

The Dean's Newsletter: June 25, 2001

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Commencement Events

It was a true privilege to participate in the graduation festivities during Commencement Weekend at Stanford. Although my personal time measured only 10 weeks at the time of Commencement, it was still wonderful to be included in the celebration and to witness the happiness and satisfaction of our graduates, their families and our faculty. Without question, the joy of our graduate and medical students as they received their Stanford degrees shined brightly and proudly. The 2001 Medical School Convocation held on the Dean's Lawn on Sunday June 17th, included 18 recipients of the Master of Science Degree, 74 recipients of the Doctor of Philosophy Degree and 99 individuals receiving the degree of Doctor of Medicine. I am pleased that University Trustee Denise O'Leary joined us for our graduation ceremony.

This year's Medical School Commencement featured wonderful speeches by two Class representatives: Laura Evenson Furstenthal spoke on behalf of the Graduate Students and Mark Michael Pomerantz represented the graduating Medical Students.

I was very pleased that Dr. Gene Bauer agreed to deliver this year's Commencement Speech, the text of which follows below. Dr. Bauer has played an enormously important role at Stanford during his years as Dean (1995-2001). During that period many changes occurred at the Medical Center, including the merger and then de-merger of Stanford with UCSF. Although these events and their consequences have continued to impact the School and faculty, it must also be noted that Dr. Bauer was also instrumental in helping the School to grow and achieve even greater excellence during this very challenging period. Importantly, during his tenure as Dean, the School recruited a number of exceptional faculty, added a number of Endowed Professorships, increased the number of NIH and other competitive grants and awards, expanded its research space to include the Center for Clinical Sciences Research (CCSR), and continued to attract superb students, including many in this year's graduating class.

I also had the interesting experience of traveling to Boston on June 19th for the graduation of the residents in Pediatric Medicine at Children's Hospital/Harvard whom I had helped train prior to moving to Stanford this April. There I not only presented certificates to the graduating seniors, but also welcomed the new interns, including two individuals (Drs. Brian Feldman and Patricia Kao) to whom I had presented diplomas at Stanford's commencement on June 17, 2001!

The lovely graduation ceremony and the events that preceded and followed it were done superbly. However, they could not have been so successfully accomplished without the dedicated and hard work of a large number of very hard-working individuals. On behalf of the School, I want to offer my personal gratitude and appreciation to Char Hamada, and Zera Murphy along with Susanne Bethard, Duane Campbell, Jacob Christian, Lucie Cunningham, Doug Monica, Sharon Olsen, Candace Romandia, Mandy Rowe, Cassandra Sooter, Jacquelyn Ziegler and Marjorie Weesner for helping to make the graduation events so successful. I also want to thank Dr. Neil Gesundheit for his help as well.

Medical School Convocation Address: "Observations on Opportunity: Diseases of Mice and Men" by Dr. Gene Bauer

While the title of my remarks today is perhaps too cute by half, I hope that my theme is not. My goal is immutably to link the unity of biomedical science and the immeasurable opportunities that have been placed in your hands — whether physician or fundamental scientist — to use the tools of your education for the benefit of humankind.

The graduates here today represent the continuum of the biomedical community, MD, MD-PhD, and PhD graduates. Your education and approach to problem-solving are embodied in the diseases of mice and men. Pasteur noted that "there does not exist a category ... to which one can give the name applied science. There are science and the applications of science, bound together as the fruit to the tree which bears it."

Never has there been a greater need, or a greater opportunity, for you to find ways to work together and to share your unique talents, techniques, and insights.

But will you seize those opportunities?

Opportunities are framed by ideas.

Whatever else may be true, it is unambiguous that our perceptions of opportunity are framed by our experiences and our ideas. For each of us is unique. Gail Tsukiayama wrote in *The Samurai's Garden*, "Even if you walk the same road a hundred times, you'll find something different each time." And the distinguished scientist, Albert Szent-Gyorgi, noted that the essence of discovery consists of seeing what everybody has seen but thinking what no one else has thought.

