):777-85. PMID:PMC3805751.

Singh MK, Kelley RG, Howe M, Reiss AL, Gotlib IH, Chang KD. Reward Processing in Healthy Offspring of Parents with Bipolar Disorder. JAMA Psychiatry 2014 Oct 1;71(10):1148-56. doi:10.1001/jamapsychiatry.2014.1031. PMID: 25142103.

Singh MK, Gotlib IH. The Neuroscience of Depression. Special Issue for: Behavior Research and Therapy. 2014 Nov;62:60-73. doi: 10.1016/j.brat.2014.08.008. PMID: PMC4253641.

Singh MK, Garrett A, Chang KD. Using neuroimaging to evaluate and guide pharmacological and psychotherapeutic treatments for mood disorders in children. CNS Spectrums 2015 Feb 9;1-10.



Center on Stress and Health
David Spiegel, MD
Professor

Our Center on Stress and Health studies mind-brain-body relationships between stress and support with sleep, endocrine and immune function, and cancer progression in the following areas:

Psychophysiology and Clinical Effects of Hypnosis. We have conducted neuroimaging studies of hypnosis to understand its brain basis. We have demonstrated hypnotic effects on somatosensory processing using event-related potentials, visual processing using positron emission tomography, and have identified resting state differences in functional connectivity between individuals high and low in hypnotizability using functional magnetic resonance imaging. We have developed a hypnosis video home-training program designed to help parents teach their children self-hypnosis techniques for inducing relaxation and hypnotic analgesia in preparation for difficult medical procedures.

PTSD, Dissociation and Trauma. We identified the role of dissociative processes in both acute and chronic response to traumatic stress, resulting in a new DSM-IV diagnostic category of Acute Stress Disorder, and a new Dissociative Subtype of PTSD in DSM-5.

Psychotherapeutic Support and Cancer Survival. We conducted the first randomized clinical trial that provided evidence that psychotherapeutic support resulted in improved mood, reduced pain, and longer survival with metastatic breast cancer.

Psychophysiological Mediators of Cancer Survival. Our research group has examined psychophysiological mediators of the effect of support on survival. We have so far identified three significant predictors of survival time with metastatic breast cancer: 1) loss of normal diurnal variation in cortisol; 2) depression; and 3) sleep disruption.

RECENT WORKS:
Lang EV, Benotsch EG, Fick LJ, Lutgendorf S, Berbaum ML, Berbaum KS, Logan H, Spiegel D. Adjunctive non-pharmacological analgesia for invasive medical procedures: a randomised trial. Lancet. 2000;355(9214):1486-90.

Hoelt F, Gabrieli JD, Whitfield-Gabrieli S, Haas BW, Bammer R, Menon V, Spiegel D. Functional brain basis of hypnotizability. Archives of General Psychiatry. 2012;69(10):1064-72.

Lanius RA, Vermetten E, Loewenstein RJ, Brand B, Schmahl C, Bremner JD, Spiegel D. Emotion Modulation in PTSD: Clinical and Neurobiological Evidence for a Dissociative Subtype. American Journal of Psychiatry. Jun 2010;167(6):640-647.



SRI Alcohol Research Program
Edith Sullivan, PhD
Professor

Alcohol Use Disorder remains a leading cause of serious disruption to personal, social, and economic health and well-being, is largely unrecognized as a health hazard, and is lacking in basic understanding of its development, treatment, and potential for recovery. Our alcoholism research program seeks neural mechanisms of alcohol's untoward effect on brain structure and function from adolescence, a time when the brain is still undergoing development and when alcohol use is typically initiated, to senescence, when chronic use may take an interactive toll with aging on the brain. These human studies are complemented by neuroimaging studies based on rodent models of acute and chronic high-level exposure to alcohol in controlled experiments. One focus is on structural and functional connectivity involving frontocerebellar circuitry contributing to disruption, yet open to repair, of cognitive and motor process in alcoholism. Additionally, we examine how highly prevalent comorbidities of alcoholism, notably HIV/AIDS and hepatitis C infection, compound the throes of alcoholism on brain structure, function, and neural circuitry. This integrated research program provides a rich environment for mentoring promising young investigators, who will be the next generation of scientists dedicated to the field of alcohol research.

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

RECENT WORKS:
Sullivan EV and Pfefferbaum A (2014, volume eds.). Preface. Handbook of Clinical Neurology: Alcohol and the Nervous System. Aminoff M, Boller F, and Swaab D (series eds.). Oxford: Elsevier, 684 pages.

Müller-Oehring EM, Jung YC, Pfefferbaum A, Sullivan EV, Schulte T (2015): The resting brain of alcoholics. Cerebral Cortex 25:4155-4168.

Pfefferbaum A, Rohlfing T, Pohl KM, Lane B, Chu W, Kwon D, Nichols BN, Brown SA, Tapert SF, Cummins K, Thompson WK, Brumback T, Jernigan TL, Dale AM, Colrain IM, Baker, FC, Prouty D, De Bellis MD, Voyvodic J, Clark DB, Luna B, Chung T, Nagel BJ, Sullivan EV (2015): Adolescent development of cortical and white matter structure in the NCANDA sample: Role of sex, ethnicity, puberty, and alcohol drinking. Cerebral Cortex Epub 2015 Sep 26.

Sullivan EV, Zahr NM, Rohlfing T, Pfefferbaum A (2015): Cognitive demands during quiet standing elicit truncal tremor in two frequency bands: differential relation to tissue integrity of corticospinal tracts and cortical targets. Frontiers in Human Neuroscience 9:175. Zahr NM, Rohlfing T, Mayer D, Luong R, Sullivan EV, Pfefferbaum A (2015): Transient CNS responses to repeated binge ethanol treatment. Addiction Biology Epub 2015 Aug 18.



Bipolar and Depression Research Program

Patricia Suppes, MD, PhD, Professor
Michael Ostacher, MD, MPH, MMSc, Associate Professor

The Stanford/VA Bipolar and Depression Research Program has a mission of studying clinical and translational neuroscience critical to people with bipolar disorder and major depressive disorder. We focus on three critical areas:

- 1) Clinical trials of psychopharmacologic, psychotherapeutic, neurotherapeutic, and web-based interventions in both veterans and civilians with mood disorders, including those with substance use and other comorbidities, along with a focus on suicide prevention.
- 2) Promulgation and dissemination of evidence-based guidelines for the treatment of multiple populations.
- 3) Understanding the pathophysiology and neurophysiology of bipolar disorder and major depressive disorder.

We are currently participating in a nationwide, 29-site CSP study of lithium for suicide prevention in veterans, two web-based studies of interventions for bipolar disorder (one, a NIDA-funded study of Acceptance and Commitment Therapy for smoking cessation in bipolar disorder; the other an NIMH-funded study of adjunctive, online, crowd-sourced psychoeducation), an international study of infliximab (a TNF- α inhibitor) for bipolar depression, and a trial of the impact of pharmacogenetic information on prescribing in major depressive episodes. We recently received a three-year renewal by the VA Central Office of our site as one of nine national Network of Dedicated Enrollment Sites (NODES) for the VA Cooperative Studies Program (CSP).

RECENT WORKS:
Ostacher MJ, Nierenberg AA, Rabideau D, Reilly-Harrington NA, Sylvia LG, Gold AK, Shesler L, Ketter TA, Bowden C, Calabrese JR, Friedman ES, Iosifescu DV, Thase ME, Leon AC, Trivedi MH. A clinical measure of suicidal ideation and behavior in bipolar disorder: The Concise Health Risk Tracking Self-Report (CHRT-SR) for suicide risk during the LITMUS study. *J Psychiatr Res.* 2015 Oct 9;71:126-133.

Ostacher MJ, Tandon R, Suppes T. Florida Best Practice Psychotherapeutic Medication Guidelines for Adults With Bipolar Disorder: a novel, practical, patient-centered guide for clinicians. *J Clin Psychiatry.* 2015 Nov 15. [Epub ahead of print].

Suppes T, Silva R, Cucchiaro J, Mao Y, Targum S, Streicher C, Pikalov A, Loebel A. Lurasidone for the Treatment of Major Depressive Disorder With Mixed Features: A Randomized, Double-Blind, Placebo-Controlled Study. *Am J Psychiatry.* 2015 Nov 10 [Epub ahead of print].



Alzheimer's Research Center Jared Tinklenberg, MD Professor

Dr. Tinklenberg, MD, serves as Director of the Stanford/VA Alzheimer's 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's 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 U.S. Department of Veterans Affairs, California Department of Health Services, and other sources, the Stanford/VA Alzheimer's 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's disease in California.

RECENT WORKS:
Tinklenberg JR, Kraemer HC, Yaffe K, O'Hara R, Ringman JM, Ashford JW, Yesavage JA, Taylor JL. Donepezil Treatment in ethnically diverse patients with Alzheimer's disease. *Am J Geriatric Psychiatry.* 23(4):384-390, 2015.

Lazzeroni, L. C., Halbauer, J. D., Ashford, J.W., Noda, A., Hernandez, B., Azor, V., Hozack, N., Hasson, N., Yesavage, J.A., Tinklenberg, J. R. (2013). Memantine is associated with longer survival than Donepezil in a Veterans Affairs prescription database, 1997 to 2008, *Journal of Alzheimer's Disease*, 36, 791-798, 2013.

Winchester J, Dick MB, Gillen D, Reed B, Miller B, Tinklenberg J, Mungas D, Chui H, Galasko D, Hewett L, Cotman CW. Walking stabilizes cognitive functioning in Alzheimer's disease (AD) across one year. *Arch Gerontol Geriatr.* 56(1):96-103, 2013.

Tinklenberg JR, Kraemer HC, Yaffe K, Ross L, Sheikh J, Ashford JW, Yesavage JA, Taylor JL. Donepezil treatment and Alzheimer disease: can the results of randomized clinical trials be applied to Alzheimer disease patients in clinical practice? *Am J Geriatr Psychiatry.* 15(11):953-60, 2007.

Ashford JW, Kraemer HC, Tinklenberg JR, O'Hara R, Taylor JL, Yesavage JA. Statistical and pharmacoeconomic issues for Alzheimer's screening. *Alzheimers Dement.* 3(2):126, 2007.

Huey ED, Taylor JL, Luu PA, Oehlert J, Tinklenberg JR. Factors associated with use of medications with potential to impair cognition or cholinesterase inhibitors among Alzheimer's disease patients. *Alzheimers Dement.* 2(4):314-21, 2006.



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

The Program on the Genetics of Brain Function (GBF) includes the labs of 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.

We develop and use next-generation 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.

RECENT WORKS:
Mills RE, Walter K, Stewart C, Handsaker RE, Chen K, Alkan C, Abyzov A, Yoon SC, Ye S et al. and the 1000 Genomes Project. Mapping structural variation at fine scale by population-scale genome sequencing. *Nature.* 2011 Feb 3; 470: 59-65.

Abyzov A, Mariani J, Palejev D, Zhang Y, Haney MS, Tomasini L, Rosenberg-Belmaker L, et al. Somatic copy number mosaicism in human skin revealed by induced pluripotent stem cells. *Nature.* 2012 Dec 20; 492(7429): 438-42.

Zhang Y, Haraksingh R, Grubert F, Abyzov A, Gerstein M, Weissman S, Urban AE. Child development and structural variation in the human genome. *Child Development.* 2013 Jan-Feb; 84(1): 34-48.



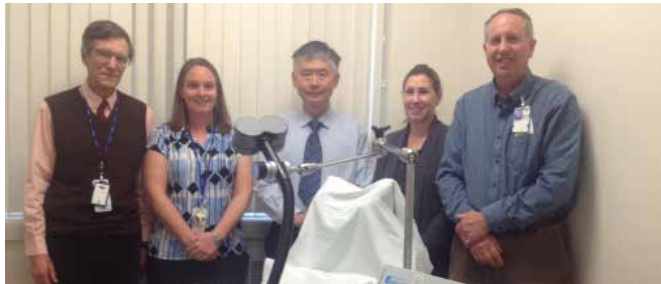
PanLab: Personalized and Translational Neuroscience Lab Leanne Williams, PhD Professor

The William's PanLab for personalized and translational neuroscience is aimed at changing how we characterize people experiencing mental disorder. Our research projects deconstruct diagnostic groups using brain imaging, physiological, behavioral, and genetic data. Our goal is to characterize dysfunction at the individual person level and to identify biomarkers that will guide prognostic and treatment decisions in practice in real world clinical settings. We have several major projects underway. These include an R01 funded under the RDoC initiative, using brain imaging and behavior to identify neural-circuit based types of depression and anxiety, and an UH2 funded under NIH's Science of Behavior Change, using multiple sessions of brain imaging, virtual reality "probes" and passive sampling to assess which aspects of brain function-mediated self regulation predict behavioral change in depression coupled with obesity. These projects build on the multi-site biomarker study for predicting antidepressant outcomes (iSPOT-D) for which data acquisition has been completed. In the past two years, six new post-doc fellows and a MedScholar have joined the lab. The post-doc fellows include two T32 fellows, two fellows on the R01, and two VA MIRECC fellows. Two of these postdocs have already received independent funding; a F32 research service award to pursue a project on machine-learning approaches to developing a brain-based classification for depression and anxiety and a VA CDA focused on developing personalized neuroscience applied clinically to substance use and comorbid disorders of addiction.

RECENT WORKS:
Williams LM. Precision Psychiatry: A neural circuit taxonomy for depression and anxiety. *The Lancet Psychiatry* (in press).

Williams LM, Korgaonkar MS, Song YC, Paton R, Eagles S, Goldstein-Piekarski A., Etkin A, Gordon E. (2015). Amygdala reactivity to emotional faces in the prediction of general and medication-specific responses to antidepressant treatment in the randomized iSPOT-D trial. *Neuropsychopharmacology.* 40: 2398-2408. PMID: 25824424.

Saveanu R*, Etkin A*, Duchemin A-E, Goldstein-Piekarski A, Gyurak A, DeBattista C, Schatzberg AF, Sood S, Day VA, Palmer DM, Rekshan WR, Gordon E, Rush AJ, Williams LM. (2015). The International Study to Predict Optimized Treatment in Depression (iSPOT-D): Outcomes from the acute phase of antidepressant treatment. *Journal of Psychiatric Research.* 61: 1-12.



Aging Clinical Research Center (ACRC)
Jerome Yesavage, MD
Professor

The Aging Clinical Research Center (ACRC) is a joint project of Stanford University and the VA Palo Alto Health Care System. Through the ACRC, experienced investigators lead a variety of clinical, research, and educational programs, with the aim of improving the lives of those affected by Alzheimer's Disease. The ACRC was formed to study memory loss associated with aging. Our main purpose is to investigate the complex nature of Alzheimer's Disease, its progression over time, its response to treatments, and problems patients and caregivers experience in dealing with the changes that occur. We are also conducting studies that look at changes that occur over the course of normal aging. The clinical researchers at ACRC come from many disciplines of medicine and neuroscience. Thus, we are able to study Alzheimer's Disease as well as normal aging from several important perspectives.

This work is funded by the National Institute of Aging, the National Institute of mental Health, and the Department of Veterans Affairs. The Center is located at the Palo Alto Veterans Health Care System in Palo Alto, California. Several MIRECC investigators have been actively researching important factors associated with preserving cognitive function in older Veterans. Most recently, several studies have been examining the effects of Transcranial Magnetic Stimulation on treating depression and dementia in veterans.

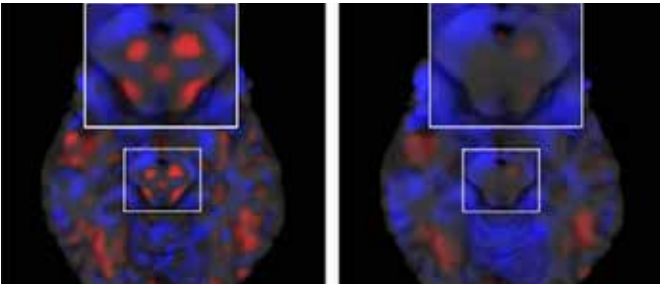
RECENT WORKS:

Newell J, Yesavage JA, Taylor JL, Kraemer HC, Munro CA, Friedman L, Rosenberg PB, Madore M, Chao SZ, Devanand DP, Drye LT, Mintzer JE, Pollock BG, Porsteinsson AP, Schneider LS, Shade DM, Weintraub D, Lyketsos CG, Noda A, Cit ADRG. (2016). Sedation mediates part of Citalopram's effect on agitation in Alzheimer's disease. J Psychiatr Res, 74, 17-21. PMC4744510.

Durazzo TC, Meyerhoff DJ, Mon A, Abe C, Gazdzinski S, Murray DE. (2016). Chronic Cigarette Smoking in Healthy Middle-Aged Individuals Is Associated With Decreased Regional Brain N-acetylaspartate and Glutamate Levels. Biol Psychiatry, 79(6), 481-488. PMC4600002.

Yochim BP, Beaudreau SA, Kaci Fairchild J, Yutsis MV, Raymond N, Friedman L, Yesavage J. (2015). Verbal naming test for use with older adults: development and initial validation. J Int Neuropsychol Soc, 21(3), 239-248.

Tinklenberg JR, Kraemer HC, Yaffe K, O'Hara R, Ringman JM, Ashford JW, Yesavage JA, Taylor JL, Ctr CAD. (2015). Donepezil Treatment in Ethnically Diverse Patients with Alzheimer Disease. American Journal of Geriatric Psychiatry, 23(4), 384-390.



Yoon Lab
Jong Yoon, MD
Assistant Professor

The Yoon Lab seeks to discover the brain mechanisms responsible for schizophrenia and psychosis and to translate this knowledge into improvements in how we diagnose and treat these conditions. Towards these ends, our lab has been applying cutting-edge neuroimaging tools to identify neurobiological abnormalities and to test novel systems-level disease models of psychosis and schizophrenia directly in individuals with these conditions. Of particular interest to the lab is the role of neocortical-basal ganglia circuit dysfunction in these conditions. Our working hypothesis of the disease pathophysiology of schizophrenia is that neocortical abnormalities lead to disconnectivity with and dysregulated activity of the basal ganglia. The Yoon Lab has developed new high-resolution functional magnetic resonance imaging methods to more precisely measure the function of important components of the basal ganglia, which given their small size and location deep within the brain has been challenging to image. These include ways to measure the activity of midbrain nuclei, including the substantia nigra, which controls dopamine signaling and the subthalamic nucleus, which is a critical regulator of the flow of information throughout the brain.

RECENT WORKS:

Jong H. Yoon, Paul Larson, Anthony Grandelis, Christian La, Edward Cui, Cameron S. Carter and Michael J. Minzenberg. Delay period activity of the substantia nigra during proactive control of response selection as determined by a novel fMRI localization method. Journal of Cognitive Neuroscience, 2015 Jun; 27(6):1238-48. doi: 10.1162/jocn_a_00775. Epub 2014 Dec 16. PMID: 25514657.

Jong H. Yoon, Michael J. Minzenberg, Sherief Raouf, Mark D'Esposito & Cameron S. Carter. Impaired prefrontostriatal functional connectivity and substantia nigra hyperactivity in schizophrenia. Biological Psychiatry 2013 Jul 15;74(2):122-9.

Jong H. Yoon, Richard J. Maddock, Ariel S. Rokem, Michael A. Silver, Michael J. Minzenberg, J. Daniel Ragland and Cameron S. Carter. γ -Aminobutyric acid concentration is reduced in visual cortex in schizophrenia and correlates with orientation-specific surround suppression. Journal of Neuroscience 2010 Mar 10;30(10):3777-81.



Circadian Research Laboratory
Jamie Zeitzer, PhD
Assistant Professor

The Zeitzer lab is focused on two areas of sleep and circadian physiology. The first is to understand and manipulate the effects of light on non-image forming functions in the brain, especially as they relate to adaptation of circadian timing (e.g., jet lag, shift work, delayed sleep phase in teens), improvement of balance and alertness in older adults, and alteration of hormone profiles and cardiovascular function. We use principles derived from studies of animal neurobiology to find creative ways to biologically hack retinal functions as a countermeasure for our modern lifestyle. These studies are done within the laboratory and in the community, and range from randomized control trials to intensive physiologic monitoring of hormones, electroencephalography, pupillometry, cognitive performance, cardiovascular function, and mobile balance. A second focus of the laboratory is to delineate and phenotype the precise nature of sleep disruption in a variety of pathological conditions (e.g., breast cancer, PTSD, chronic pain, bipolar disorder, schizophrenia, dementia, traumatic brain injury, spinal cord injury) in order to more appropriately treat the underlying pathological disruption, rather than the symptoms of sleep disruption. As part of this work, we have pioneered the use of advanced statistical techniques to uncover daily patterns of activity and their association with a variety of medical and psychiatric outcomes.

RECENT WORKS:

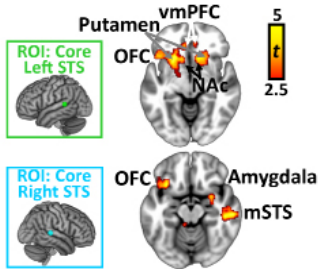
Najjar RP, Zeitzer JM. Temporal integration of light flashes by the human circadian system. Journal of Clinical Investigation, 2016. doi:10.1172/JCI82306.

Zeitzer JM. Real life trumps laboratory in matters of public health. Proceedings of the National Academy of Sciences USA 112:E1513, 2015.

Zeitzer JM, Fiscaro RA, Ruby NF, Heller HC. Millisecond flashes of light phase delay the human circadian clock during sleep. Journal of Biological Rhythms 29:370-376, 2014.

Zeitzer JM, David R, Friedman L, Mulin E, Garcia R, Wang J, Yesavage JA, Robert PH, Shannon W. Phenotyping apathy in individuals with Alzheimer's using functional principal component analysis. American Journal of Geriatric Psychiatry 21:391, 2013.

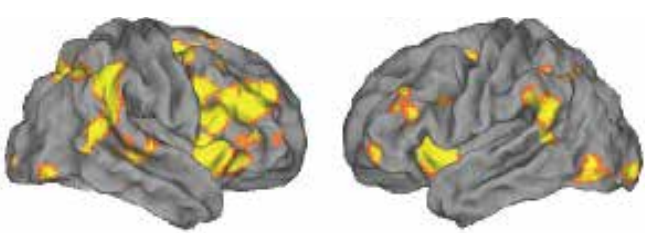
Advancing Science: Instructors



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

Our primary research goals are to understand the brain bases of social communication and language impairments in children with autism spectrum disorders (ASD), and to describe neural changes associated with remediation of these behavioral deficits. Our approach is to study the perception and neural coding of speech: speech is a critical communication signal for social skill acquisition, and impaired speech perception is a hallmark of autism. Importantly, speech provides multiple pieces of social information during human interactions, including “who” is speaking, “what” they are saying, and “how” they feel when saying it. Our current research is focused on the brain systems underlying the perception of these three key aspects of speech. Of particular interest is describing brain signatures underlying a highly salient and important sound source in a child’s life: mother’s voice. Our recent preliminary results are the first to describe the brain network underlying perception of mother’s voice in typically developing children, brain network differences in processing this salient vocal source in children with ASD, and changes that occur to this network during development. We have also initiated an exciting project examining perception and brain processing of the vocal cues that signal emotional content in speech, known as affective prosody, in children with ASD. Our work will provide new information regarding the perceptual, cognitive, and brain systems that contribute to speech impairments in children with ASD, and may provide critical insight into the biological foundations of social communication and language deficits in this population.

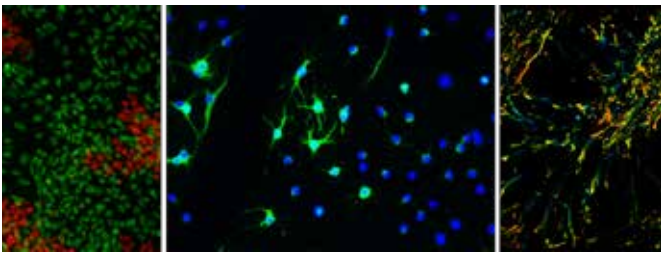
RECENT WORKS:
Abrams DA, et al. (2013) Underconnectivity between voice-selective cortex and reward circuitry in children with autism. *Proceedings of the National Academy of Sciences* 110(29):12060-12065.
Abrams DA, Uddin LQ, & Menon V (2013) Reply to Brock: Renewed focus on the voice and social reward in children with autism. *Proceedings of the National Academy of Sciences of the United States of America* 110(42).
Uddin LQ, et al. (2015) Brain State Differentiation and Behavioral Inflexibility in Autism. *Cereb Cortex* 25(12):4740-4747.
Abrams DA & Kraus N (2015) Auditory pathway representation of speech sounds in humans. *Handbook of Clinical Audiology*, 7th edition, eds Katz J, Chasin M, English K, Hood L, & Tillery KL (Lippincott Williams & Wilkins, Philadelphia), 7th Edition Ed, pp 611-626.



Human Brain Mechanism in Cognitive Control
Weidong Cai, PhD
Instructor

My research combines sophisticated computational methods, advanced functional neuroimaging techniques, and experimental work to understand how cognitive control network is organized, how cognitive control network is developed through childhood, and how these functional circuits are disturbed in neurodevelopmental disorders characterized by cognitive control deficits, such as attention deficit hyperactivity disorder. A major research direction is to investigate functional organization of cognitive control network and its underlying dynamic interactions during cognitive control. In a recent study, we investigated functional organization of right fronto-opercular cortex, a key area in cognitive control network. We found that right anterior insula (rAI) and right inferior frontal cortex, two subdivisions in right fronto-opercular cortex, have dissociable roles in cognitive control based on their distinct patterns of activation, intrinsic and task-related connectivity, and relation to behavior. In another study, we found dominant causal interaction from rAI to dorsal anterior cingulate cortex (dACC) during different cognitive control contexts, suggesting that causal signaling between rAI and dACC serves a fundamental role in implementing cognitive control. In the future studies, we will use neurocognitive models of cognitive control to develop functional neuroimaging-based biomarkers for psychiatric disorders characterized by cognitive control deficits, as well as prediction models for clinical symptoms.

RECENT WORKS:
Cai W, Cannistraci CJ, Gore JC, & Leung HC (2013) Sensorimotor-independent prefrontal activity during response inhibition. *Human brain mapping*.
Cai W, et al. (2015) Causal Interactions Within a Frontal-Cingulate-Parietal Network During Cognitive Control: Convergent Evidence from a Multisite-Multitask Investigation. *Cerebral cortex*.
Cai W, George JS, Verbruggen F, Chambers CD, & Aron AR (2012) The role of the right presupplementary motor area in stopping action: two studies with event-related transcranial magnetic stimulation. *Journal of neurophysiology* 108(2):380-389.
Cai W, Ryali S, Chen T, Li CS, & Menon V (2014) Dissociable roles of right inferior frontal cortex and anterior insula in inhibitory control: evidence from intrinsic and task-related functional parcellation, connectivity, and response profile analyses across multiple datasets. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 34(44):14652-14667.



Chetty Lab
Sundari Chetty, PhD
Instructor

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 our 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 understanding the genetic and epigenetic mechanisms controlling the developmental potential of hPSCs. We are particularly interested in applying this knowledge to improve the differentiation potential of hPSCs into neuronal and glial cells for understanding the pathology and treatment of neuropsychiatric disorders.

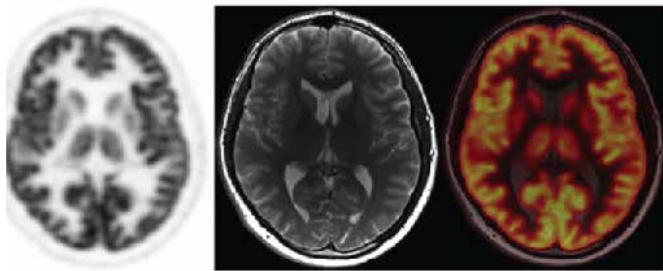
RECENT WORKS:
A.M. Tsankov, V. Akopian, R. Pop, S. Chetty, C.A. Gifford, L. Daheron, N.M. Tsankova, A. Meissner. (2015) A qPCR ScoreCard quantifies the differentiation potential of human pluripotent stem cells. *Nature Biotechnology* 33: 1182-1192.
S. Chetty, E.N. Engquist, E. Mehanna, K.O. Lui, A.M. Tsankov, D.A. Melton. (2015) A Src inhibitor regulates the cell cycle of human pluripotent stem cells and improves directed differentiation. *The Journal of Cell Biology* 210: 1257-1268.
S. Chetty, F.W. Pagliuca, C. Honore, A. Kweudjeu, A. Rezaia, D.A. Melton. (2013) A simple tool to improve pluripotent stem cell differentiation. *Nature Methods* 10: 553-556.
S. Chetty, A.R. Friedman, K. Taravosh-Lahn, E.D. Kirby, C. Mirescu, F. Guo, D. Krupik, A. Nicholas, A. Geraghty, A. Krishnamurthy, M. Tsai, D. Covarrubias, A. Wong, D. Francis, R.M. Sapolsky, T.D. Palmer, D. Pleasure, D. Kaufer. (2014) Stress and glucocorticoids promote oligodendrogenesis in the adult hippocampus. *Molecular Psychiatry* 19: 1275-1283.



e-Mental Health
Alison Darcy, PhD
Instructor

Dr. Darcy’s current research interest is in building an evidence base that informs the development, adoption and implementation of internet and mobile health behavior change applications in mental health care. Particularly exciting is the potential that these technologies offer for individualized medicine and targeted prevention and/or treatment. To date, she has pioneered the use of Massive Open Online Course (MOOC) platforms for clinical training in eating disorders and is testing it in an NIH funded trial. Early in her research career, she built the first Internet-delivered support group for people with Eating Disorders in Europe. Currently, she is exploring the feasibility of offering internet-delivered guided self-help to parents of adolescents with anorexia nervosa. Another specialty has been the neurocognitive profile of adolescents with anorexia nervosa and bulimic spectrum eating disorders. The Eating Disorders Research Group has pioneered this work with a view to elucidating the neurocognitive effect of length of illness on cognitive flexibility and central coherence.

RECENT WORKS:
Central coherence in adolescents with bulimia nervosa spectrum eating disorders *INTERNATIONAL JOURNAL OF EATING DISORDERS* Darcy, A. M., Fitzpatrick, K. K., Manasse, S. M., Datta, N., Klabunde, M., Colborn, D., Aspen, V., Stiles-Shields, C., Labuschagne, Z., Le Grange, D., Lock, J. 2015; 48 (5): 487-493.
Development and Evaluation of a Treatment Fidelity Instrument for Family-Based Treatment of Adolescent Anorexia Nervosa *INTERNATIONAL JOURNAL OF EATING DISORDERS* Forsberg, S., Fitzpatrick, K. K., Darcy, A., Aspen, V., Accurso, E. C., Bryson, S. W., Agras, S., Arnow, K. D., Le Grange, D., Lock, J. 2015; 48 (1): 91-99.
Relapse From Remission at Two- to Four-Year Follow-Up in Two Treatments for Adolescent Anorexia Nervosa *JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY* le Grange, D., Lock, J., Accurso, E. C., Agras, W. S., Darcy, A., Forsberg, S., Bryson, S. W. 2014; 53 (11): 1162-1167.
What variables are associated with successful weight loss outcomes for bariatric surgery after 1 year? Surgery for obesity and related diseases *Robinson, A. H., Adler, S., Stevens, H. B., Darcy, A. M., Morton, J. M., Safer, D. L.* 2014; 10 (4): 697-704.



Molecular Neuropsychiatry
Lawrence Fung, MD, PhD
Instructor

Specializing in molecular neuropsychiatry, Dr. Lawrence Fung conducts research in neuropsychopharmacology and molecular neuroimaging. Dr. Fung's research focuses on understanding excitation/inhibition (E/I) balance in neurodevelopmental disorders using multimodal imaging techniques. In particular, he has started using a hybrid positron emission tomography/magnetic resonance (PET/MR) scanner to simultaneously measure GABAA receptor binding densities (by PET) and GABA levels (by magnetic resonance spectroscopy (MRS)) in the brains of individuals with autism spectrum disorder (ASD) and fragile X syndrome (FXS). This approach is ideal for capturing the complexity of neurobiological systems, simultaneously providing information both at the level of the neurotransmitter and at the level of the receptor in specific regions of the brain. He is a co-investigator of "Cross-Species Multi-Modal Neuroimaging to Investigate GABA Physiology in Fragile X Syndrome" (PI: Chin), funded by the National Institute of Child Health & Human Development. Working with Dr. Antonio Hardan, Dr. Fung also serves as a co-investigator and co-protocol director of a randomized, placebo-controlled pilot trial of pregnenolone in adolescents with autism spectrum disorder, recently funded by the Simons Foundation (PI: Hardan). Pregnenolone is a naturally occurring neurosteroid and the precursor of virtually all neurosteroids. In an open-label study, Drs. Fung and Hardan had demonstrated that pregnenolone reduced the level of irritability in adults with ASD.

RECENT WORKS:
Fung LK and Reiss AL. Moving towards integrative, multi-dimensional research in modern psychiatry: lessons learned from fragile X syndrome. *Biological Psychiatry*. 2015 Dec 18. pii: S0006-3223(15)01059-8. doi: 10.1016/j.biopsych.2015.12.015. [Epub ahead of print]. PMID: 26868443.
Hardan AY, Fung LK, Frazier T, Berquist SW, Minshew NJ, Keshavan MS, Stanley JA. A proton spectroscopy study of white matter in children with autism. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*. 2015 Nov 16;66:48-53. PMID: 26593330.
Fung LK, Libove R, Phillips J, Haddad F, Hardan AY. Brief Report: An open-label study of the neurosteroid pregnenolone in adults with autism spectrum disorder. *Journal of Autism & Developmental Disabilities*. 2014 Nov;44(11):2971-7. PMID: 24849255.
Hardan AY, Fung LK, Libove R, Obukhanych TV, Nair S, Herzenberg LA, Frazier TW, Tirouvanziam R. A randomized, placebo-controlled, double-blind trial of N-Acetylcysteine in children with autism. *Biological Psychiatry*. 2012 Jun 1;71(11):956-61. PMID: 22342106.



Effects of Psychotherapy on Brain Function
Amy Garrett, PhD
Instructor

We are investigating the neural mechanisms underlying symptom improvement following psychotherapy. Our current study examines whether brain function normalizes when adolescent patients receive Trauma-Focused Cognitive Behavioral Therapy (TFCBT) for symptoms of stress following a trauma. TFCBT is an evidence based treatment that we provide in weekly sessions to individual patients for 20 weeks. Functional magnetic resonance imaging (fMRI) scans are collected before and after the treatment. At the same time, we are investigating longitudinal changes in fMRI of healthy control participants over the same time period, so that we will be able to control for nuances in fMRI measures that are attributable to variability in the test-retest measurement of brain function. This study also investigates the correlations between pre/post measures of brain function and improvements in symptoms of reexperiencing, hyperarousal, depression, and dissociation, to better understand the distinctions as well as the overlap between brain circuitry subserving these co-occurring symptoms. The ultimate goal of this research program is to identify objective markers that may be used to guide treatments for individual patients who have not responded sufficiently to therapy.

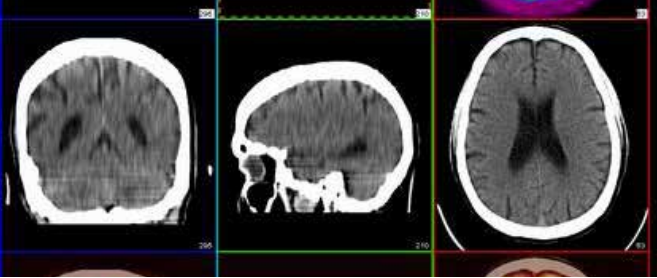
RECENT WORKS:
Changes in brain activation following psychotherapy for youth with mood dysregulation at familial risk for bipolar disorder. *PROGRESS IN NEUROPSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY*. Garrett, A. S., Miklowitz, D. J., Howe, M. E., Singh, M. K., Acquaye, T. K., Hawkey, C. G., Glover, G. H., Reiss, A. L., Chang, K. D. 2015; 56: 215-220.
Brain activation to facial expressions in youth with PTSD symptoms. *DEPRESSION AND ANXIETY*. Garrett, A. S., Carrion, V., Kletter, H., Karchemskiy, A., Weems, C. F., Reiss, A. 2012; 29 (5): 449-459.
Predicting clinical outcome using brain activation associated with set-shifting and central coherence skills in Anorexia Nervosa *JOURNAL OF PSYCHIATRIC RESEARCH*. Garrett, A. S., Lock, J., Datta, N., Beenhaker, J., Kesler, S. R., Reiss, A. L. 2014; 57: 26-33.
Abnormal Amygdala and Prefrontal Cortex Activation to Facial Expressions in Pediatric Bipolar Disorder *JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY*. Garrett, A. S., Reiss, A. L., Howe, M. E., Kelley, R. G., Singh, M. K., Adleman, N. E., Karchemskiy, A., Chang, K. D. 2012; 51 (8): 821-831.



Life Stress and Sleep/Circadian Disturbances
Anda Gershon, PhD
Instructor

The goal of the Gershon Lab is to understand the mechanisms by which life stress and sleep/circadian disturbances increase vulnerability to mood disorders. Life stress and sleep/circadian disturbances are two of the most consistently identified risk factors for mood disorders. Despite their importance, relatively little is known about the ways by which these risk factors trigger or sustain mood dysregulation. Understanding the role of these risk factors in mood-disordered populations could help to identify novel intervention targets to improve quality of life in affected people, as well as new markers for early detection, improved prediction, and ultimately, protection against the development of mood disorders in high-risk individuals. Our current work focuses on characterizing sleep/circadian rhythm disruptions and the social contexts that may trigger these disruptions in youth who are diagnosed with bipolar disorder. To this end, we use a systematic, ecologically sensitive assessment that combines at-home polysomnography, coupled with ecological momentary assessment methods for measuring circadian rhythms, social interactions, stress, and mood. Our aim is to help clarify the interplay between biological and social factors in the risk for mood disorders, laying the foundation for necessary refinements of existing detection and intervention strategies.

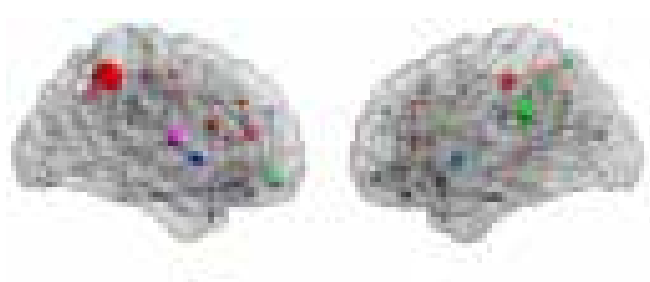
RECENT WORKS:
Gershon, A., Ram, N., Johnson, S.L., Harvey, A.G., Zeitzer, J. (in press). Daily actigraphy profiles distinguish depressive and well periods in bipolar disorder. *Clinical Psychological Science*.
Gershon, A., Johnson, S.L., Miller, I. (2013). Chronic stressors and trauma: Prospective influences on the course of bipolar disorder. *Psychological Medicine*, 43, 2583-2592.
Gershon, A., Thompson, W.K., Eidelman, P., McGlinchey, E., Kaplan, K.A., Harvey, A.G. (2012). Restless pillow, ruffled mind: Sleep and affect coupling in inter-episode bipolar disorder. *Journal of Abnormal Psychology*, 121, 863-873.



Neurogenetic Symptoms and Cognitive Function
Tamar Green, MD
Instructor

Dr. Green is a child psychiatrist, trained at the Nes-Ziyyona - Beer Yaakov Mental Health Center, affiliated to Tel Aviv University in Israel. As a clinician, she has had extensive opportunities to work with children with a range of mental disorders. In parallel to her clinical work, she joined the Behavioral Neurogenetics Clinic at Sheba Medical Center, Israel and began conducting neurogenetics research with specific focus on velocardiofacial syndrome and Williams syndrome. Dr. Green's clinical background has fostered her interest in research questions that have immediate relevance to improving the quality of life of children who suffer from psychiatric and neurodevelopmental disorders. In September 2012, she joined the Center for Interdisciplinary Brain Sciences Research at the Department of Psychiatry and Behavioral Sciences working under the mentorship of Dr. Allan Reiss. In her current research, she is studying the brain structure and function of girls who suffer from Turner syndrome. Her main research focuses on attention and executive function (a cognitive domain underlying the ability to plan, organize and maintain attention) deficits in Turner Syndrome and other neurogenetic syndromes.

RECENT WORKS:
Elucidating X chromosome influences on Attention Deficit Hyperactivity Disorder and executive function *JOURNAL OF PSYCHIATRIC RESEARCH* Green, T., Shrestha, S. B., Chromik, L. C., Rutledge, K., Pennington, B. F., Hong, D. S., Reiss, A. L. 2015; 68: 217-225.
Elucidating X chromosome influences on Attention Deficit Hyperactivity Disorder and executive function. *Journal of psychiatric research* Green, T., Bade Shrestha, S., Chromik, L. C., Rutledge, K., Pennington, B. F., Hong, D. S., Reiss, A. L. 2015; 68: 217-225.
Specific effect of the fragile-X mental retardation-1 gene (FMR1) on white matter microstructure *BRITISH JOURNAL OF PSYCHIATRY* Green, T., Barnea-Goraly, N., Raman, M., Hall, S. S., Lightbody, A. A., Bruno, J. L., Quintin, E., Reiss, A. L. 2015; 207 (2): 143-148.
The Effectiveness and Safety of Antipsychotic and Antidepressant Medications in Individuals with 22q11.2 Deletion Syndrome. *Journal of child and adolescent psychopharmacology* Dori, N., Green, T., Weizman, A., Gothelf, D. 2015.