Conversely, ideas are created by opportunity.

If our perceptions of opportunity are framed by ideas, it is also likely that ideas are framed by opportunity. In 1658, a physician, Johann Jakob Wepfer, was perplexed by the cause of stroke, then called apoplexy. At the time, while the symptoms of stroke were well-known, its etiology was not. Yet Wepfer followed his intuition that the brain must be involved and seized an opportunity to perform careful postmortem examinations, forever after linking cerebral hemorrhage to the etiology of stroke.

In more recent times, say 1960, who would have predicted that we, 40 years later, would possess the template of the entire human genome as a basis for experimentation, let alone for therapeutics?

- Indeed, despite a deep-seated intuition about the unity of biology, who then would have predicted that the genome of a roundworm, or of a fruit fly, or of a zebra fish, would approximate the human genome and present models for human developmental processes and diseases?
- Or, even if you were one of the handful of prescient scientists who absolutely knew that men — perhaps especially men — at their cores, were worms or mice, would you have predicted the human genome to consist of only 30,000 genes, rather than the 100,000 genes predicted only a couple of years ago?

How are we to bring the powerful unity of science to bear on human illness?

It is tragic that the pressures of providing cost-effective health care demand that patients be discharged from hospitals so quickly that students and trainees have no opportunity to observe the natural history of disease.

- Shall we be forced ultimately to rely upon disease models?
- And, if so, are transgenic models (for example) faithful replicas of their putative human counterparts — even in a genetic sense, never mind how environmental factors may play out in non-human species (e.g., mice versus men)?
- Or, are computer simulations sufficient (even with three-dimensional imaging and haptic feedback) to train our students in the nuances of human biology?

In commenting on...teaching hospitals, Dr. Kenneth Ludmerer (in, *A Time To Heal*) observed, "The medical effects

of...a dramatic reduction in the length of stay and of moving...procedures out of the hospital were controversial... [but] one consequence was clearly apparent: the erosive effects on the learning environment... It became...harder for learners to acquire problem-solving skills when patients were admitted with...diagnoses...and treatment plans already determined. Surgical residents, meeting patients under the drapes of the operating table, could still learn how to remove a gall bladder, but their opportunity to develop the clinical experience and judgmental capacity to decide who might actually need the procedure was severely compromised."

And so, I repeat: Shall we be forced to rely only on disease models (either biologic or virtual)?

I think not. To do so would be an egregious example of hubris, for Mother Nature presents us many forms and patterns, and eventually she would have her revenge.

Rather, we must bring the power of science to bear and seize unprecedented opportunities to collaborate at all levels — virtual models, biologic models, and authentic human beings for the best educational — and clinical — outcomes.

Opportunities are defined by actions.

Feldman and Spratt in their book, *Five Frogs on a Log*, used a child's riddle to make this point. It goes as follows.

Five frogs are sitting on a log.
Four decide to jump off.
How many are left?
Answer: 5

Why? Because deciding and doing are not the same things!

To make a difference you must seize opportunities.

I shall offer a brief example of how one person did seize an opportunity offered by proximity to excellent fundamental science to help transform a field in the space of 30 years. It is the story of a colleague who has been a friend to Stanford on many occasions.

Dr. Irwin Freedberg is now the George Miller McKee Professor and Chairman of the Department of Dermatology at New York University School of Medicine, arguably one of the most distinguished departments in the world. In 1967, as an assistant professor at Harvard Medical School, he assayed the state of dermatologic research in a paper entitled, "Rashes and Ribosomes," in the New England Journal of Medicine.

He concluded that dermatology had progressed from its descriptive phase of naming rashes to one in which the tools of genetics and biochemistry could be used to characterize the skin. At the time, the subunits of the epidermal protein, keratin, had not been isolated, but Freedberg predicted that important insights about keratin synthesis and function would emerge from an incipient revolution in molecular biology.