Connectomics in Health and Disease: Toward Targeted Rehabilitation of Brain Networks
Hadi Hosseini, PhD
Instructor

Dr. Hosseini's research portfolio crosses multiple disciplines including cognitive and computational neuroscience, multimodal neuroimaging, and neurocognitive rehabilitation. In the past five years, he has been investigating the organization of human connectome in health and disease using state of the art neuroimaging techniques (fMRI, rsfMRI, sMRI, DWI, fNIRS) combined with novel computational methods (graph theoretical and multivariate pattern analyses). Specifically, he has been investigating the small-world properties of functional and structural brain networks, changes in modular architecture of brain networks, the coupling between structural and functional brain networks, and changes in network resilience in patients with various neurocognitive disorders. One of his contributions to the neuroscience community was the development of an open-source graph analysis toolbox (GAT) that facilitates topological analyses of functional and structural brain networks in humans.

The ultimate goal of Dr. Hosseini's research is to translate the above knowledge for developing personalized interventions. He recently received a NARSAD's Young Investigator Award to test a novel intervention tailored toward targeted rehabilitation of the affected brain networks in ADHD. The proposed neurocognitive intervention combines real-time near-infrared spectroscopy (NIRS) neurofeedback and computerized cognitive training for targeted enhancement of executive function networks. Validation of the proposed approach will provide a foundation for developing efficient, pathology-focused interventions and could significantly enhance patient outcomes and public health.

RECENT WORKS:
S.M.H. Hosseini, S.R. Kesler (2013). Comparing connectivity pattern and small-world organization between structural correlation networks and resting state networks in healthy adults. *NeuroImage* 78, 402-414.

S.M.H. Hosseini, J.M. Black, F. Hoefft, et al (2013). Topological properties of large-scale structural brain networks in children with familial risk for reading difficulties. *NeuroImage* 71, 264-74.

S.R. Kesler, J.S. Wefel, S.M.H Hosseini, M. Cheung, C. Watson, F. Hoefft (2013). Default mode network connectivity distinguishes chemotherapy-treated breast cancer survivors from controls. *Proceedings of National Academy of sciences (PNAS)* 110(28), 11600-5.

S.M.H. Hosseini, F. Hoefft, S.R. Kesler (2012). GAT: A graph-theoretical analysis toolbox for analyzing between-group differences in large-scale structural and functional brain networks. *PLoS ONE* 7(7): e40709.



Statistical Methods for Public Mental Health
Jane Kim, PhD
Instructor

Dr. Kim's research goal is to develop and use statistical methods to ensure that the most appropriate methods are being used to improve public mental health. Her work in statistical methodology addresses 1) methods development for survival data arising from non-standard biased sampling schemes and 2) the robustness of regression-based inference for both randomized trials and observational studies. The former set of methods propose a novel class of statistical models for unbiased and efficient estimation when data are biased by virtue of the sampling mechanism that gave rise to them.

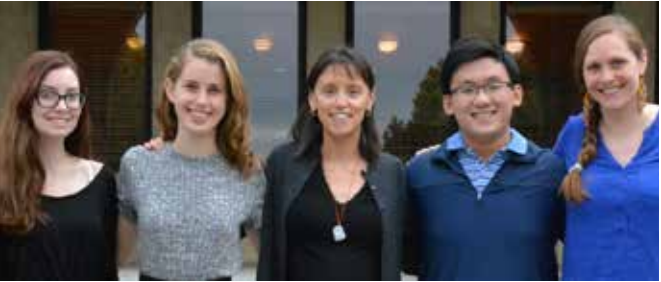
Current projects include studies of empirical ethics inquiry in conjunction with the Roberts laboratory. Broadly, this body of work examines ethical safeguards in vulnerable populations and probes subjective determinants of vulnerability. Distinct patterns of ethical perspectives were found in one study of severely ill individuals compared to healthy individuals as demonstrated by graphical models, adding a salient finding in the ethical literature on the "therapeutic misconception."

Most recently, Dr. Kim was awarded with a Department Small Grant Award to build decision rules for personalizing behavioral intervention technologies. The goal of this new research area is to develop statistical methods for the personalization and optimization of interventions delivered through mobile applications.

RECENT WORKS:
Kim, JP, Sit, T., Ying, Z. (In press). Accelerated failure time models under general biased sampling schemes. *Biostatistics*.

Roberts LW and Kim JP. (2016). Are individuals living with mental illness and their preferred alternative decision-makers aligned in their attitudes regarding treatment decisions? *Journal of Psychiatric Research*. 79:42-47.
Kim JP and Roberts LW. (2015). Demonstrating different patterns of views expressed by volunteers: a novel use of graphical models for survey data on ethical research. *AJOB Empirical Bioethics*. 6 (2): 33-42.

Kim, JP., Ying, Z. Sit, T. Lu, W. (2013). A Unified approach to semiparametric transformation models under general biased sampling schemes. *Journal of the American Statistical Association*. 108 (501): 217-227



Depression Among Adolescents Research
Sarah Ordaz, PhD
Instructor

Dr. Ordaz's research seeks to understand three fundamental questions: First, how do trajectories of brain development go awry in youth who become depressed? Second, how is maladaptive brain development perpetuated or worsened over the course of a depressive episode? Third, how might positive parenting buffer against maladaptive trajectories?

In one study, they have recruited early-pubertal girls who will be scanned (structural and functional neuroimaging) five times over the course of their pubertal maturation. They will investigate when and how brain network development goes off-course in girls who become depressed, how pubertal hormones might contribute to this, and how positive parenting might buffer against maladaptive trajectories. This work is being done in collaboration with Ian Gotlib and is funded by an NIMH K01 award.

A second study is a longitudinal neuroimaging study of currently-depressed teens. Teens come to the lab twice over the course of six months; at each visit we characterize their clinical symptomatology, obtain structural and functional neuroimaging scans, and assess parenting behavior. We will examine whether the known relationship between positive parenting and clinical course of depression is mediated by rates of change in connectivity among networks implicated in emotional reactivity, rumination, and emotion regulation. This work is a collaboration with Manpreet Singh and Ian Gotlib, and it is funded by a NARSAD Young Investigator Award and a Klingenstein Third Generation Foundation Award.

RECENT WORKS:
Gotlib, I. & Ordaz, S. (2015). The importance of assessing neural trajectories in pediatric depression. *JAMA Psychiatry*, 73(1), 9-10. PMID26676653

LeMoult, J., Ordaz, S., Kircanski, K., Singh, M., Gotlib, I. (2015). Predicting first onset of depression in young girls: Interaction of diurnal cortisol and negative life events. *Journal of Abnormal Psychology*. PMID26595472.

Ordaz, S., Foran, W., Velanova, K., Luna, B. (2013). Longitudinal growth curves of brain function underlying cognitive control through adolescence. *Journal of Neuroscience*, 33(46), 18109-24. PMID24227721.

Ordaz, S., Luna, B. (2012). Sex differences in physiological reactivity to acute psychosocial stress in adolescence. *Psychoneuroendocrinology*, 37(8): 1135-57. PMID 22281210.



Stress Effects on Learning
Shaozheng Qin, PhD
Instructor

Dr. Qin's primary research interest is to understand how the brain supports learning and memory, and interaction with stress and emotion, and how these processes develop as the brain matures from childhood to adulthood. Using a multi-disciplinary approach, integrating functional brain imaging and experimental behavioral techniques, endocrine, psychophysiology, and genetics, Dr. Qin currently investigates how the medial temporal, prefrontal, and parietal systems interplay to support learning and memory and interact with emotion, and their maturational changes from childhood through adolescence into adulthood. The overarching goals of Dr. Qin's research are to optimize learning and memory in education, and to prevent learning and emotion problems over development. Dr. Qin currently serves as PI on a project titled "Brain Systems Underlying Episodic Memory For Social Stimuli In Childhood Autism."

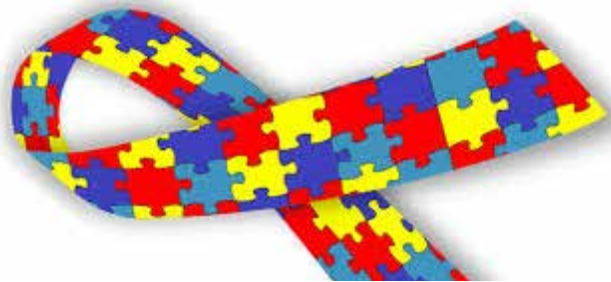
RECENT WORKS:
Large-scale intrinsic functional network organization along the long axis of the human medial temporal lobe. Qin S, Duan X, Supekar K, Chen H, Chen T, Menon V. *Brain Struct Funct*. 2015 Sep 3. [Epub ahead of print]

Brain Structural Integrity and Intrinsic Functional Connectivity Forecast 6 Year Longitudinal Growth in Children's Numerical Abilities. Evans TM, Kochalka J, Ngoon TJ, Wu SS, Qin S, Battista C, Menon V. *J Neurosci*. 2015 Aug 19;35(33):11743-50. doi: 10.1523/JNEUROSCI.0216-15.2015.

Hippocampal-neocortical functional reorganization underlies children's cognitive development. Qin S, Cho S, Chen T, Rosenberg-Lee M, Geary DC, Menon V. *Nat Neurosci*. 2014 Sep;17(9):1263-9. doi: 10.1038/nn.3788. Epub 2014 Aug 17. Erratum in: *Nat Neurosci*. 2015 Dec;18(12):1861.

Long-term academic stress increases the late component of error processing: an ERP study. Wu J, Yuan Y, Duan H, Qin S, Buchanan TW, Zhang K, Zhang L. *Biol Psychol*. 2014 May;99:77-82. doi: 10.1016/j.biopsycho.2014.03.002. Epub 2014 Mar 18.

Amygdala subregional structure and intrinsic functional connectivity predicts individual differences in anxiety during early childhood. Qin S, Young CB, Duan X, Chen T, Supekar K, Menon V. *Biol Psychiatry*. 2014 Jun 1;75(11):892-900. doi: 10.1016/j.biopsych.2013.10.006. Epub 2013 Oct 11.



Learning and Memory
in Children with Autism
Miriam Rosenberg-Lee, PhD
Instructor

The overall goal of this research is to understand the neural basis of learning in children with autism spectrum disorders (ASD) using both functional and structural brain imaging. ASD is a neurodevelopmental disorder characterized by social and behavioral deficits, but it is often accompanied by remarkable visuo-spatial and mnemonic abilities. A fundamental question addressed here is how individuals with ASD learn, and whether they rely on the same brain systems for learning as typically developing (TD) individuals. Dr. Rosenberg-Lee's research aims to deepen our understanding of the neurobiological basis of learning in children with ASD. Better understanding of the brain systems supporting these abilities will improve long- term outcomes for these children and foster academic and professional success in individuals with ASD.

RECENT WORKS:
Development of common neural representations for distinct numerical problems
NEUROPSYCHOLOGIA Chang, T., Rosenberg-Lee, M., Metcalfe, A. W., Chen, T., Menon, V. 2015; 75: 481-495.

Brain hyper-connectivity and operation-specific deficits during arithmetic problem solving in children with developmental dyscalculia
DEVELOPMENTAL SCIENCE Rosenberg-Lee, M., Ashkenazi, S., Chen, T., Young, C. B., Geary, D. C., Menon, V. 2015; 18 (3): 351-372.

Cognitive tutoring induces widespread neuroplasticity and remediates brain function in children with mathematical learning disabilities. Nature communications
Rosenberg-Lee, M., Richardson, J., Tenison, C., Fuchs, L., Supekar, K., Menon, V. 2015; 6: 8453.



Machine Learning and Signal Processing
Methods for Neuroimaging
Srikanth Ryali, PhD
Instructor

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. Presently, 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.

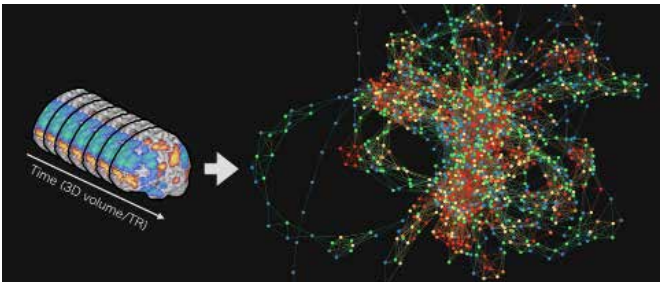
RECENT WORKS:
Ryali, S., et al., Multivariate dynamical systems models for estimating causal interactions in fMRI. Neuroimage, 2011. 54(2): p. 807-23.

Ryali, S., Shih, Y., Chen T, Kochalka, J, Albaugh, D, Fang, Z, Supekar, K, Lee, J.H, Menon, V, Combining optogenetic stimulation and fMRI to validate a multivariate dynamical systems model for estimating causal brain interactions. Neuroimage, 2016. In Press.

Ryali, S., et al., Development and validation of consensus clustering-based framework for brain segmentation using resting fMRI. Journal of Neuroscience Methods, 2015. 240: p. 128-40.

Ryali, S., et al., A parcellation scheme based on von Mises-Fisher distributions and Markov random fields for segmenting brain regions using resting-state fMRI. NeuroImage, 2012.

Ryali, S., et al., Sparse logistic regression for whole-brain classification of fMRI data. Neuroimage, 2010. 51(2): p. 752-64.



Quantifying Fluctuations in
Intrinsic Brain Activity
Manish Saggar, PhD
Instructor

The overarching goal for my research is to invent computational methods that will allow for extracting insights from brain dynamics in healthy and patient populations. Funded by a career development award (K99/R00, 2015-20; NIMH) and a young investigator award (NARSAD, 2016-18; Brain Behavior Foundation), I am currently developing methods to model variations or “transitions” in underlying neural processes during resting state in healthy participants as well as in individuals with fragile X syndrome. I strongly believe that information about transitions in brain dynamics could in turn be used to characterize clinical disorders. Thus, looking forward, rapid transitions might characterize disorders with impaired attention, while “fixed-states” might indicate internal ruminations most characteristic of depressive or anxiety disorders. Capturing and quantifying transitions across mental processes at an individual level could also provide a novel avenue to effectively translate results from group-based analysis to person-centric clinical applications (i.e., precision medicine). Additionally, I am also working towards understanding the neural correlates of creative capacity enhancement across lifespan.

RECENT WORKS:
Saggar M, Glover G, Carlsson G, Reiss AL (2016) Quantifying fluctuations in intrinsic brain activity without spatial or temporal averaging using topology. Oral presentation in the 3rd Biennial Whistler Scientific Workshop on Brain Functional Organization, Connectivity and Behavior (Mar 6-9, 2016, Whistler, Canada).

Saggar, M., Hosseini, S. M. H., Bruno, J. L., Quintin, E.-M., Raman, M. M., Kesler, S. R., & Reiss, A. L. (2015). Estimating individual contribution from group-based structural correlation networks. NeuroImage, 120, 274–284. <http://doi.org/10.1016/j.neuroimage.2015.07.006>.

Saggar, M., Quintin, E.-M., Kienitz, E., Bott, N. T., Sun, Z., Hong, W.-C., et al. (2015). Pictionary-based fMRI paradigm to study the neural correlates of spontaneous improvisation and figural creativity. Scientific Reports, 5, 10894. <http://doi.org/10.1038/srep10894>.

Saggar, M., Zanesco, A. P., King, B. G., Bridwell, D. A., MacLean, K. A., Aichele, S. R., et al. (2015). Mean-field thalamocortical modeling of longitudinal EEG acquired during intensive meditation training. NeuroImage, 114, 88–104.



Brain Stimulation Lab
Nolan Williams, PhD
Instructor

The Brain Stimulation Lab (BSL) is a human neuroscience laboratory that was started by Dr. Nolan Williams in 2015. It focuses on utilizing a personalized neuromodulation approach to probe the neural elements involved in regulation of cognitive control within the human brain. The BSL has an extensive collection of brain stimulation technologies including rTMS, tDCS, TNS, VNS, and DBS systems as well as cutting edge equipment for personalized neuronavigation. The BSL uses these 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.

The mission of the BSL is to utilize cutting-edge neuroimaging techniques to develop new hypotheses regarding proposed dysfunction within the neural networks involved in neuropsychiatric diseases/disorders. With this information, we apply neuromodulation strategies to accurately assess whether our proposed brain-behavior theories are accurate. The BSL offers numerous research study treatments for a variety of neuropsychiatric diseases/disorders. Currently, the BSL has several active studies examining topics such as treatment-resistant depression, chronic pain, suicide, and obsessive-compulsive disorder.

RECENT WORKS:
Williams NR, Sahlem GL, Short EB, Jeffery A, Burns C, Williams EN, Takacs I, Revuelta GJ, George MS. Neuroversion: Using Electroconvulsive Therapy as a Bridge to Deep Brain Stimulation Implantation. Accepted for publication by Neurocase. NCS-OA 15-238.

Williams NR, Short EB, Jeffery A, Williams EN, Hanlon CA, Sahlem GL, Korte J, Revuelta GJ, George MS. Unilateral ultra-brief pulse electroconvulsive therapy for depression in Parkinson's disease. Acta Neurologica Scandinavica. In Press. ANE-O-12-15-614.

Williams NR, Schatzberg AF. NMDA antagonist treatment of depression. Current Opinion in Neurobiology. 2015, 36:112-117.

Williams NR, Hopkins TR, Short EB, Sahlem GL, Snipes J, Revuelta GJ, George MS, Takacs I. Reward circuit DBS improves Parkinson's gait along with severe depression and OCD. Neurocase 2015:1-4.

Advancing Science: Clinician Educators



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

Dr. Adelsheim is a child/adolescent psychiatrist and Director of the Center for Youth Mental Health and Wellbeing, as well as Community Partnerships. His research focuses on developing models of early identification and intervention across the continuum of care for young people and their families when faced with mental health issues.

Recently, in partnership with students and faculty at the Stanford Computer Sciences Department, he has been working to develop effective models of screening young people for mental health conditions across a variety of conditions.

In addition, Dr. Adelsheim is focused on the creation of early public mental health service models in the US to link young people to care, such as the headspace program out of Australia, an early mental health intervention program for young people 12-25.

Dr. Adelsheim has recently become involved in working with a number of programs developing mental health technology solutions to help young people access early support and linkages to direct care as necessary.

In addition, Dr. Adelsheim is leading the development of PEPPNET, the national network for early psychosis clinical programs, in an effort to support the implementation of evidence-based services in the rapidly expanding world of early psychosis programs. Dr. Adelsheim has been recognized by NAMI, the American Psychiatric Association, and the American Academy of Child and Adolescent Psychiatry for his community mental health partnership efforts.

RECENT WORKS:
Adelsheim, S.; In Depth Article: Commentary: From School Health to Integrated Health: Expanding Our Children's Public Mental Health System, Academic Psychiatry (2014) 38:405-408.

Tso, I., Taylor, S., Grove,T., Niendam, T., Adelsheim, S., Auther, A., Cornblatt, B., Carter, C., Calkins, R., Ragland, J., Sale, T., & McFarlane, W. ;Factor analysis of the Scale of Prodromal Symptoms: data from the Early Detection and Intervention for the Prevention of Psychosis Program. Early Intervention in Psychiatry, 2015.

Adelsheim, Bonham, Fore, Glass, Simmons, & Thomas, Creating a National Native Telebehavioral Health Network: The IHS Telebehavioral Health Center of Excellence, chapter in Partnerships for Mental Health, Roberts et al, Springer International Publishing, 2015.



College/University Student Mental Health
Ronald Albucher, MD
Clinical Associate Professor

Dr. Albucher serves as the lead Investigator for Stanford University on a project entitled, "eBridge to Wellness." It is a 5-year multisite study awarded to the University of Michigan that looks at mental health and general well-being among college students. The project's goals are to understand the service needs of students and to examine the usefulness of e-Bridge, an online program that may help link students to supportive services. Students at high risk for depression and self-harm (who are not currently in treatment) are identified for participation.

RECENT WORKS:
Albucher RC: Interview in Nature: Under a Cloud; October 2012; Volume 490: 299-301.

Levine BH, Albucher RC: FOCUS: Patient Management Exercises in Psychiatry; American Psychiatric Press, Inc. 2011.

Albucher, RC: An Integrationist Perspective: A Response to "Bias: Thinking about College Student Psychotherapy versus Drug Treatment and Disability", Journal of College Student Psychotherapy, Volume 27, Issue 4, 2013.