Dr. Freedberg revisited the state of the science in a recent lecture. In the 30-year interval, the field has been transformed, and it is no longer one populated exclusively by dermatologists.

For a moment, let me engage in a brief sidebar. As all of you graduates know, we academics are prone to preface any description of our own work by the phrase, "My, or our, laboratory and others..." In this case, the "and others" includes such eminent scientists as Elaine Fuchs of the University of Chicago and Matthew Scott of Stanford.

Now back to my anecdote. Freedberg's laboratory, and others, proved that the keratin family consists of at least 30 distinct keratins, proteins found in all epithelial tissues, not just in the skin. His laboratory, and others, showed that the cytoskeleton is comprised of keratin intermediate filaments, structures that play a pivotal role in normal development and in several debilitating — potentially lethal — genetic diseases, including epidermolysis bullosa and ichthyosis. And his laboratory, and others, defined the regulatory elements responsible for expression of the

various keratin proteins that combine uniquely in various tissues during developmental processes or in diseases.

I believe we can extract a philosophy from this anecdote, one that is applicable to basic scientists and physicians alike.

The philosophy is simple: Provide students with resources, including free access to one's own knowledge, and allow them to formulate the hypotheses and develop the experiments.

- In short, the philosophy is one of opportunity.
- The necessary ingredients include facilities — and instrumentation — and reagents — and, yes, even hospitals and clinics, so that Mother Nature's own examples, the patients, who suffer from debilitating illnesses, can be defined, cared for, and learned from.
- The expectation of the students is one of creativity and hard work.

The product of such a philosophy will be the launching of the careers of biomedical scientists and physician leaders of the future.

- That is what Stanford is about.
- That is what your education at Stanford has been about.
- I hope that is also what your future lives will be about.

Learning and creativity are, or should be, lifelong goals. And as Yogi Berra said, "You can observe a lot by watching."

In closing, let me return to the beginning.

I have cajoled, even admonished, you to recognize the unity of science and to seize opportunities to link diseases of mice and men to improve the human condition. But what is opportunity and how do we measure it?

The Ancients offered us some examples of its fleeting nature.

- There is the old Proverb that "Opportunity knocks only once."
- The Romans offered that "Once lost, Jupiter himself cannot bring back opportunity."
- And Hippocrates said, "Healing is a matter of time, but it is sometimes a matter of opportunity."

We Moderns have been less poetic, if equally pithy.

- To quote Woody Allen, "Eighty percent of success is showing up."

So, I beg you, since you now have all of the other tools, please show up!

Close

I extend my deep congratulations on your accomplishments, culminating with your graduation today, and with all of the other faculty members, I shall eagerly await news of your many future successes.

Awards and Honors at Graduation

In addition to honoring our students, commencement is also a time to recognize faculty who have made major contributions to student teaching and who serve as role models for our graduate and medical students. Following are the faculty who received awards at the 2001 Medical School Convocation. I should note that while each individual is to be praised for his/her accomplishments, two members of our faculty, Drs. Kelly Skeff and Samuel Le Baron, are singled out for receiving two teaching awards each! Please take a moment to congratulate this year's recipients.

The Kaiser Award For Excellence In Preclinical Teaching

- Lisa N. Gervin, Medicine
- Eric Glasgow, Human Anatomy (posthumously)
- Phillip M. Harter, Surgery

- David B. Lewis, Pediatrics

The Kaiser Award For Excellence In Clinical Teaching

- Samuel LeBaron, Family and Community Medicine
- Ann N. C. Leung, Diagnostic Radiology
- Lars Osterberg, Medicine

The Kasier Award For Outstanding And Innovative Contributions To Medical Education

- Kelley Michael Skeff, General Internal Medicine

The Arthur L. Bloomfield Award For Excellence In Teaching Clinical Medicine

- Samuel LeBaron, Family and Community Medicine
- Lawrence H. Mathers, Pediatrics
- Kelley Michael Skeff, General Internal Medicine