Outcomes Research in Schizophrenia and Psychotic Disorders
Jacob Ballon, MD, MPH
Clinical Assistant Professor

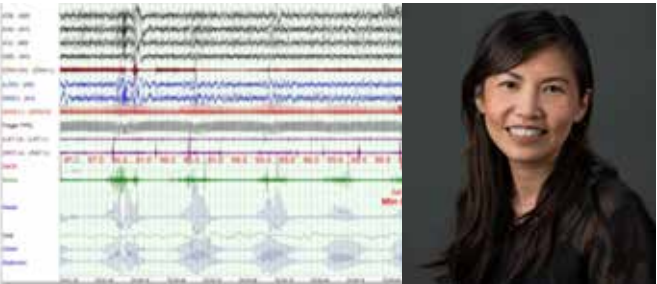
Dr. Ballon's work focuses on the relationship between schizophrenia and adverse metabolic states including insulin resistance and obesity. The team is currently conducting a pilot study looking at the use of bromocriptine to mitigate antipsychotic-associated insulin resistance. Bromocriptine is a dopamine D2/D3 receptor and serotonin 5-HT2C receptor agonist with FDA approval for treatment of type 2 diabetes (T2D). In people with T2D, bromocriptine significantly lowers postprandial plasma glucose, improving glycemic control, without increasing insulin or C-peptide levels. Despite agonism at dopaminergic receptors and concerns for exacerbating psychosis, bromocriptine has been found to be safe in patients taking antipsychotic drugs, even when used at high doses. The optimal dose of bromocriptine to treat antipsychotic drug-associated insulin resistance is not known. The main purpose of this study is to provide proof of concept, dose finding, and an open label assessment of metabolic and clinical psychiatry effects of bromocriptine in patients treated with antipsychotic drugs. In addition to this study, the research group is also involved in studies focusing on evidence-based interventions for people in with recent-onset of psychosis, and the use of aerobic exercise to target cognitive deficits in schizophrenia.

RECENT WORKS:
Ballon JS, Pajvani UB, Freyberg ZF, Leibel RL, Lieberman JA. Molecular Pathophysiology of Metabolic Effects of Antipsychotic Medications. Trends in Endocrinology and Metabolism. 25 (11), 593-600. 2014 Nov. PMID: 25190097.

Kimhy D, Lauriola V, Bartels MN, Armstrong HF, Vakhrusheva J, Ballon JS, Sloan RP. Aerobic exercise for cognitive deficits in schizophrenia - The impact of frequency, duration, and fidelity with target training intensity. Schizophr Res. 2016 Feb 3. PMID: 26852401.

Kimhy D, Vakhrusheva J, Bartels MN, Armstrong HF, Ballon JS, Khan S, Chang RW, Hansen MC, Ayanruoh L, Lister A, Castrén E, Smith EE, Sloan RP. The Impact of Aerobic Exercise on Brain-Derived Neurotrophic Factor and Neurocognition in Individuals With Schizophrenia: A Single-Blind, Randomized Clinical Trial Schizophr Bull. 2015 Mar 23. pii: sbv022. PMID: 25805886.

Kimhy D, Vakhrusheva J, Bartels MN, Armstrong HF, Ballon JS, Khan S, Chang RW, Hansen MC, Ayanruoh L, Smith EE, Sloan RP. Aerobic fitness and body mass index in individuals with schizophrenia: Implications for neurocognition and daily functioning. Psychiatry Res. 2014 Dec 30;220(3):784-91. 2014 Sep 3. PMID: 25219618.



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

Dr. Michelle Cao is a Clinical Assistant Professor in the Division of Sleep Medicine. Her clinical research spans several disciplines to include complex sleep apnea syndromes, advanced respiratory devices to treat sleep related breathing disorders, and sleep education. Her work specifically focuses on central sleep apnea syndromes including opioid induced, and novel positive pressure devices to treat complex sleep related breathing disorders.

Dr. Cao, alongside her colleague Dr. Shannon Sullivan, is also conducting surveys on sleep education, specifically evaluating the amount of sleep education provided in primary residency training programs across the United States. Their research also focuses on psychiatry subspecialty training programs where sleep disorders are prevalent. Together, they hope to provide a valuable framework for development of curricula in order to include sleep medicine education uniformly across training programs in United States.

RECENT WORKS:
Chow M, Cao M. The orexin system and sleep disorders: preclinical insights and clinical progress. Nature and Science of Sleep. 2016 in press.

Cao M, Cardell CY, Willes L, Mendoza J, Benjafield A, Kushida C. A Novel Adaptive Servoventilation (ASVAuto) for the Treatment of Central Sleep Apnea Associated with Chronic Use of Opioids. J Clin Sleep Med 2014; 10(8):855-61.

Arora N, Cao M, Javaheri S. Opioids, Sedatives, and Sleep Hypoventilation. Sleep Med Clin 2014; 9(3):391-398.

Cao M, Javaheri S. Management of Opioid Induced Central Sleep Apnea. US Respir Dis 2014. (In press).

Cao M, Guilleminault C, Lin C. Central sleep apnea: effects on stroke volume in heart failure. Am J Resp Crit Care Med 2013; 187(4):340-341.

Cao M, Guilleminault C. Sleep Disordered Breathing, heart failure, and phrenic nerve stimulation. CHEST 2012; 142(4):821-823.



Prevention and Intervention Laboratory
Victoria Cosgrove, PhD
Clinical Assistant Professor

The Prevention and Intervention (PI) Laboratory, housed in the Division of Child and Adolescent Psychiatry and under the direction of Dr. Victoria Cosgrove, investigates the etiology and treatment of affective psychopathology across the life span. Our 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. Our lab is comprised of ten doctoral candidates at the PGSP-Stanford Psy.D. Consortium, post-baccalaureate scholars, and Stanford undergraduates. Lab members routinely conduct sub-studies exploring important questions about roles for biological markers of inflammation, expressed emotion, personality factors, and neurocognitive functioning. The PI Lab has recently presented data at the Association for Behavioral and Cognitive Therapies (ABCT), Society for Personality Assessment (SPA), and Society for Affective Science Annual Meetings. We collaborate with Drs. Trisha Suppes and Michael Berk on a joint international project (R34 MH091284) with the University of Melbourne involving development and refinement of an internet-based intervention (MoodSwings) for adults with bipolar disorder (www.moodswings.net.au). The PI Lab also collaborates with Dr. Roger McIntyre at the University of Toronto on a joint international project, funded by the Stanley Medical Research Institute, investigating the efficacy of intravenous infliximab in the treatment of bipolar depression in adults.

RECENT WORKS:
Cosgrove, V.E., Kelsoe, J., Suppes, T.S. (2016). Toward a valid animal model of bipolar disorder: how the Research Domain Criteria help bridge the clinical-basic science divide. *Biological Psychiatry*, 79(1), 62-70.

Gliddon, E., Lauder, S., Berk, L., Cosgrove, V., Grimm, D., Dodd, S., Suppes, T., Berk, M. (2015). Evaluating discussion board engagement in the MoodSwings online self-help program for bipolar disorder: protocol for an observational prospective cohort study. *BMC Psychiatry*, 15(1): 243.

Suppes, T., McElroy, S.L., Sheehan, D.V., Hidalgo, R.B., Cosgrove, V.E., Gwizdowski, I.S., Feldman, N.S. (2014). A Randomized, Double-Blind, Placebo-Controlled Study of Ziprasidone in Bipolar Disorder with Co-Occurring Lifetime Panic and Generalized Anxiety Disorder. *Journal of Clinical Psychiatry*, 75(1): 77-84.



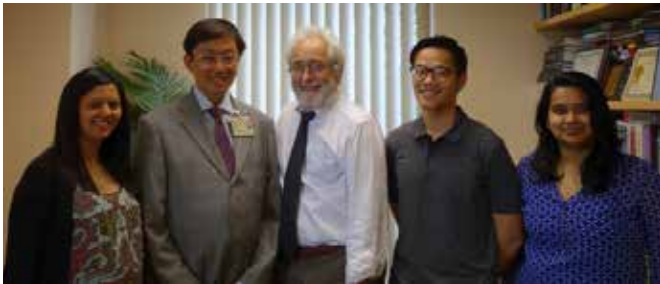
Global Mental Health: Risk and Resilience
in Vulnerable Populations
Christina Khan, MD, PhD
Clinical Assistant Professor

The goal of the Khan Laboratory is to build and sustain academic-community partnerships and outreach in the areas of global mental health, integrated behavioral health, and trauma. The laboratory conducts community-based research and outreach aimed at the prevention and early identification of mental health problems in vulnerable populations. The lab's work is primarily focused on populations at high risk for trauma, including communities in East Palo Alto, Guatemala, and Zimbabwe, but also on populations at risk for secondary trauma, such as physicians and health workers. The clinical arm of the laboratory aims to promote the integration of behavioral health within existing primary medical and community health systems of care. Current sites include Ravenswood Family Health Center in East Palo Alto and communities in rural Guatemala and in Zimbabwe. This is being done through a multi-pronged approach, including: 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 mobile-based educational interventions and population-based tracking. The research arm of the laboratory has two parts: 1) implementation research related to the above clinical activities, and 2) examination of the impact of trauma and preventive interventions on trans-diagnostic markers of distress, including emotion regulation, self-esteem, and sleep. For example, a recent mindfulness and dance pilot intervention delivered in the Ravenswood City School District After-School Program showed promising results for sleep quality post-intervention. Other efforts include multidisciplinary work in the areas of physician wellness and vulnerable populations. For example, efforts are underway to bring together faculty from across the medical school to offer gender-affirming services, with preparations to launch a multidisciplinary gender clinic at Stanford in Summer 2016.

RECENT WORKS:
Khan, C.T., Louie, A., Reicherter, D., Roberts, L.W. Global mental health: What is the role of academic departments of psychiatry? *Academic Psychiatry*. Online first, 14 Mar 2016: 1-7.

Rissman, Y.Z., Khan, C.T., Isaac, S.K., Paiz, J.A. & DeGolia, S.G. Developing a Mental Health Curriculum to Build Capacity and Improve Access to Mental Health Care in Rural Guatemala. *Academic Psychiatry*. Online first, 14 Mar 2016: 1-3.

Khan, C.T. Kombis, brothels, and violence against women: Building global health partnerships to address women's health and empowerment. In Roberts, L. et al. *Partnering for Mental Health: A Guide to Community and Academic Collaboration*. Springer: New York; 2015.



Bipolar Disorders Clinic
Shefali Miller, MD
Clinical Assistant Professor

Dr. Miller's current research focuses on understanding the effectiveness of novel treatment and monitoring strategies for bipolar disorder. She is the principal investigator of two clinical research studies, including a randomized, double-blind, placebo-controlled trial of adjunctive suvorexant for insomnia related to bipolar disorder, and a retrospective naturalistic study of the clinical effectiveness of lurasidone in bipolar disorder patients. She is also involved in a randomized, double-blind, placebo-controlled study of infliximab for bipolar depression. The results of these studies hold promise to advance our understanding not only of the effectiveness of novel treatments for bipolar disorder, but also of potential underlying etiologic factors contributing to the illness (e.g., orexin and/or other neurotransmitter abnormalities, inflammatory processes). Dr. Miller and her colleagues are also investigating the use of actigraphy to monitor daytime and nighttime activity in bipolar disorder patients, and how these objective measures of activity may correlate with (and potentially predict the onset of) subjectively reported bipolar mood symptoms. In addition to the above research activities, Dr. Miller is dedicated to the use and dissemination of measurement-based care strategies to optimize treatment outcomes and advance clinical research efforts. As such, she is involved in a quality improvement initiative with her colleagues to implement measurement-based care across the Department of Psychiatry, and she has been analyzing measurement-based clinical data collected by the Stanford Bipolar Disorders Clinic and the Stanley Bipolar Network to improve our understanding of bipolar disorder phenomenology, with particular interests in depressive and mixed states and factors influencing longitudinal illness course.

RECENT WORKS:
Miller, S., Suppes, T., Mintz, J., Hellemann, G., Frye, M.A., McElroy, S.L., Nolen, W.A., Kupka, R., Leverich, G.S., Grunze, H., Altshuler, L.L., Keck, P.E., Post, R.M. Mixed depression in bipolar disorder: Prevalence rate and clinical correlates during naturalistic follow-up in the Stanley Bipolar Network. *Am J Psychiatry* (in press).

Miller, S., Dennehy, E.B., Suppes, T. The prevalence and diagnostic validity of short-duration hypomanic episodes and major depressive episodes. *Curr Psychiatry Rep* 2016; 18: 27-33.

Hooshmand, F., Miller, S., Dore, J., Wang, P.W., Hill, S.J., Portillo, N., Ketter, T.A. Trends in pharmacotherapy in patients referred to a bipolar specialty clinic, 2000-2011. *J Affect Disord* 2014; 155: 283-287.



Sports Psychology
Lisa Post, PhD
Clinical Associate Professor

Dr. 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-PI 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.

RECENT WORKS:
Simpson NS, Gibbs EL, Matheson G (accepted). Optimizing sleep to maximize performance: Implications for elite athletes. *Scandinavian Journal of Medicine and Science in Sports*. <http://www.ncaa.org/about/resources/research/injured-athlete-support-group-evaluation-pilot-program>



Human Rights in Trauma
Mental Health Laboratory
Daryn Reicherter, MD
Clinical Associate Professor

Daryn Reicherter is the director of The Human Rights in Trauma Mental Health Laboratory. The laboratory is committed to advancing and applying research on psychiatric sequelae for survivors of human rights abuses with an eye towards informing transitional justice and judicial processes. The lab focuses on the science of the psychological changes and mental health pathology caused by trauma on individuals, their families, and their communities, over time and between generations. Lab affiliates and colleagues analyze and build upon the rich data in the interdisciplinary scientific literature and in specific conflict situations to clearly identify the impact on human psychology of various forms of mass trauma, including genocide, mass killings, rape, and torture. This analysis can be used to clarify the science and/or advocate for the survivors' human rights and mental health in a whole range of settings, including criminal trials, civil suits for monetary damages, and asylum proceedings. The lab will participate in these transitional justice processes in a range of ways, including by providing expert testimony and reports and consulting with the legal teams prosecuting perpetrators or representing victims. The lab's current projects include formal reports for United Nations-backed transitional justice programs for situations in Cambodia and the Central African Republic, and investigations for reports for human rights violations in Haiti and in Somalia. The lab also provides expert opinions for legal clients from Central America, the Caribbean, and the Middle East.

RECENT WORKS:
Cambodia's Hidden Scars: Trauma Psychology and the Khmer Rouge Tribunal. Documentation Center of Cambodia, Phnom Penh, Cambodia. (2016). Van Schaack B, Reicherter D, Chhang Y.

Cambodia's Hidden Scars: Trauma Psychology in the Wake of the Khmer Rouge. Documentation Center of Cambodia, Phnom Penh, Cambodia. (2011). Van Schaack B, Reicherter D, Chhang Y.

"The Earthquake: Mobile Refugee Clinic in Haiti." In Partnerships for Mental Health pp 179-192 Jayne E. Flemin, Daryn Reicherter (2015).

"Mental Health Consequences of War and Political Conflict." In The International Handbook of Psychiatry: A Concise Guide for Medical Students, Residents, and Medical Practitioners, LW Roberts (Ed.), World Scientific Publishing, Hackensack, NJ. Reicherter D, Sugarbaker R (2013).

"Mental Health Reform: Toward a National Program for Trauma Related Mental Health in Cambodia." In Cambodia's Hidden Scars: Trauma Psychology in the Wake of the Khmer Rouge, Reicherter D, van Schaack B, Chhang Y (2011).



Biology of Perinatal Mood Disorders
Thalia Robakis, MD, PhD
Clinical Assistant Professor

Dr. Robakis' research focuses on perinatal mood disorders and their relationship to early life stress. Her previous work has shown that insecure attachment style in pregnant women is strongly related to the development of postpartum depression. Attachment insecurity is often a result of adverse childhood experiences, and early life stress has been shown to affect epigenetic modification of key genes over the long term. She is currently conducting a study whose purpose is to isolate an epigenetic signature of insecure attachment in pregnant women and determine how this may be related to the development of depression postpartum.

This work will advance our understanding of how epigenetic modifications contribute to the shaping of personality and risk for psychiatric disorders. This deeper understanding will improve our ability to explain, prevent, and develop timely interventions for postpartum depression, and perhaps also for the many other psychiatric syndromes that have been linked to suboptimal experiences in early life.

RECENT WORKS:
Robakis TK, Williams K E, Crowe S, Lin KW, Gannon J, & Rasgon NL. (2016). Maternal attachment insecurity is a potent predictor of depressive symptoms in the early postnatal period. *Journal of Affective Disorders* 2016, 190, 623-631.

Robakis TK, Holtzman J, Stemmler PG, Reynolds-May MF, Kenna HA, Rasgon NL. Lamotrigine for Menstrually Entrained Symptoms of Bipolar Disorder. *Journal of Affective Disorders*, 2015, p 108-115.

Robakis TK, Williams KE, Crowe S, Kenna H, Gannon J, Rasgon NL. Optimistic Outlook Regarding Maternity Protects Against Depressive Symptoms Postpartum. *Archives of Women's Mental Health*, Aug 5, 2014. PMID 25088532.

Robakis TK, Williams KE. Biologically based treatment approaches to the patient with resistant perinatal depression. *Archives of Women's Mental Health*, 2013 Oct;16(5):343-51. Review.



Eating Disorders: Emotion Dysregulation,
Athlete and Bariatric Populations
Athena Robinson, PhD
Clinical Assistant Professor

Dr. Robinson's core areas of programmatic research include emotion regulation in binge eating disorder, and disordered eating in special subpopulations including athletes and bariatrics. In regards to emotion regulation in binge eating disorder, she received a K-23 Mentored Patient Oriented Career Development Award to evaluate the comparative efficacy of Integrative Response Therapy and Cognitive Behavioral Therapy Guided Self-Help in treating BED. Integrative Response Therapy is an emotion-regulation based intervention for BED which she developed as Ruth L. Kirschstein-National Service Research Award (T32) post-doctoral research fellow. Results demonstrate IRT's efficacy as a viable treatment alternative; it was not significantly different from Cognitive Behavioral Therapy Guided Self-Help on primary and secondary outcomes. She has also served as Principal Investigator on a National Collegiate Athletics Association Innovation in Research and Practice Program grant, which funded the development and evaluation of the preliminary efficacy and acceptability of the Whole Image Athletes. Results indicated that WIA, developed by Dr. Robinson, was the first online body image enhancement program specifically tailored for male and female college athletes and achieved high acceptability and modest improvements in body image and disordered eating concerns among a small sample of Stanford athletes. She also plays an integral role in a series of studies on understanding and intervening upon early post-operative risk factors for suboptimal weight loss among bariatric populations.

RECENT WORKS:
Robinson AH: Integrative Response Therapy for Binge Eating Disorder. *Cognitive and Behavioral Practice*, 2013:20(1), 93-105.

Robinson AH, Osipov L: Primary outcomes from a randomized clinical trials comparing two guided self-help treatments for binge eating disorder. *Eating Disorders*, in press.

Robinson AH, Rowan M. Preliminary efficacy of the Whole Image Athletes: An online body image enhancement program. Manuscript submitted.

Robinson AH, Adler S, Stevens HB, Darcy A, Morton JM, Safer, DL. What variables are associated with successful weight loss outcomes for bariatric surgery after one year? *Surgery for Obesity and Related Diseases*, 2014;10:697-704. doi: 10.1016/j.soard.2014.01.030.

Robinson AH, Darcy AM, Adler S, Safer DS: Early Adherence Targeted Therapy: An Intervention for Maladaptive Eating Behaviors for Post-Bariatric Patients. *Psychosomatic Medicine*, in press.



Evaluation and Management of CNS
Hypersomnias and other Sleep Disorders
Chad Ruoff, MD
Clinical Assistant Professor

Chad Ruoff, MD is principal investigator on a pharmaceutical study investigating the use of Sodium Oxybate in pediatric narcolepsy. The Stanford Center for Sleep Sciences and Medicine is the highest recruiting site in this pediatric narcolepsy trial. He is also involved two other pharmaceutical trials investigating other compounds in the treatment of narcolepsy and idiopathic hypersomnia in adults. He is also collaborating with Dr. John Day investigating sleep-related issues, in particular, CNS hypersomnia issue in individuals diagnosed with myotonic dystrophy. He has several poster and oral presentations at the upcoming annual sleep meeting presenting on the repeatability of the MSLT in CNS hypersomnias as well as data on JZP-110, a promising wake-promoting compound, for the treatment of narcolepsy.

RECENT WORKS:
Liebenthal, J, Valerio J, Ruoff C, Mahowald M. A Case of REM Sleep Behavior Disorder in Parkinson's Disease Treated with Sodium Oxybate. *JAMA Neurology*. 2016; Jan 1; 73(1): 126 – 7.

Camacho M, Riaz M, Capasso R, Ruoff CM, Guilleminault C, Kushida CA, Certal V. The Effect of Nasal Surgery on Continuous Positive Airway Pressure Device Use and Therapeutic Treatment Pressures: A Systematic Review and Meta-Analysis. *Sleep*. 2015; Feb 1; 38 (2): 279 – 86.

Black J, Reaven N, Funk S, McGaughery K, Ohayon M, Guilleminault C, Ruoff C, Mignot E. The Burden of Narcolepsy Disease (BOND) Study: Healthcare Utilization and Cost Findings. *Sleep Med*. 2014; May; 15 (5): 522 – 9.

Goldbart A, Peppard P, Finn L, Ruoff C, Barnet J, Young T, Mignot E. Narcolepsy and predictors of positive MSLTs in the Wisconsin Sleep Cohort. *Sleep*. 2014; Jun 1; 37 (6): 1043-51.

Advancing Science: Emeritus Faculty



Health for Healers
Mickey Trockel, MD, PhD
Clinical Assistant Professor

Dr. Trockel and his colleagues have recently established the Health for Healers research group (HFH). HFH is a collaborative group for researchers interested in practical evaluation research including the design, implementation, and evaluation of interventions to improve physician wellness. HFH mission aims are 1) to demonstrate the relationship between physician wellness and patient outcomes, and 2) to demonstrate that interventions to improve physician wellness also improve patient outcomes and cost effectiveness of medical care. This research is a natural extension of Dr. Trockel's previous work which includes evaluation of the effects of cognitive and behavioral strategies on sleep health and mood, evaluation of the effects on therapists and their patients of evidence based psychotherapy programs, and evaluation of a variety of primary prevention and health promotion interventions.

RECENT WORKS:
Schrijver, I., Brady, K., Trockel, M. An exploration of key issues and potential solutions that impact physician wellbeing and professional fulfillment at an academic center, *Peer J* (in press).

Trockel, M., Karlin, B., Brown, G. K., Taylor, C. B., Manber, R. (2015). Effects of Cognitive Behavioral Therapy for Insomnia on Suicidal Ideation in Veterans. *SLEEP*, 38 (2), 259-265.

Karlin, B., Trockel, M., Taylor, C. B., Gimeno, J., Manber, R. (2013). National Dissemination of Cognitive Behavioral Therapy for Insomnia in Veterans: Therapist and patient-level outcomes. *Journal of Clinical and Consulting Psychology*, 81, (5) 912-917.

Trockel, M., Manber, R., Chang, V., Thurston, A., Taylor C. B. (2011). An e-mail delivered CBT for sleep health program for college students: effects on sleep quality and depression symptoms. *Journal of Clinical Sleep Medicine*, 7 (3), 276-281.



GIRLTALK: We Talk
Helen Wilson, PhD
Clinical Assistant Professor

Helen Wilson is the Principal Investigator of GIRLTALK: We Talk, a longitudinal study funded by the National Institute of Child Health and Human Development (NICHD) that examines pathways from early violence exposure to dating violence and unsafe sex in a sample of low-income, urban African American women at ages 18-26 (N = 129). Dating violence and unsafe sex represent major public health concerns that take place within romantic relationships and disproportionately affect young, urban African American women. Young women who participated in a longitudinal study that began when they were 14-16 years old were re-contacted for this new study. They have now completed seven waves of data collection, including information about trauma and victimization history, mental health, family, peer, and partner relationships, risk behavior, and resilience. The study aims to provide a better understanding of the precursors and consequences of dating violence and unsafe sex through use of longitudinal, multivariate analyses. In addition to interviews with the young women, we interviewed their romantic partners and observed a structured interaction between the two. We also collected biological markers of physiological stress response and sexually transmitted infections. Findings can ultimately be used to develop culturally tailored, gender sensitive interventions to foster healthy romantic and sexual relationships in young African American women with histories of violence exposure.

RECENT WORKS:
Wilson, H. W., Samuelson, S., Staudenmeyer, A. H., Widom, C. S. (2015). Trajectories of risk associated with childhood abuse and neglect in low-income urban African American girls. *Child Abuse & Neglect*, 45, 108-21.

Wilson, H. W., Pettineo, L., Edmonds, A., Goodman, E., Emerson, E., Donenberg, G. R. (2015). From violence exposure to the development of sexual risk in low-income urban girls: The role of psychopathology. *Child Psychiatry and Human Development*, 46, 270-280.

Wilson, H. W., Donenberg, G., Emerson, E. (2014). Violence exposure and the development of sexual risk in low-income African American girls. *Journal of Behavioral Medicine*, 37, 1091-101.



Eating Disorder Research Program
W. Stewart Agras, MD
Professor (Emeritus)

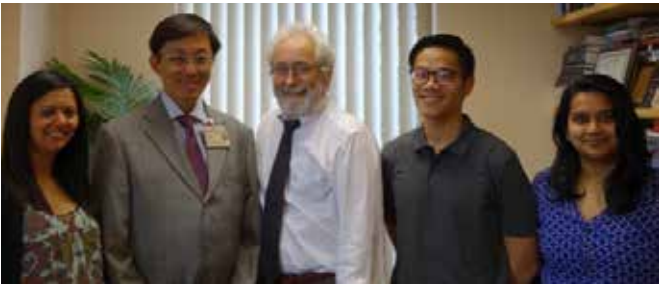
A problem across many areas of medical practice is that evidence-based treatments or practices are not used correctly or not used at all. This problem pertains to psychiatry and psychology because research has shown that many practitioners do not use evidence-based psychotherapeutic treatments. Dr. Agras is currently investigating this problem by 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 smaller project is examining implementation of family-based treatment in anorexia nervosa.

RECENT WORKS:
LeGrange, D., Lock, J., Agras, W. S., Bryson, S.W., Jo, B. Randomized clinical trial of family-based treatment and cognitive-behavioral therapy for adolescent bulimia nervosa. *J Am Acad Child Adolesc Psychiatry*, 54: 886-894, 2015.

Agras, W.S., Lock, J., Brandt, H., Bryson, S.W., Dodge, E., Halmi, K.A., Jo, B., Johnson, C., Kaye, W., Wilfley, D., Woodside, B. Comparison of 2 family therapies for adolescent anorexia nervosa: A randomized parallel trial. *JAMA Psychiatry*, 71:1279-1286, 2014.

Agras, W. S., Hammer, L. D., Huffman, L. C., Mascola, A., Bryson, S. W., Danaher, C. Improving healthy eating in families with a toddler at risk for overweight: A cluster randomized controlled trial. *Journal of Developmental & Behavioral Pediatrics*, 33:529-534, 2012.

Mitchell, J. E., Agras, W. S., Crow, S., Halmi, K., Fairburn, C. G., Bryson, S., Kraemer, H. C. Stepped care and cognitive-behavioural therapy for bulimia nervosa: randomised trial. *British Journal of Psychiatry*, 198: 391-397, 2011.



Bipolar Disorders Clinic
Terence Ketter, MD
Emeritus (Active) Professor

The Stanford University Bipolar Disorder Clinic was established in 1995, and has been involved in bipolar disorder etiology, phenomenology, and treatment research since that time. Etiologic research has involved using neuroimaging methods to better understand neurobiology, and explore the possibility of such techniques helping to more effectively target treatments. Phenomenologic research has focused on development and course of bipolar disorder in late adolescence/ young adulthood, and links between creativity, temperament, and mood disorders. Treatment research has involved clinical trials of novel medications for bipolar disorder, with emphasis on anticonvulsants, second-generation antipsychotics, and comparative effectiveness of pharmacotherapies. Treatment research has included not only in industry-funded pivotal phase III efficacy and phase IV effectiveness studies, but also large federally-funded comparative effectiveness studies, such as the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD), the Lithium Treatment Moderate dose Use Study (LiTMUS), and the Bipolar Clinical Health Outcomes Initiative in Comparative Effectiveness (Bipolar CHOICE) study. The clinic has practiced evidence-based (using model practice procedures) and measurement-based (using validated STEP-BD assessment and longitudinal monitoring instruments) care since the year 2000. Based on such data, it has published multiple manuscripts in peer-reviewed journals, commonly with Stanford trainees and international visiting scholars as first authors. Topics include pharmacotherapy trends and clinical correlates of onset age, current irritability, current anxiety, episode accumulation, mixed features during depression, illness subtype (e.g., bipolar I disorder versus bipolar II disorder), prior suicide attempts, eating disorders, and use of pharmaceuticals (e.g., lamotrigine and quetiapine alone and in combination with one another, aripiprazole, ziprasidone, and second-generation antipsychotics in bipolar II disorder versus bipolar I disorder). Current research initiatives include efforts to establish mood correlates of actigraphy in bipolar disorder and integrate actigraphy into bipolar disorder clinical care, an investigator-initiated, double-blind, placebo-controlled trial of adjunctive suvorexant for insomnia in bipolar disorder, and an assessment of clinical correlates of lurasidone use in bipolar disorder patients.



Psychology and Biobehavioral
Sciences Laboratory
Cheryl Koopman, PhD
Emeritus (Active) Professor

Cheryl Koopman, PhD is Professor (Research) of Psychiatry and Behavioral Sciences, Emerita. Her Stanford team is collaborating with community-based partners from Sierra Streams Institute to evaluate the effects of providing support groups via videoconferencing on improving quality of life for women diagnosed with breast cancer who reside in rural communities. Dr. Koopman is collaborating with experts in Lyme disease/biostatistics in three areas of research: 1) investigating diverse manifestations of Lyme disease in relation to demographic, medical, and exposure characteristics, diagnostic tests, and use of medications; 2) examining experiences of Lyme-related stigma and helpful and unhelpful forms of social support; and 3) comparing patients diagnosed with Lyme disease to age-, gender-, and education-matched healthy controls on widely used and validated indices of quality of life.

RECENT WORKS:
Roberts, S., Birgisson, N., Chang, D.J., & Koopman, C. (2015). A pilot study on mobile phones as a means to access maternal health education in eastern rural Uganda. *Journal of Telemedicine and Telecare*, 21(1), 14-17.

Patel, K., Wall, K., Bott, N.T., Katonah, D.G., & Koopman, C. (2015). A qualitative investigation of the effects of psycho-spiritual integrative therapy on breast cancer survivors' experience of paradox. *Journal of Religion and Health*, 54(1), 253-263.

Hom, M., Heaney, C., & Koopman, C. (2014). Personalized normative feedback for depression symptoms: A qualitative pilot study of female undergraduates. *Academic Psychiatry*, 38(4), 464-469. Published online March 2014.

Andresen, E.L., Wilson, K.A., Castillo, A., & Koopman, C. (2010). Patient motivation for participating in clinical trials for depression: Validation of the Motivation for Clinical Trials Inventory - Depression. *International Clinical Psychopharmacology*, 25(1), 7-16.

Sacerdoti, R. C., Lagana', L., & Koopman, C. (2010). Altered sexuality and body image after gynecological cancer treatment: How can psychologists help? *Professional Psychology: Research and Practice*, 41(6), 533-540.



Sleep & Circadian Neurobiology Laboratory
Seiji Nishino, MD, PhD
Emeritus (Active) Professor

The Stanford Sleep and Circadian Neurobiology Laboratory (SCN lab, Nishino lab) is an integrated, multidisciplinary research facility dedicated to understanding the neural, neurochemical, and molecular mechanisms underlying biological rhythms and arousal state control. Understanding these mechanisms will lead to new opportunities and pathways for development of new types of pharmaceuticals for sleep disorders medicine and circadian rhythm disorders.

Research in this field is greatly facilitated by using appropriate animal models with sleep abnormalities, and the SCN lab possesses various transgenic and gene and cell targeting animals, including mouse models of narcolepsy (with hypocretin/orexin gene knockout and cell-targeted transgenic ablations), Parkinson's disease (with conditional knockout of dopamine neurons), and myotonic dystrophy (with Mbnl knockout and human DMPK transgene containing CTG expansion).

The research is highly translational, and the results obtained from animal studies will lead to development of new generations of pharmaceuticals to remedy the enormous unmet needs in sleep disorders medicine and disorders of circadian timekeeping.

RECENT WORKS:
Charizanis, K., et al., Muscblind-like 2-Mediated Alternative Splicing in the Developing Brain and Dysregulation in Myotonic Dystrophy. *Neuron*, 2012. 75(3): p. 437-50.

Chikahisa, S., et al., Histamine from brain resident MAST cells promotes wakefulness and modulates behavioral states. *PLoS One*, 2013. 8(10): p. e78434.

Kawai, N., et al., The sleep-promoting and hypothermic effects of glycine are mediated by NMDA receptors in the suprachiasmatic nucleus. *Neuropsychopharmacology*, 2015. 40(6): p. 1405-16.

Xu, M., et al., Basal forebrain circuit for sleep-wake control. *Nat Neurosci*, 2015. 18(11): p. 1641-7.



Laboratory for the Study
of Behavioral Medicine
Craig Barr Taylor, MD
Emeritus (Active) Professor

Dr. Taylor's laboratory focuses on developing and evaluating accessible, affordable, technology and evidence-based prevention and treatment programs for anxiety, depression, and anxiety disorders. In partnership with Washington University and Palo Alto University, they conducted a large NIMH funded controlled trial to determine if an online/app based intervention can improve treatment for eating disorders on college campuses. In parallel, they are participating in helping to develop an integrated eating disorder prevention and treatment programs for all public colleges and universities in Missouri. The laboratory has active collaborations with investigators in India (anxiety prevention and treatment in four Universities), China (middle school based healthy weight regulation programs), and Australia (automated programs to reduce psychosocial risk and risk factors in patients with heart disease), and many investigators in the U.S. Dr. Taylor serves as a chief scientific advisory to the eCare program, a multinational European research project designed to evaluate the benefit of technology to provide prevention and intervention for a variety of problems and settings throughout Europe.

RECENT WORKS:
Taylor CB, Kass A, Trockel ME, et al, Reducing eating disorder onset in a very high risk sample with significant comorbid depression: A randomized controlled trial. *Journal of Consulting and Clinical Psychology* 2016, Jan 21 (epub ahead of print).

Purvis C, Jones M, Bailey JO, Bailenson J, Taylor CB. Developing a novel measure of body satisfaction using virtual reality. *PLoS One*. 2015 Oct 15;10(10):e0140158.

Oldenburg B, Taylor CB, O'Neil A, Cocker F, Cameron L. Using new technologies to improve the prevention and management of chronic conditions in populations, *Annual Review of Public Health*, 2015 Mar 18;36:483-505.

Kass AE, Trockel M, Safer DL, Sinton MM, Cuning D, Rizk MT, Genkin BH, Weisman HL, Bailey JO, Jacobi C, Wilfley DE, Taylor CB. Internet-based preventive intervention for reducing eating disorder risk: A randomized controlled trial comparing guided with unguided self-help. *Behaviour Research and Therapy*, 2014 Oct 2;63C:90-98.

Wilfley D, Agras WS, Taylor CB. Reducing the burden of eating disorders: A Model for population-based prevention and treatment for university and college campuses. *International Journal of Eating Disorders*, 2013, 46, 529-532.

Active Sponsored Research*

Federal and State Funding

Abrams, Daniel	NIH	K01	Decoding Neural Systems Underlying Affective Prosody in Children with Autism	Hardan, Antonio	NIH	R21	Pivotal Response Treatment Package for Young Children with Autism
Agras, Stewart	NIH	R01	Implementation of evidence-based treatment for on-campus eating disorders (Co-PI)	Hardan, Antonio	NIH	R21	Quantitative Measurements of Cortical Excitability in Neurodevelopmental Disorder
Beier, Kevin	NIH	F32	Elucidating input-output relations of rewarding and aversive dopamine neurons in the mouse ventral midbrain	Jo, Booil	NIH	R01	Heterogeneity in Prevention Intervention Effects on Substance Use: A Latent Variable Causal Modeling Approach
Bernert, Rebecca	Dept of Defense		A Behavioral Sleep Intervention for Suicidal Behaviors in Military Veterans: A Randomized Controlled Study	Levinson, Douglas	NIH	R01	Testing the Hypothesis of Somatic Cell Retrotransposition in Human Brain
Bernert, Rebecca	NIH	K23	A Sleep-Oriented Intervention for Suicidal Behaviors	Levinson, Douglas	NIH	R01	HLA and schizophrenia: a high-throughput sequencing study
Bohon, Cara	NIH	K23	Neurochemical and functional neuroimaging of negative and positive valence systems in binge eating	Levinson, Douglas	NIH	U19	Multimodal analysis of high-risk psychosis mutations in induced neuronal cells
Cai, Weidong	NIH	K01	Dynamic Brain Mechanisms of Proactive and Reactive Control in Childhood ADHD	Lock, James	NIH	R33	Optimizing Fidelity in Family-Based Treatment for Adolescent Anorexia Nervosa
Chang, Kiki D.	NIH	R01	2/2-Early Intervention for Youth at Risk for Bipolar Disorder	Lock, James	NIH	R34	Feasibility of Combining Family and Cognitive Therapy to Prevent Chronic Anorexia
Chang, Kiki D.	NIH	K24	Brain Connectivity and Mindfulness Training in Youth with Bipolar Disorder NOS	Lyons, David	NIH	R01	Early social stress, novelty seeking, and impulsive behavior
Christoffel, Dan	NIH	F32	Function of thalamic excitatory synapses in social reward processing	Malenka, Robert	NIH	P50	Activity-Dependent Synaptic and Circuit Plasticity
De Lecea, Luis	NIH	R01	Optogenetic Control of Vigilance State Transition	Manber, Rachel	NIH	R01	The effectiveness of non-pharmacological treatment for perinatal insomnia
De Lecea, Luis	NIH	R01	Neuronal mapping of anxiety and panic	Menon, Vinod	NIH	R01	Longitudinal Neurocognitive Studies of Mathematical Disabilities
De Lecea, Luis	NIH	R01	Optogenetic interrogation of sleep circuits during aging	Menon, Vinod	NIH	R01	Interventions in Math Learning Disabilities: Cognitive and Neural Correlates
Dhabhar, Firdaus	Dept of the Navy		Biomarkers and Mechanisms of Resilience vs. Susceptibility to Stress	Menon, Vinod	NIH	R01	Mathematical Cognition in Autism: A Cognitive and Systems Neuroscience Approach
Etkin, Amit	NIH	R01	Mapping and Manipulating Circuits for Emotion and Cognition in Anxiety and Depression	Menon, Vinod	NIH	R01	Methods for Dynamic Causal Interactions in Human Brain Function and Dysfunction
Evans, Tanya	NIH	F32	Neurodevelopmental Basis of Persistent Mathematical Learning Disabilities	Mignot, Emmanuel	NASA		HERO Twin Astronaut Study Consortium (TASC): Immunome Changes in Space
Garrett, Amy Sue	NIH	K01	Brain Biomarkers of Clinical Response to Cognitive Treatment of PTSD in Youth	Mignot, Emmanuel	NIH	T32	Multi-Institutional Training in Genetic/Genomic Approaches to Sleep Disorders
Gershon, Anda	NIH	K01	Sleep and Circadian Dysregulation in Pediatric Bipolar Disorder	Mignot, Emmanuel	NIH	P50	Center for Narcolepsy and Related Disorders
Giardino, William	NIH	F32	Optogenetic studies of hypocretin in binge drinking and negative hedonic valence	Mourrain, Philippe	NIH	R01	Melanin-Concentrating Hormone: Ancestral Role in Feeding & Sleep Regulation
Hall, Scott	NIH	R21	Understanding severe disruptive behaviors in adolescents with fragile X syndrome	Nishino, Seiji	NIH	R21	Brain Mast Cells in Sleep and Behavioral Regulation
Hall, Scott	NIH	R01	Effects of Social Gaze Training on Brain and Behavior in Fragile X Syndrome	O'Hara, Ruth	NIH	R01	Neurocircuitry of Emotion: Distinguishing Late Life Anxiety and Depression
Hallmayer, Joachim	NIH	R01	Integrative Molecular and Phenotype Analysis of 22q11.2 Deletion Syndrome	Ordaz, Sarah Jean	NIH	K01	Trajectories of Brain Connectivity, Depressive Symptoms, and Parenting in Puberty
Hallmayer, Joachim	CIRM		Induced pluripotent stem cells from children with autism spectrum Disorder	Palesh, Oxana	NIH	R01	Prefrontal cortex abnormalities associated with breast cancer chemotherapy
				Palesh, Oxana	NIH	R01	Brief Behavioral Intervention for Insomnia During Chemotherapy

* Data as of March 1, 2016

Federal and State Funding (continued)

Palesh, Oxana	NIH	R21	RCT for Mechanisms and Management of Sleep Utilizing Multicenter Clinical Oncology Network
Parker, Karen	NIH	R01	Early experience and emotional development in free ranging primates (Co-PI)
Parker, Karen	NIH	R21	The role of vasopressin in the social deficits of autism
Parker, Karen	NIH	R21	Epigenetic regulation of social impairments and treatment response in autism
Pasca, Sergiu	NIH	R01	Gaining insight into psychiatric disease by engineering piece by piece the human brain in vitro
Qin, Shaozheng	NIH	K99	Brain Systems Underlying Episodic Memory for Social Stimuli in Childhood Autism
Reiss, Allan	NIH	T32	Research Training for Child Psychiatry and Development
Reiss, Allan	NIH	R01	Type 1 Diabetes and the Brain in Children: Metabolic Interventions (Co-PI)
Reiss, Allan	NIH	R01	Longitudinal MRI Study of Brain Development in Fragile X
Reiss, Allan	NIH	R01	Gene, Brain, Behavior in Turner Syndrome
Rodriguez, Carolyn	NIH	K23	Novel Interventions for Adults with Obsessive-Compulsive Disorder
Rodriguez, Carolyn	NIH	R01	NMDAR Modulation As A Therapeutic Target and Probe of Neural Dysfunction in OCD
Rosenberg-Lee, Miriam	NIH	K01	Brain Systems Supporting Learning and Memory in Children with Autism
Ryali, Srikanth	NIH	K25	Methods for Dynamic Causal Interactions in the Developing Human Brain
Saggar, Manish	NIH	K99	Quantifying the Fluctuations of Intrinsic Brain Activity in Healthy and Patient Populations
Schatzberg, Alan	NIH	R25	Research Career Development Institute for Psychiatry (R25) (Co-PI)
Schatzberg, Alan	NIH	T32	A Biobehavioral Research Training Program
Singh, Manpreet	NIH	R01	2/2-Mechanism of Antidepressant-Related Dysfunctional Arousal in High-Risk Youth
Singh, Manpreet	NIH	R56	Neurodevelopmental Features of Sexual Dimorphism in Pediatric Psychopathology
Singh, Manpreet	NIH	R01	Neurobehavioral Trajectories of Pediatric Depression and Insulin Sensitivity
Sullivan, Edith	NIH	R01	Neuroimaging of Connectivity in Alcoholism/In Vivo Diffusion & Spectroscopic Brian Imaging in Alcoholism (Co-PI)
Sullivan, Edith	NIH	R37	Cerebellar Structure and Function in Alcoholism
Sullivan, Edith	NIH	K05	Translational Studies of Brain Circuitry Disrupted by Alcoholism

Sullivan, Edith	NIH	U01	International Research Collaboration on Neuroimaging Studies of Alcoholism
Tinklenberg, Jared	CA Dept of Public Health		California Alzheimer's Disease Centers (CADC)
Urban, Alexander	NIH	DP2	Genomic and epigenomic effects of large CNV in neurons from iPSC
Walsh, Jessica	NIH	F32	Systems level investigation of di-synaptic circuit involved in panic disorder
Wilson, Helen	NIH	R01	Exposure to violence and unsafe sex in late adolescent African American women
Williams, Leanne	NIH	UH2	Engaging self-regulation targets to understand the mechanisms of behavior change and improve mood and weight outcomes (Co-PI)
Williams, Leanne	NIH	R01	Neural Dimensions of Threat Reactivity and Regulation for Understanding Anxiety
Wu, Di	NIH	K99	Asynchronous Release in Synaptic Transmission
Zeitzer, Jamie	NIH	R21	Treating sleep disruption in teens with millisecond light exposure during sleep

Industry-Sponsored Clinical Trials and Research

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
DeBattista, Charles	AssureRX Health, Inc.	A 12-Week, Randomized, Double-Blind, Controlled Evaluation Followed by an Open-Label 12-Week Follow-up Period of the Impact of GeneSight Psychotropic on Response to Psychotropic Treatment in Outpatients Suffering from a Major Depressive Disorder (MDD) and Having Had (Within the Current Episode) an Inadequate Response to at Least One Psychotropic Medication Included in GeneSight Psychotropic
DeBattista, Charles	St. Jude Medical Neuromodulation Division	A Long-term Follow-Up Study for the Evaluation of Patients who have a Deep Brain Stimulation System for the Adjunctive Treatment of Major Depressive Disorder
De Lecea, Luis	Johnson and Johnson	Functional Connectivity of GPR-139-Expressing Neurons
De Lecea, Luis	Merck Sharp & Dohme Corp.	Hcrt/orexin circuit dynamics and memory consolidation
Kushida, Clete	Jawbone Corporation	Comparison of Jawbone Devices to In-Lab Polysomnography
Kushida, Clete	Seven Dreamers Laboratories, Inc.	Nasal Airway Stent (NAS) study
Kushida, Clete	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

Industry-Sponsored Clinical Trials and Research (continued)

Mignot, Emmanuel	Clinilabs, 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, Open-Label 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 Twelve-Week, Double-Blind, Placebo-Controlled, Randomized, Parallel Group, Multicenter Study of the Safety and Efficacy of JZP-110 [(R)-2-amino-3-phenylpropylcarbamate hydrochloride] in the Treatment of Excessive Sleepiness in Subjects with Obstructive Sleep Apnea (OSA)
Mignot, Emmanuel	Jazz Pharmaceuticals	A Twelve-week, Double-blind, Placebo-controlled, Randomized, Parallel-group, Multicenter Study of the Safety and Efficacy of JZP-110 [(R)-2-amino 3-phenylpropylcarbamate hydrochloride] in the Treatment of Excessive Sleepiness in Subjects with Narcolepsy
Mignot, Emmanuel	Jazz Pharmaceuticals	PSG polygraphic markers of narcolepsy/hypocretin
Mignot, Emmanuel	Jazz Pharmaceuticals	Consulting Agreement: Global Lead Investigator for the Jazz Pharmaceuticals Pediatric Narcolepsy Study
Mignot, Emmanuel	Merck Sharp & Dohme Corp.	Are Insomnia Symptoms Associated With Increased CSF Hypocretin-1 Levels? - A Retrospective Pilot Study
Miller, Shefali	Merck Sharp & Dohme Corp.	Adjunctive suvorexant for treatment-resistant insomnia in patients with bipolar disorder
Nishino, Seiji	Airweave	Effect of high rebound mattress toppers on sleep and sleep related symptoms
Nishino, Seiji	Airweave	Evaluation of Effects of a High Rebound Mattress Pad on Sleep and Athletic Performance
Ruoff, Chad	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
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

Foundation and Non-Profit Funding

Adelsheim, Steve	The Robert Wood Johnson Foundation	Headspace in the US: Creating a National Culture of Adolescent Health
Adelsheim, Steve	The Robert Wood Johnson Foundation	National PEPPNET Coordination and Implementation Program
Carrion, Victor	The Tipping Point Foundation	Early Life Stress Research Program
Cosgrove, Victoria Eileen	American Psychological Association	Understanding the Climate of a Cognitive Behavioral Therapy Group for Adolescents with Mood Disorders
De Lecea, Luis	United States-Israel Binational Science Foundation (BSF)	Functional connectivity in hypothalamic circuits
Fung, Lawrence	American Academy of Child and Adolescent Psychiatry	Developmental Pathodynamics of Structural and Connectional Neuroanatomy in a Mouse Model of Fragile X Syndrome
Hall, Scott	The John Merck Fund	Treatment of Disruptive Behaviors in Fragile X Syndrome
Hardan, Antonio	The Simons Foundation Autism Research Initiative	Randomized Controlled Pilot Trial of Pregnenolone in Autism
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
Kushida, Clete	Patient-Centered Outcomes Research Institute	Sustainable Methods, Algorithms & Research Tools for Delivering Optimal Care
Lembke, Anna	American Board of Addiction Medicine Foundation	Next Generation Award for Adolescent Substance Use Prevention
Malenka, Robert	The Simons Foundation Autism Research Initiative	Neural mechanisms of social reward in mouse models of autism
Menon, Vinod	The Simons Foundation Autism Research Initiative	Decoding Affective Prosody and Communication Circuits in Autism
Mignot, Emmanuel	National Space Biomedical Research Institute	Markers of Susceptibility to Neurobehavioral Decrements In Space Flight
Mignot, Emmanuel	Technische Universitat Munchen	Genotyping of Individuals with Movement and Sleep Disorders
O'Hara, Ruth	Bay Area Autism Consortium	Reduced Rapid Eye Movement Sleep in ASD Reflects Misalignment of the Circadian Clock
Ordaz, Sarah	Brain & Behavior Research Foundation	Neural Functional Connectivity as a Mediator of the Effects of Parenting on Clinical Course in Adolescent Depression

Foundation and Non-Profit Funding (continued)

Ordaz, Sarah	The Klingenstein Third Generation Foundation	Neural Functional Connectivity in Adolescent Depression: Mediating the Effects of Parental Warmth on Clinical Course
Parker, Karen	The Simons Foundation Autism Research Initiative	Detecting and Treating Social Impairments in a Monkey Model
Pasca, Sergiu	MQ: Transforming Mental Health	Identifying cellular mechanisms of disease and novel therapeutic targets in neurons derived from patients with schizophrenia
Rasgon, Natalie	American Diabetes Association, Inc.	Effects of Liraglutide on hippocampal structure and function in aging adults with prediabetes
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	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
Steinberg, Elizabeth	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
Urban, Alexander	March of Dimes Birth Defects Foundation	Multilevel genomics analyses of models of neuronal and cardiovascular symptoms in 22q11-Deletion-Syndrome using induced pluripotent stem cells
Yoon, Jong	The Charles A. Dana Foundation	Improving the early detection of schizophrenia and outcomes with a novel method of precisely measuring substantianigra activity
Zalpuri, Isheeta	American Psychiatric Association	SAMHSA's Minority Fellowship

Subcontracts

Albucher, Ronald	University of Michigan	Electronic Bridge to Mental Health (eBridge) for College Students
Debattista, Charles	Massachusetts General Hospital	Double-Blind, Placebo-Controlled Proof-of-Concept (POC) Trial of Ketamine Therapy in Treatment-Resistant Depression (TRD)
Dhabhar, Firdaus	University of California, Davis	Quantifiable Constituents of Spiritual Growth
Etkin, Amit	New York University	Prevention of PTSD III - Neurobehavioral Training of Emotional Regulation
Hardan, Antonio	Boston Children's Hospital	Developmental Synaptopathies Associated with TSC, PTEN, and SHANK3 Mutations
Humphreys, Keith	Third Sector Capital Partners Organization	Designing a Social Impact Bond-Funded Mental Health Evaluation
Jo, Booil	Palo Alto Veterans Institute for Research	Clinical Trial of yoga as a therapeutic intervention for chronic pain in gulf war illness
Jo, Booil	The Johns Hopkins University	Longitudinal Assessment of Manic Symptoms
Joshi, Shashank	SRI International	An Efficacy Study of the Cognitive Behavioral Intervention for Trauma in Schools (CBITS) Program
Kushida, Clete	Department of Veterans Affairs	NIDA/Stanford Biostatistical Consultation
Kushida, Clete	Palo Alto Veterans Institute for Research	Treatments for Insomnia, Mediators, Moderators, and Quality of Life
Levinson, Douglas	University of California, San Diego	Psychiatric GWAS - Genomic Follow Up Next-Gen Sequencing & Genotyping
Malenka, Robert	Mt. Sinai School of Medicine	Molecular Neurobiology of Drug Addiction
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
Schatzberg, Alan	Palo Alto Veterans Institute for Research	Emotion Regulation in Anxiety & Depression: A Novel Neurobehavioral Intervention
Sullivan, Edith	SRI International	CNS Deficits - Interaction of Age and Alcoholism
Sullivan, Edith	SRI International	INIA: Imaging Core
Sullivan, Edith	SRI International	Tracking HIV Infection and Alcohol Abuse CNS Comorbidity with Neuroimaging
Sullivan, Edith	SRI International	National Consortium on Alcohol and NeuroDevelopment in Adolescence (N-CANDA): Data Core
Thompson, Dolores Gallagher	Photozig, Inc.	Webnovela for Hispanic Dementia Family Caregivers

Subcontracts (continued)

Thompson, Dolores Gallagher	World Health Organization	Development of iSupport for Dementia Family Caregivers
Trockel, Mickey	Washington University in St. Louis	Technology to Improve Eating Disorders Treatment
Urban, Alexander	Yale University	Genomic mosaicism in developing human brain
Urban, Alexander	Yale University	Somatic Mosaicism in the Brain of Tourette Syndrome

NEW Department Small Grants Program

Program Overview




The new Department of Psychiatry and Behavioral Sciences Small Grant Program, launched in 2015, was designed to promote research and collaborative scholarly projects advancing the academic interests of our faculty and the strategic themes of our department.

Projects across the full spectrum of science and scholarship were encouraged and we are excited to announce that 21 applications to the Small Grant Program were selected for funding in January, 2016. Awards included Pilot Studies in novel scientific areas that have high potential to lead to competitive grant applications and Small Scholarly Projects related to education, clinical care, community outreach, and health systems issues, such as health care quality.

The selected projects represent those most highly rated by reviewers and with special salience to department missions, and include 6 pilot studies and 15 small scholarly projects.

Funded Pilot Studies

Jacob Ballon, MD	Open Label, Flexible-Dose, Adjunctive Bromocriptine for Patients with Schizophrenia and Metabolic Dysfunction
Michele Berk, PhD & 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



Listed Alphabetically: Row 1 - Adler, Ballon, Berk, Bullock, Cassidy Eagle, Cao, Chen, Cheung, Dunn, Eisen, Row 2 - Green, Hardy, Kessler, Khan, Kim, Mason, Naranjo, Poon, Reicherter, Rodriguez, Row 3 - Saggar, Sher, Sullivan, Weitlauf, E Williams, N Williams

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 & 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
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
Amy Poon, MD	An Educational Intervention Program for Decreasing Mental Health Stigma and Barriers to Treatment for Veterinarians and Veterinary Students
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 of Genito-Pelvic Pain/Penetration Disorder in Women with Interpersonal Trauma Exposure

Educational Excellence



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 nurturing leaders - individuals whose work will bring about transformative change in our society through their influence and impact.

Our department engages with over 6,000 learners each year, ranging from students in high school to clinicians in practice. 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 promoted by being located on the same campus.

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, engaged in critical thinking and creativity and bringing about transformative change in society.

Alan Louie, MD
Professor
Associate Chair - Education

7 and 3

subspecialty physician fellowships and NIH T32 training programs

100%

of ACGME and APA training programs with maximum years of accreditation

2016

best national residency matching program results in our history

Department Education 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. Numerous research opportunities are available by enrolling in psychiatry research courses. Faculty also serve as mentors in the Pre-Major Advising Program.

We recently enrolled approximately 800 undergraduates in educational activities in the Department. Forty-seven members of the Department’s faculty taught undergraduate courses.

Medical School Education in Psychiatry

Charles DeBattista, MD, DMH, Director of Medical Student Education
Yasmin Owusu, MD, Pre-Clerkship Director
Divy Ravindranath, MD, MS, Site Director VA PAD

Psychiatry and Behavioral Sciences are taught during both the pre-clerkship and clerkship parts of medical school. Pre-clerkship instruction is offered to first and second year students and explores the psychological effects of physical diseases, the doctor-patient relationship, ethical issues in medicine, and human development; offers patient interviewing apprenticeships; and examines the major psychiatric disorders including psychotic, mood and anxiety, eating, somatoform and dissociative, and substance use disorders.

Elective courses are also offered in topics like medical hypnosis and child and adolescent psychiatry. Clerkships 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. Advanced psychiatric clerkships offer specialized experiences in child and adolescent, geriatric, sleep, psychosomatic, addiction, trauma, or research psychiatry.

High School Education in Psychiatry and Behavioral Sciences: CNI-X

Laura Roberts, MD, MA, Co-Director
Alan Louie, MD, Co-Director

The Clinical Neuroscience Internship Experience (CNI-X) is an intensive, weeklong summer program following the sophomore, junior, or senior years in high school that introduces students to the amazing breadth of research found in our Department of Psychiatry and Behavioral Sciences.

The week is packed with small group sessions on topics ranging from miniature human brains in petri dishes, to cognition studies in flight simulators, to treating addiction in adolescents, to human rights of torture victims with PTSD. Experiential learning, self-directed study, and self-reflection are emphasized.

CNI-X launched in 2015 with 18 students and 20 faculty members. In its second year it has grown over 6 times and there are over 120 students enrolled.

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 PAD
Cecylia Nowakowska, MD, PhD, Site Director, VA MPD

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. Clinical care is approached with critical thinking and innovation. The curriculum features a scholarly concentration program 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.

Subspecialty Clinical Fellowships

Addiction Medicine Fellowship

Anna Lembke, MD, Training Director

The ABAM-accredited Addiction Medicine Fellowship is a one-year fellowship open to physicians who have completed an ACGME-accredited residency in any specialty. The fellowship provides state-of-the-art training in the treatment of patients with addiction. The program is tailored to the individual background and interests of the applicant, and our goal is to train physicians in all aspects of treating patients with substance use disorders, behavioral addictions, and co-occurring psychiatric and medical disorders. We also hope to promote future leaders, policy-makers, and researchers in the field of Addiction Medicine.

The Addiction Medicine Fellowship has become a model of cross-specialty training, represented at the White House Symposium on “Medicine Responds to the Need for Addiction Expertise” (2015). The fellowship also published the online, enduring CME course “Prescription Drug Abuse – Compassionate Care for a Complex Problem,” funded by the Stanford Center for Continuing Medical Education, and received the Next Generation Award (2014-2016) for Adolescent Substance Use Prevention, American Board of Addiction Medicine/Conrad N. Hilton Foundation.

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. Fellows develop clinical expertise in assessing and treating the wide range of psychiatric disorders in the elderly. Fellows have a wide range of research opportunities--e.g., at the intersections of geriatric psychiatry with sleep medicine, dementia neuroscience, ethics/forensics, and psycho-oncology. Fellows also develop skills in scholarly activities and administration that are required of leaders in clinical practice, community work, and/or academia.

We recently recruited a new training director and several new faculty (psychiatrists and psychologists), bringing the number of faculty who are ABPN-certified in geriatric psychiatry to six, with a seventh to join soon.

Child and Adolescent Psychiatry Fellowship

Shashank Joshi, MD, Training Director
Glen Elliott, MD, PhD, Associate Training Director
Michelle Goldsmith, MD, MA, 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. 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 has recently been approved by the GME office to expand from seven to nine fellows per year, for a total of 18 fellows over the two year training.

Neuropsychiatry Fellowship

John Barry, MD, Training Director
Sepideh Bajestan, MD, PhD, Associate Training Director

The 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, including a traditional neuropsychiatry track and an interventional psychiatry track that emphasizes transcranial magnetic stimulation, electroconvulsive therapy, vagus nerve stimulations, and deep brain stimulation.

We recently increased from one to two fellows and to seven faculty who are UCNS-certified in “Neuropsychiatry and Behavioral Neurology.”

Clinical Psychology Training

Psychosomatic Medicine Fellowship

Jose Maldonado, MD, FAPM, FAFCE, Training Director
Liza Sher, MD, Associate Training Director

The ACGME-accredited Psychosomatic Medicine 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 of delirium in medically ill individuals. They have also been instrumental in the development of treatment protocols and algorithms.

We have increased our program to two fellows and to five faculty who are ABPN-certified in "Psychosomatic Medicine."

Student Mental Health Fellowship

Amy Poon, MD, Training Director

The 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 both outpatient psychotherapy/pharmacotherapy and inpatient consults.

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).

We recently received approval and funding for this fellowship from the GME office.

Sleep Medicine Fellowship

Anstella Robinson, MD, Training Director
Chad Ruoff, MD, Assistant Training Director

The ACGME-accredited Sleep Medicine Fellowship is viewed internationally as the world's leading training program for sleep disorders medicine and thereby draws trainees from across the United States as well as from around the globe. It is also the first fellowship program accredited by the American Sleep Disorders Association.

This one-year clinical fellowship at the Stanford Sleep Medicine Center at Stanford Hospital and Clinics covers multiple aspects of sleep medicine 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.

The Sleep Medicine Fellowship has given great contribution to public education and the health of our community. Eight fellows produced 2 scientific publications, 2 were awarded grants, 7 gave national/regional presentations, 9 participated in quality improvement projects, and 33 presentations were given to the local community.

Child and Adolescent Pre-doctoral Psychology Internship

Michelle Brown, PhD, Director

The Predoctoral Psychology Internship in child clinical/pediatric psychology, accredited by the American Psychological Association, is one-year long at the Lucile Packard Children's Hospital at Stanford and the Children's Health Council. The program seeks to train highly skilled and sensitive clinicians capable of functioning in a variety of multidisciplinary clinical settings and using a variety of treatment methods and conceptual perspectives, with a range of child and family problems.

The internship year is the capstone experience in the overall professional development and ultimate professional identities of PhD clinical psychologists-in-training and is tailored to the individual needs of interns. The program trains high-quality clinicians with a realistic sense of their professional capabilities.

PGSP-Stanford PsyD Consortium

Kimberly Hill, PhD, Co-Director of Clinical Training
Robert Holaway, PhD, Co-Associate Director of Clinical Training
Allison Thompson, PhD, Co-Associate Director of Clinical Training

The PGSP-Stanford PsyD Consortium is a full-time, five-year, practitioner-scholar program intended for those seeking careers devoted to the direct delivery of clinical psychological services. Students in the program, which has been continuously accredited by the American Psychological Association since 2006, 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 incorporating supervised clinical training. Students complete three full years of practicum training in settings that include the Department before completing a full-time, year-long, pre-doctoral internship.

We matched 100% of graduates into American Psychological Association-accredited internships. This exceeds the national match rates for PsyD programs (49%) and for PhD programs (78%). Our PsyD program has the highest match rate among all PsyD programs, including the Rutgers program, which is the only one rated higher than Stanford by US News.

Clinical Psychology Post-doctoral Fellowships

Kate Corcoran, PhD, Training Director, Clinical Psychology (Adult)
Sharon Williams, PhD, Training Director, Clinical Psychology (Child)

The Clinical Psychology Fellowship at Stanford, accredited by the American Psychological Association, 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.

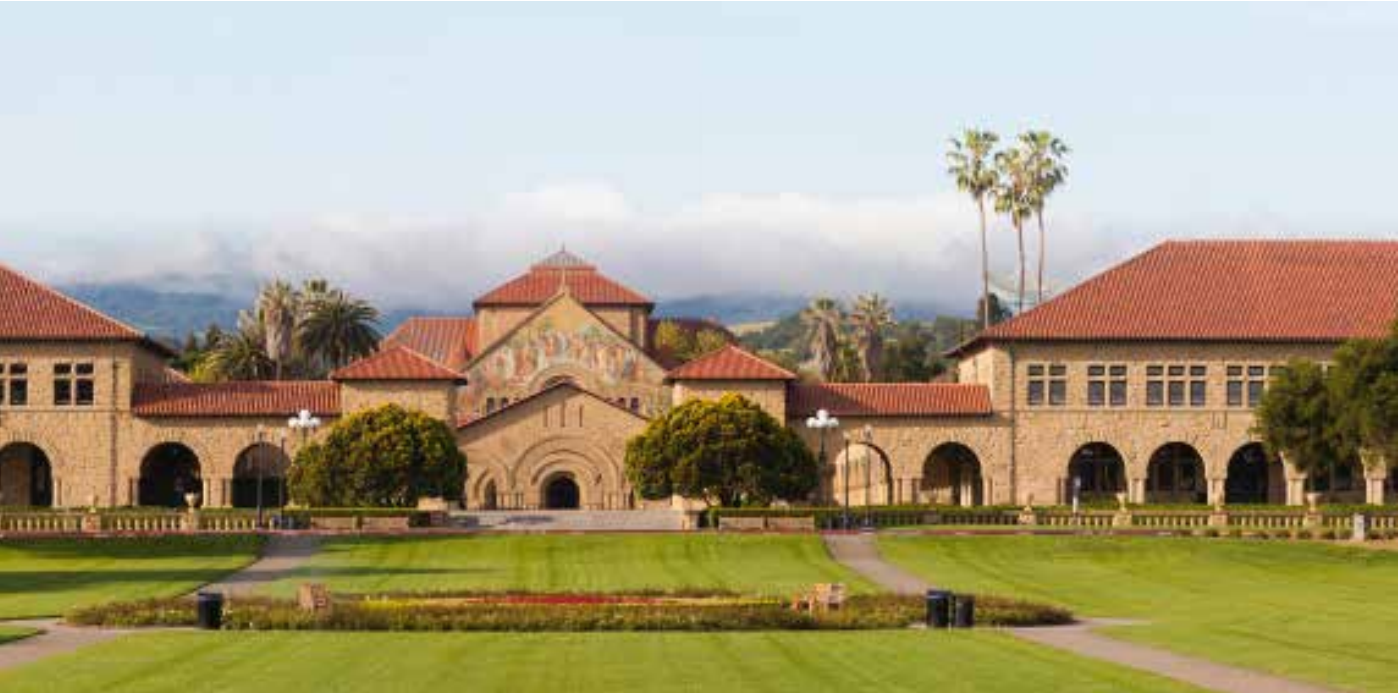
Fellows are trained in one of two programs:
1. Clinical Child and Adolescent Psychology
2. Clinical Psychology

In 2013, the Clinical Psychology Post-doctoral Fellowship Program achieved accreditation from the American Psychological Association. This initial accreditation for the program was for seven years, the longest term possible, which is rarely confirmed for a new program. The Adult Program now offers 6 positions in the Psychosocial Treatment Clinic, up from 4 when we first applied for accreditation. The Child and Adolescent Program continues to be 1 of 8 programs in the country with this accreditation.

100%

PGSP-Stanford PsyD Consortium internship match rate in 2013, 2014 and 2016

Advanced Research Training Programs



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 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.

In the past 5 years the grant supported 18 T-32 post-doctoral research fellows. The post-doc fellows were scholarly productive, producing over 40 publications, many in top journals. The majority of the fellows who were supported by the grant in the past 5 years were awarded research or career development grants by the 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. A full complement of fellows are now recruited to this T32. 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 video-based 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.

T32 Research Training for Child Psychiatry and Development

PI: Allan Reiss, MD

Positions are available for two to three years of training in clinical or basic research for MD and PhD fellows. This program is particularly intended for beginning researchers who seek to improve or expand their ability to conduct interdisciplinary investigation in brain and behavioral sciences.

Candidates have the opportunity to participate in research projects of their mentors and/or develop their own research projects. Weekly seminars and formal training in research methods and ethics are an integral part of the program.

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 Palo Alto Veterans Affairs 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.

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 Palo Alto Veterans Affairs Health Care System provides a two-year post-doctoral 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 didactic courses to promote research and professional development and has attracted strong applicants from across the nation. Since its inception in 2012 more than a dozen fellows successfully completed their training and subsequently launched careers in healthcare, high tech, or government.

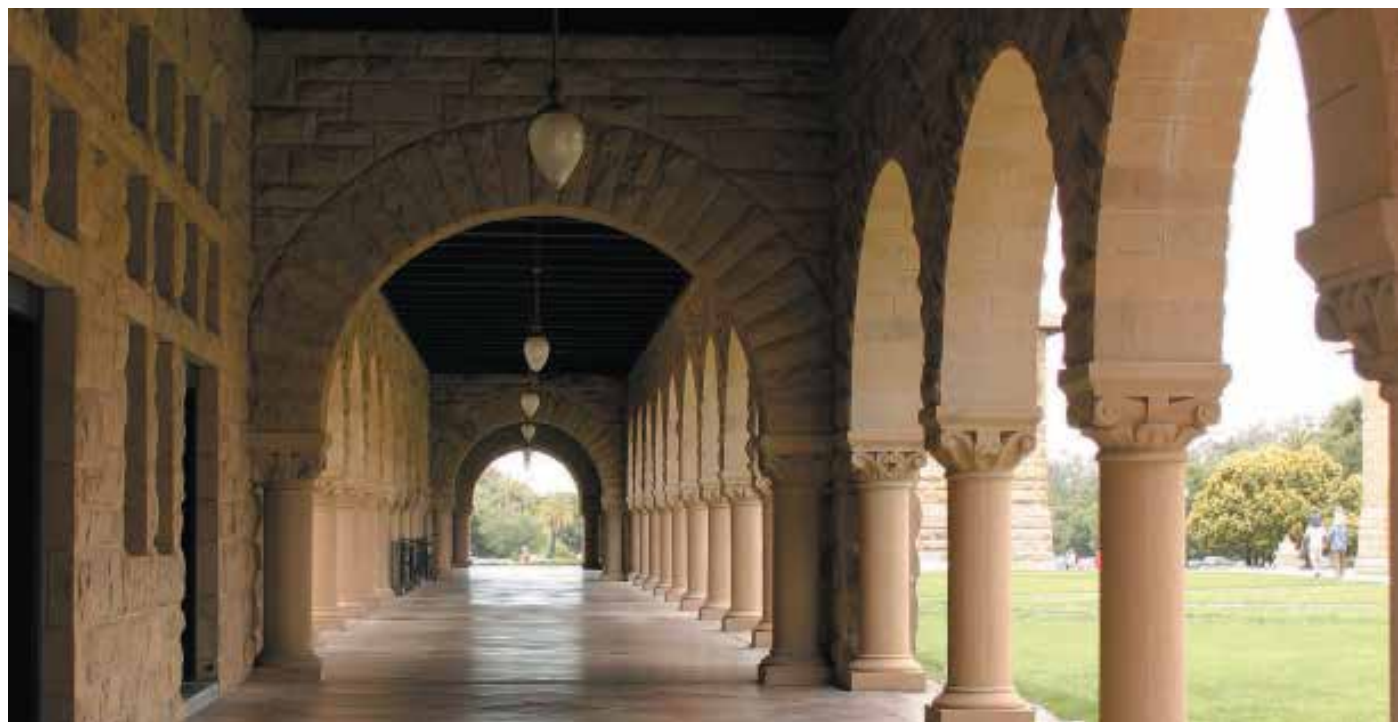
National Center for Posttraumatic Stress Disorder (NCPTSD) Advanced Fellowship

Marylene Cloitre, PhD, Fellowship Director

The National Center for Posttraumatic Stress Disorder (NCPTSD), Division of Dissemination and Training at the Palo Alto Veterans Affairs 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.

Continuing Education



Continuing Medical Education (CME)

Alan Louie, MD, Director

Multiple educational activities are sponsored 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, but several are also open to the general public. Many offer CME credit through the Stanford Center for Continuing Medical Education. Examples of these activities are as follows:

- CME Conferences: Innovations in Psychiatry and Behavioral Health, Managing Sleep Health in the Primary Care Setting
- Grand Rounds: Psychiatry and Behavioral Sciences Grand Rounds, Sleep Medicine Grand Rounds, Geriatric Psychiatry and Neuroscience Grand Rounds
- Joint Sessions of the Psychiatry and Behavioral Sciences Grand Rounds and the Stanford Neuroscience Institute
- Regularly Scheduled Series (other than Grand Rounds): VA Interdisciplinary Mental Health CME Series, Closing the Gap: Moving towards Best Practices in Psychiatry
- Online CME courses: "Prescription Drug Misuse and Addiction: Compassionate Care for a Complex Problem," "Screening and Assessing Depression in Primary Care Settings: Clinical and Ethical Considerations," "Dementia and Diversity in Primary Care: A Primer – Guidelines, Ethnic Differences, and Assessments"

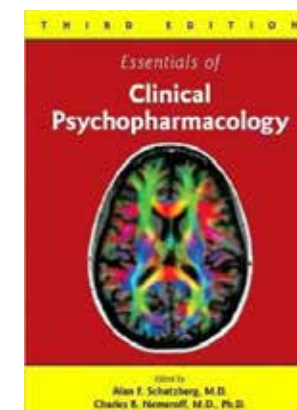
Stanford Geriatric Education Center (SGEC)

Dolores Gallagher-Thompson, PhD, ABPP, Director

The Stanford Geriatric Education Center (SGEC) is a nationally recognized leader in the field of ethnogeriatrics, health care for elders from diverse populations. Since SGEC was funded by the Bureau of the Health Professions in the Health Resources and Services Administration in 1987, hundreds of resources have been developed, and over 1600 trainings have been conducted with over 32,000 faculty and health care providers from a variety of disciplines, including medicine, nursing, social work, psychology, occupational therapy, pastoral counseling, and related fields.

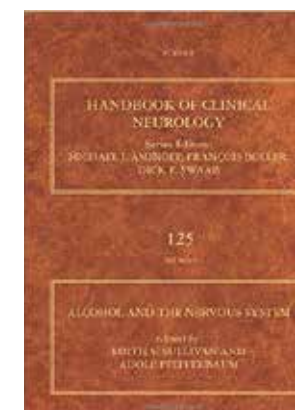
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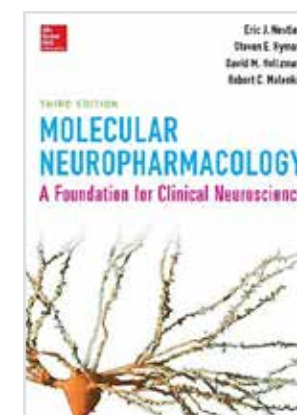
Essentials of Clinical Psychopharmacology: Third Edition

Co-Editor
Alan Schatzberg, MD



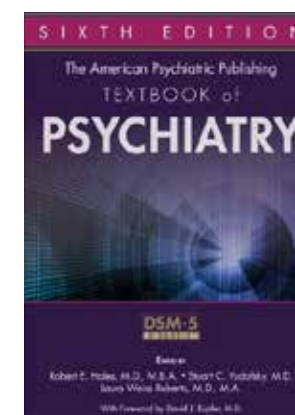
Handbook of Clinical Neurology: Alcohol and the Nervous System, 1st Edition

Co-Editor
Edith Sullivan, MD



Molecular Neuropharmacology: Third Edition


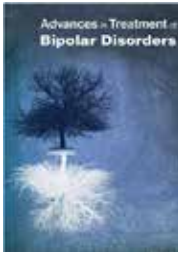
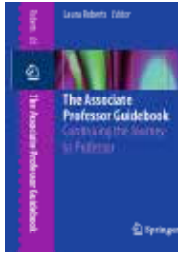

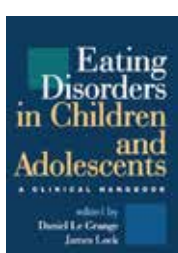
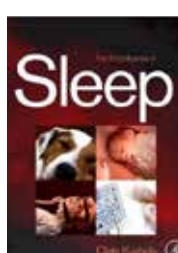


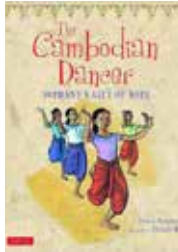


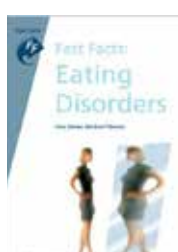
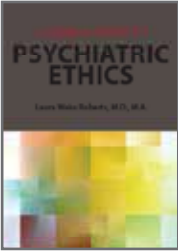


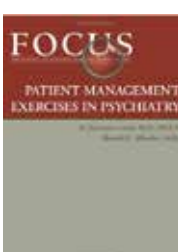

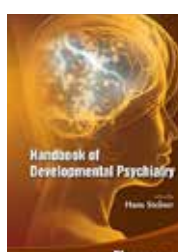


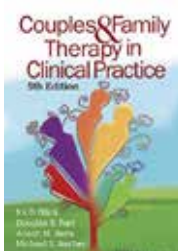
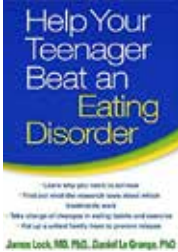


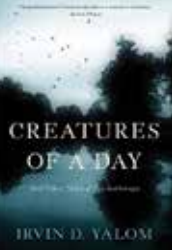


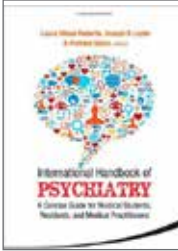


Co-Editor
Robert Malenka, MD, PhD



The American Psychiatric Publishing Textbook of Psychiatry: Sixth Edition




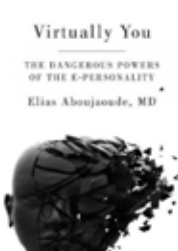
Co-Editor
Laura Roberts, MD, MA

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	<p>Autism Spectrum Conditions: FAQs on Autism, Asperger Syndrome, and Atypical Autism Answered by International Experts</p> <p>Co-Editor Joachim Hallmayer, MD, Dr med</p>		<p>Cambodia's Hidden Scars: Trauma Psychology in the Wake of the Khmer Rouge</p> <p>Co-Editor Daryn Reicherter, MD</p>		<p>The Cambodian Dancer: Sophany's Gift of Hope</p> <p>Author Daryn Reicherter, MD</p>		<p>Ethnicity and the Dementias</p> <p>Co-Editor Dolores Gallagher-Thompson, PhD, ABPP</p>		<p>Evaluation of Sleep Complaints, An Issue of Sleep Medicine Clinics</p> <p>Editor Clete Kushida, MD, PhD</p>		<p>Fast Facts: Eating Disorders</p> <p>Co-Author Hans Steiner, MD</p>
	<p>A Clinical Guide to Psychiatric Ethics</p> <p>Author Laura Roberts, MD, MA</p>		<p>The Clinician Educator Guidebook: Steps and Strategies for Advancing Your Career</p> <p>Editor Laura Roberts, MD, MA</p>		<p>Cognitive-Behavioral Therapy for Late-Life Depression</p> <p>Presenter Dolores Gallagher-Thompson, PhD, ABPP</p>		<p>Focus Patient Management Exercises in Psychiatry</p> <p>Co-Author Ronald Albucher, MD</p>		<p>Goodnight Mind: Turn Off Your Noisy Thoughts and Get a Good Night's Sleep</p> <p>Co-Author Rachel Manber, PhD</p>		<p>Handbook of Developmental Psychiatry</p> <p>Co-Author and Editor Hans Steiner, MD</p>
	<p>Community-Based Participatory Research for Improved Mental Healthcare: A Manual for Clinicians and Researchers</p> <p>Author Laura Roberts, MD, MA</p>		<p>Connect Core Concepts in Health</p> <p>Co-Author Walton Roth, MD</p>		<p>Couples and Family Therapy in Clinical Practice</p> <p>Co-Authors Ira Glick, MD Douglas Rait, PhD</p>		<p>Help Your Teenager Beat an Eating Disorder</p> <p>Co-Author James Lock, MD, PhD</p>		<p>How Many Subjects?: Statistical Power Analysis in Research</p> <p>Co-Author Helena Chmura Kraemer, PhD</p>		<p>Impulse Control Disorders</p> <p>Co-Editors Elias Aboujaoude, MD Lorrin Koran, MD</p>
	<p>Creatures of a Day: And Other Tales of Psychotherapy</p> <p>Author Irvin Yalom, MD</p>		<p>Cue-Centered Therapy for Youth Experiencing Posttraumatic Symptoms: A Structured Multi-Modal Intervention, Therapist Guide</p> <p>Author Victor Carrion, MD</p>		<p>Cultural Issues in Pediatric Mental Health, An Issue of Child and Adolescent Psychiatric Clinics of North America</p> <p>Co-Editor Shashank Joshi, MD</p>		<p>International Handbook of Psychiatry - A Concise Guide for Medical Students, Residents, and Medical Practitioners</p> <p>Co-Author and Co-Editor Laura Roberts, MD, MA</p>		<p>Manual of Clinical Psychopharmacology</p> <p>Co-Authors Alan Schatzberg, MD Charles DeBattista, DMH, MD</p>		<p>Mental Health in the Digital Age: Grave Dangers, Great Promise</p> <p>Co-Editor Elias Aboujaoude, MD</p>

Recent Books (continued)

	<p>The Oxford Handbook of Child and Adolescent Eating Disorders: Developmental Perspectives</p> <p>Editor James Lock, MD, PhD</p>		<p>Partnerships for Mental Health: Narratives of Community and Academic Collaboration</p> <p>Co-Editors Laura Roberts, MD, MA Daryn Reicherter, MD Steven Adelsheim, MD Shashank Joshi, MD</p>
	<p>Psychopharmacology, An Issue of Child and Adolescent Psychiatric Clinics of North America</p> <p>Co-Editor Kiki Chang, MD</p>		<p>Psychotherapy for Immigrant Youth</p> <p>Co-Editor Daryn Reicherter, MD</p>
	<p>Study Guide to DSM-5</p> <p>Co-Editors Laura Roberts, MD, MA Alan Louie, MD</p>		<p>The Treatment of Drinking Problems: A Guide to the Helping Professions</p> <p>Co-Author Keith Humphreys, PhD</p>
	<p>Treatment Manual for Anorexia Nervosa, Second Edition: A Family-Based Approach</p> <p>Co-Author James Lock, MD, PhD</p>		<p>Treatment Plans and Interventions for Insomnia: A Case Formulation Approach</p> <p>Co-Author Rachel Manber, PhD</p>

	<p>Professionalism and Ethics in Medicine: A Study Guide for Physicians and Physicians-in-Training</p> <p>Co-Editors Laura Roberts, MD, MA Daryn Reicherter, MD</p>		<p>The Spinoza Problem: A Novel</p> <p>Author Irvin Yalom, MD</p>
	<p>Treating Adolescents</p> <p>Co-Author Hans Steiner, MD</p>		<p>Virtually You: The Dangerous Powers of the E-Personality</p> <p>Author Elias Aboujaoude, MD</p>

Journals

	<p>Editor-in-Chief Laura Roberts, MD, MA Katharine Dexter McCormick and Stanley McCormick Memorial Professor and Chairman Psychiatry and Behavioral Sciences Stanford University School of Medicine</p>		<p>Regional Editor-in-Chief, Americas Keith Humphreys, PhD Professor and Section Director for Mental Health Policy Psychiatry and Behavioral Sciences Stanford University School of Medicine</p>
	<p>Co-Editors-in-Chief: Dolores E. Gallagher-Thompson, PhD, ABPP Director, Stanford Geriatric Education Center and Professor of Research Psychiatry and Behavioral Sciences Stanford University School of Medicine Larry W. Thompson, PhD Goldman Family Professor of Psychology, Pacific Graduate School of Psychology and Professor Emeritus, Psychiatry and Behavioral Sciences Stanford University School of Medicine</p>		<p>Editor-in-Chief Edith V. Sullivan, PhD Professor of Psychiatry and Behavioral Sciences Psychiatry and Behavioral Sciences Stanford University School of Medicine</p>
	<p>Co-Editor-in-Chief: Alan F. Schatzberg, MD Kenneth T. Norris, Jr. Professor Psychiatry and Behavioral Sciences Stanford University School of Medicine</p>		



Community Commitment and Engagement

Community commitment and engagement is a fundamental academic mission of the Department. Our community mission is defined broadly and flexibly to include our dedication to building academic collaboration and support among our faculty, learners, and staff as well as our intensive local, state, and national community partnerships, ultimately extending to international colleagues, creating novel behavioral health systems to provide care for mental health needs 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 homeless individuals with mental illness 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.

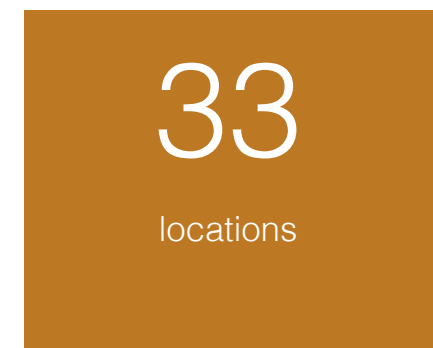
In all of these efforts, we bring the unique strengths of an academic partner. Collaborations between community and academic partners can have far greater impact than the work of either entity alone. Several of our faculty collaborated on a 2015 book titled *Partnerships for Mental Health: Narratives of Community and Academic Collaboration*, co-edited by Drs. Laura Roberts, Daryn Reicherter, Steven Adelsheim, and Shashank Joshi. This text highlights the remarkable and sometimes very difficult narrative experiences of community and academic partners engaged in transformative work in many countries in the world and many counties in the US. This book follows an earlier book by Dr. Laura Roberts with colleagues on best practices in community-based participatory research (*Community Based Participatory Research for Improved Mental Healthcare*), published in 2013.

Because of the importance of the issues we face here and elsewhere, the community mission is important to every member of our Department, whether laboratory scientist or front-line community-based clinician. At our 2013 departmental retreat, the faculty identified this mission as an area for increased focus as a key objective and aspiration for the 2023 Department of Psychiatry and Behavioral Sciences of Stanford Medicine. A thematic group of faculty, the Community Engagement Advisory Committee, initially led by Dr. Victor Carrion and now by Dr. Steven Adelsheim, has worked together in support of these efforts. Numerous community-based activities have arisen from this dialogue, including our sponsorship of National Alliance on Mental Illness and Out of the Darkness events, led by Drs. Rebecca Bernert, Kim Bullock, and Amy Poon. Community partnerships in support of the Bay Area Asian community have led

to multiple family educational events focused on improving parent-child communication, including innovative learning through skits and cultural events, led by Dr. Roma Hu and many departmental trainees. New faculty recruits and new special initiatives based in the office of the chair, including the Center for Youth Mental Health and Wellbeing, have derived from this important departmental priority.

Our department continues to expand its community experiences for our trainees in county and local agency settings. We have also welcomed experts in community psychiatry administration to Stanford to build greater understanding and collaboration. Many of our department's faculty have served as leaders in response to local community crises and have provided guidance on developing new behavioral health systems of care for county, state, and regional partners. Most recently, we have developed new 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, and international victims of torture – to name just a few. In partnership with others, we seek to expand our community engagement efforts to increase broad access to culturally appropriate, cutting-edge mental health care.

Looking forward, we will continue to expand clinical support, research, education, and health policy activities focused on early intervention programs for adolescents and young adults, the use of technology in providing broad mental health support, and new partnerships with schools, community colleges, and our own Stanford campus to link young people to mental health care earlier and more effectively. We are working to diminish stigma associated with having mental health concerns or seeking mental health support. Further, by creating a cadre of trainees equipped to serve as community mental health leaders and team members, providing education and consultative support for community 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 the platform that will give rise to better health outcomes of the communities – the people and populations – we serve.





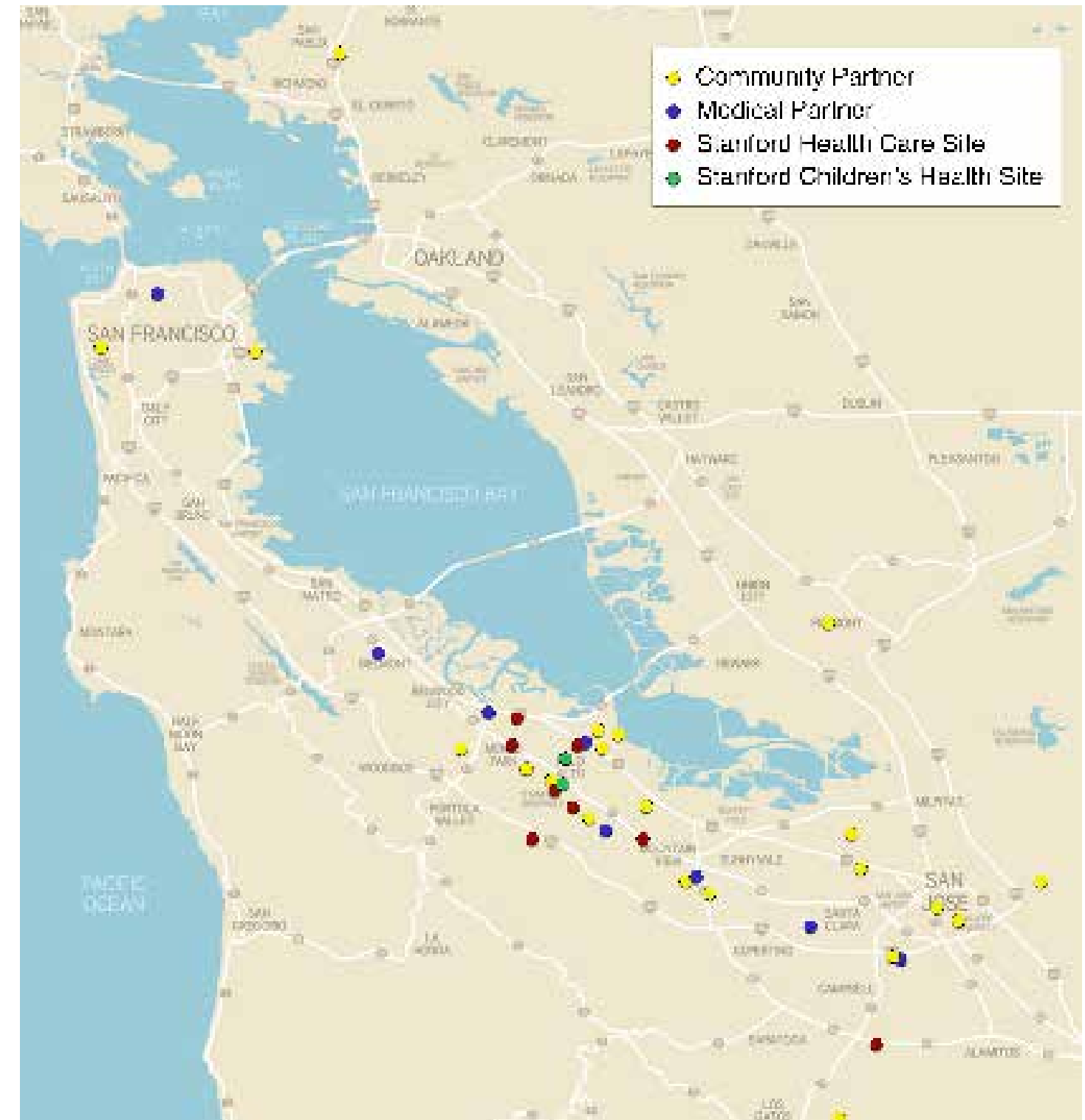
Clinical Innovation and Service

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 five 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 FY2016, our Quarry Road clinics will have nearly 67,000 outpatient visits and our faculty as a whole has 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 maximum impact in real-time and in the future.

Department Locations





401 Quarry- Psychiatry and
Behavioral Sciences Building
Stanford, CA



VAPAHCS
Palo Alto, CA



Boswell Building
Stanford, CA



3165 Porter
Palo Alto, CA



Hoover Pavilion
Stanford, CA



321 Middlefield Road
Palo Alto, CA



Grant Building
Stanford, CA



SIM1
Stanford, CA



Stanford Medicine
Outpatient Center
Redwood City, CA



Ravenswood Family
Health Center
Palo Alto, CA



AchieveKids
Palo Alto, CA



Palo Alto Unified School District
Palo Alto, CA



Beckman Center
Stanford, CA



Alway Building
Stanford, CA



Lucas Center (MSLS)
Stanford, CA



VAPAHCS - Menlo Park Division
Menlo Park, CA



California Pacific Medical Center
San Francisco, CA



Khalil Center
Santa Clara, CA



Canary Center
Palo Alto, CA



1070 Arastradero
Palo Alto, CA



CJ Huang Building
Stanford, CA



Positive Care Clinic
Atherton, CA

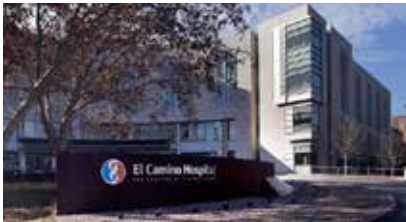


3240 Alpine Rd
Portola Valley, CA



Sequoia Unified School District
Redwood City, CA

Special Initiatives of the Chair



El Camino Medical Center
Mountain View, CA



El Camino Women's
Medical Group
Mountain View, CA



Mountain View/Los Altos
Unified School District
Mountain View, CA



Los Altos Primary Care Stanford
Los Altos, CA



Santa Clara Valley
Medical Center
San Jose, CA



Asian Americans for
Community Involvement
San Jose, CA



Gardner Family Health Network
San Jose, CA



Affinity Medical
Oakland, CA



Affinity Medical
San Pablo, CA

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. 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.

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.

Studies focused on risk factors giving rise to poor health outcomes have also shown how crucial the experience of belonging can be. Individuals who feel marginalized are more likely to experience significant health problems over the course of their lives. Moreover, 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 are launching "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. The Belonging Project was conceived by Dr. Laura Roberts who serves as the project director.

The Bike Beyond Project



The Bike Beyond Project is aimed to advance a community-academic partnership to foster resilience and improved physical and mental health among at-risk transitional age youth (ages 12-22) of the Central Valley through a novel pilot program in which intermediate, high school, and community college students are taught mechanics of bicycle repair, bicycle safety, and positive self-care skills while engaging in service that supports leadership and community-building skills.

The pilot program will apply the community-based model for children, adolescents, and young adults pioneered by Green Ways To School in Santa Cruz County, in which student participants help identify needs for safer, ecologically sustainable routes to school while also developing longitudinal engagement with local organizations and small businesses. The pilot program will build upon the experience and remarkable success of a nationally-recognized intervention project originating in the Department of Psychiatry and Behavioral Sciences at Stanford University that was created to strengthen emotional wellbeing, academic performance, mental health, and family outcomes among impoverished youth by teaching mindfulness, yoga, and positive health practices. For this novel pilot project, an initial retreat will bring together Stanford researchers with cycling advocates and educators from California's central valley and beyond. Together the convened group will lay the plans and identify best-practices for the Bike Beyond anchor project. Annual half-day retreats will be held to ensure cohesion of the project going forward. The partnership will engage: 1) local non-profit bicycle coalitions in the Central Valley; 2) classroom-based bike skills classes in Central Valley public intermediate and high schools and community colleges, and 3) academic faculty of Stanford University's Department of Psychiatry and Behavioral Sciences.

The project will be led by Laura Roberts, MD, Victor Carrion, MD, and Kyle McKinley, MFA, of Stanford University in collaboration with diverse community partners, Tawn Kennedy, who serves as the director of Green Ways to School, Jackie Musick, who serves as an instructor for Geared Up! Bicycle Technology Program, and teachers and students of Central Valley public schools.

Clinical Neuroscience Internship Experience (CNI-X)



Co-directed by Dr. Laura Roberts and Dr. Alan Louie, the Clinical Neuroscience Internship Experience (CNI-X) at Stanford University is an intensive two-week summer program following the sophomore, junior, or senior years in high school. Interns are introduced to the amazing breadth of research found in the Stanford Department of Psychiatry and Behavioral Sciences.

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. These hours of experiential and interactive learning with highly acclaimed faculty and researchers are complemented by homework assignments including written reflections on 13 relevant TED talks, the reading of scholarly articles, and attendance at a Stanford scientific poster session.

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 internship 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.

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’s 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. Our partners have years of experience developing a wide variety of treatment, education, and ingenious services for those they serve. 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



Beginning in June 2016, Dr. Laura Roberts will assume the role of Editor in Chief, Books for the American Psychiatric Association. In this capacity she will work with the Publisher, Associate Publisher, 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.

Other responsibilities include networking with key researchers, clinicians, and academics in mental healthcare to acquire new books proposals and manuscripts, as well as screening book proposals and judging their appropriateness for publication, and identifying topics and authors for new books.

As Editor in Chief, Books she is also responsible for overseeing and ensuring the rigorous and equitable peer review of book manuscripts – selecting reviewers, monitoring modifications of revised and resubmitted manuscripts, and making disposition recommendations.

Editorial Office: Academic Psychiatry



Academic Psychiatry is a bi-monthly, international academic medical journal that publishes original papers on innovations in psychiatric education and professional development. 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 and as frequent contributors of research and of content to the Journal.

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.

Forensic Psychiatry



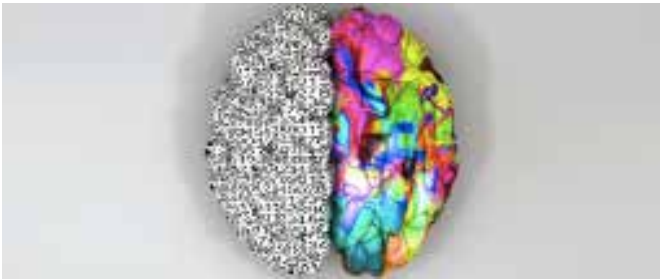
Forensic Psychiatry is a subspecialty of psychiatry that encompasses the interface between the law and psychiatry. A forensic psychiatrist can provide evaluations for numerous legal purposes, including competency to stand trial and mental state opinions among others.

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.

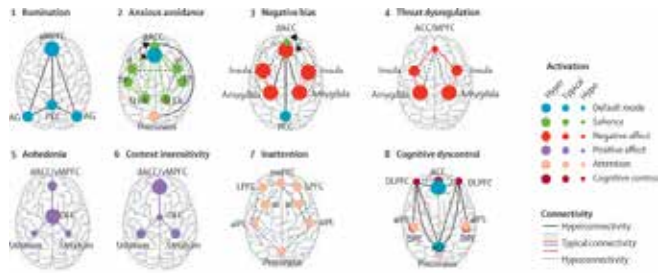
Humanities and Medicine: Growing the Heart and Mind of Medicine



Medicine is the most human of the sciences. The 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. 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 an 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; and developing a 3-5 year plan for enhancing/growing the academic and clinical interface between the medicine and the humanities at Stanford.

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 examples, 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 2014 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 under recognized.

Project Catalyst for Mental Health is a new center to be launched in 2016 as a special initiative of the Chair. 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.

Lyme Disease Working Group

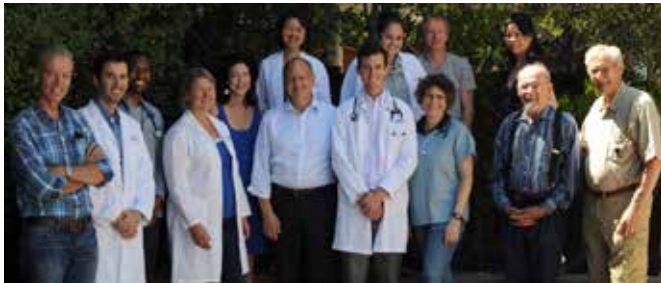


Lyme Disease is a serious and prevalent condition with physical, cognitive, and affective consequences. This condition and other tick-borne conditions are poorly understood and have received insufficient scientific attention. With the encouragement of a number of Lyme Disease organizations, we have initiated 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. Participating colleagues represent expertise in basic sciences, translational sciences, and clinical care. Basing this effort at Stanford University will build upon the advantages of working within an institution that strongly supports academic freedom while also encouraging interdisciplinary collaboration. This exceptional interdisciplinary group also values collaboration with other academic institutions, and a number of collaborations are underway.

Such a model is optimal in this context for its potential to produce major breakthroughs in knowledge and improve medical practice—perhaps even more so in the context of Lyme Disease where bringing together diverse views is greatly needed to advance the science and inform practice.

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. The group currently has some eighty members from all branches of medicine participating in monthly meetings, workshops, and annual events. 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.

Recently, the Pegasus group was featured in a SciArt in America blog post, a Psychology Today post, two Stanford Medicine SCOPE blog posts, and on Ernst Schmiederer. The Pegasus Physician Writers at Stanford also participated in a Café Scientifique event, reading short stories and poems on using blood products as life-saving interventions. The group has been featured in an article about the arts, humanities and medicine programs that allow Stanford School of Medicine students to explore their artistic passions in conjunction with their medical studies. They have also published several pieces in The Intima, A Journal of Narrative Medicine.

Reimagining Mental Healthcare



Reimagining Mental Healthcare challenges us to put aside what we know about mental healthcare and to start from scratch – to reimagine mental healthcare.

This special initiative of the Department of Psychiatry and Behavioral Sciences seeks to dream into the future of mental healthcare. Participants bring to bear on this task theories, tools, and expertise from fields outside mental healthcare – in particular, from information technology, design thinking, and implementation science. A multidisciplinary team including Drs. Andrew Chacko, Alison Darcy, Steven Lindley, Alan Louie, Laura Roberts, Josef Ruzek, Manish Saggarr, Erica Simon, Michael Valdovinos, and Lindsey Zimmerman are engaged in this special initiative.

Information technology encompasses the broad spectrum of possible applications including telemental health, electronic medical records, and measurement-based care, big data and machine learning, m-health applications and biometrics, virtual extenders, technological adjuncts to treatment, virtual reality, web-based interventions, and more. We are setting out to discover and create information technologies targeted at improving human mental health.

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 truly understand the mental health needs of our patients and the myriad array of providers and craft solutions required to meet those needs.

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 introducing and integrating discoveries into clinical practices and the care of populations, here and globally.

In essence, Reimagining Mental Healthcare is an incubator and accelerator of ideas and projects. We incubate ideas, iterate and refine their solutions, and accelerate their translation into improved mental healthcare. Participants bring different expertise to collaborations, and meetings with members of other Stanford Schools (e.g., School of Engineering) and Silicon Valley industries are additional resources for consultation and joint ventures.

Small Grant Program



The Department of Psychiatry and Behavioral Sciences Small Grant 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 Small Grant 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.

In its inaugural year, 38 applications were submitted for consideration and 21 projects were awarded full or partial funding. The Small Grant Program occurs annually, with applications due on November 15 each year.

Stanford Center for Youth
Mental Health and Wellbeing



The Stanford Center for Youth Mental Health and Wellbeing recognizes that we are in the midst of a national public health crisis among US youth and is committed to spearheading a new national vision for adolescent and young adult wellness and mental health support.

The clinical and research experts within the Department of Psychiatry and Behavioral Sciences have laid the groundwork of a national initiative for youth through their expertise in early mental health support, development of self-regulation tools, school mental health, and suicide prevention.

By creating an innovative health system and a new culture of health for the adolescent and young adult population, Stanford hopes to create a model for the country in how to better support our young people to navigate the transition to adulthood and realize their full potential as adults.

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 in response to significant needs identified among clinical trainees on our campus.

This program was established to address three main objectives:
1) mental health and wellbeing of residents and fellows, 2) educational needs that align with of 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.

Stanford WellConnect also offers wellness curriculum consultations and provides 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

Our People





Five Interdependent Academic Missions of the Department of Psychiatry and Behavioral Sciences

The vision of leaders is often touted as their greatest value to organizations, and perhaps that is true. The ability to imagine a better future, to articulate it clearly, and then to bring others forward in building and attaining that vision is certainly an essential quality of effective leaders. Leaders with extraordinary vision are thus creative, well spoken, and influential, and generate a sense of cohesiveness among individuals who, together, exert purposeful effort toward a foreseen objective.

In academic psychiatry, leaders are people who can help our field generally, and departments of psychiatry specifically, to fulfill their commitments in multiple mission areas. Most traditional academic organizations define three core missions, but I believe we actually assume responsibility for five overlapping areas. The first two areas encompass education, preparing the next generation of physicians-in-training and developing innovative specialty and subspecialty initiatives, as well as research and scholarship, the generation, translation, and application of new knowledge for the benefit of society. A third mission area is clinical advancement and practice, which involves creating new diagnostic and therapeutic approaches and providing state-of-the-art clinical care for patients from all backgrounds and walks of life. We are also responsible for community engagement—working to partner with, serve, and improve the health of our communities, locally and globally. We are charged with fostering professionalism and the companion endeavors of supporting professional development and ensuring the ethical expression of our profession in everyday life. Taken together, these commitments support the growth of expertise and skill among faculty and trainees. What is more, they strengthen the ability of today's early career leaders to carry the duties to our profession and its stakeholders moving forward. A leader with vision in academic psychiatry, in my view, is one who is able to recognize the interdependent nature of these mission areas and to yoke them together to bring about a better future.

From Roberts LW: "Leadership in Academic Psychiatry: The Vision, the "Givens," and the Nature of Leaders." Acad Psychiatry 2009;33:85-8. Copyright 2009 Academic Psychiatry. Reprinted with permission of Springer.