The Franklin G. Ebaugh Jr. Award For Advising Medical Students

- Helena C. Kraemer, Psychiatry

The Alwin C. Rambar-James B.D. Mark Award For Excellence In Patient Care

- Youn H. Kim, Dermatology

Stanford University School Of Medicine Award For Graduate Teaching

- W. James Nelson, Molecular and Cellular Physiology

Stanford University School Of Medicine Award For Outstanding Service To Graduate Students

- Howard Schulman, Neurobiology

Again, congratulations to each of our award winners and to the many other members of our faculty and resident staff who contribute so much to the education and training of our students and each other.

Affirmation of Support for the Medical Center by the Chairs of Basic Science Departments

On June 21st, the Chairs of the Basic Science Departments sent a letter affirming their support for the Medical Center to the leadership and trustees of Stanford University. This letter, signed by all ten chairs (Richard Aldrich (Molecular & Cellular Physiology), Helen Blau (Molecular Pharmacology), John Boothroyd (Microbiology & Immunology), David Botstein (Genetics), Stephen Galli (Pathology), Mark Hlatky (Health Research & Policy), Eric Knudsen (Neurobiology), Michael Levitt (Structural Biology), Roeland Nusse (Developmental Biology) and Suzanne Pfeffer (Biochemistry).

In their letter, the Basic Science Chairs noted that "Our hospitals play an extremely important role in our ability to train medical and graduate students and postdoctoral fellows, and to link our basic research enterprise with efforts to improve our understanding of disease pathogenesis and to make advances in patient treatment and care....We believe that maintaining the University's close connection with the hospitals is necessary for our continued success, and we appreciate the efforts you and President Hennessy are taking in support of the Stanford School of Medicine".

I want to thank the Basic Science Chairs for their initiative in expressing their support and commitment to the School, Medical Center and to their Clinical Science Colleagues. As I have underscored in prior communications, the important challenges we face today can be overcome, especially when we work together. This vote of support and affirmation is important evidence of such unity and I am enormously appreciative for that vote of confidence.

Presentation to the Medical Center Committee of the University Board of Trustees

On Thursday, June 14th, I presented to the Medical Center Committee of University Board of Trustees on the current and future strategic goals and challenges facing the School of Medicine. This was an opportunity to review with the Trustees that our mission, as a leading research-intensive School of Medicine, is to improve the lives of adults and children through research and education. After reviewing how we are planning to enhance our missions through strategic initiatives in education, research, clinical care, advocacy, public policy and community service, I also underscored how affected we are by the financial forces impacting academic medical centers. In addition we have important needs for renewed facilities for education, library, research, information technology and clinical programs (most recently including the Cancer Center/Ambulatory Care Program). Achieving these critical needs will require considerable financial support for capital development, a major portion of which will need to come from philanthropic support. Accordingly, I underscored with the Board members our pledge to work within the School as a faculty to improve our financial management and accountability but also to work collaboratively with the Development Office to help raise new funds to support critical operational and capital programs and projects. Equally importantly, I emphasized the importance of the University leadership, including the Board, in doing everything possible to help the faculty and School achieve its key needs and objectives. This will also require the support of the Trustees and University leadership in assuring that the School's needs are given sufficient priority for a capital campaign for "Stanford Medicine" to assure our future success.

Dr. Richard Aldrich is Named Chair of the Department of Molecular and Cellular Physiology

I am pleased to inform you that Dr. Richard Aldrich, Professor of Molecular and Cellular Physiology and Investigator at the Howard Hughes Medical Institute, has agreed to serve as Chair of the Department of Molecular and Cellular Physiology effective June 1, 2001. He succeeds Dr. W. James Nelson who stepped down as department chair in order to assume the responsibilities of Senior Associate Dean for Research, Graduate and Postdoctoral Education.

Dr. Aldrich arrived at Stanford as an Assistant Professor in 1985 and achieved tenure in 1990. In 1997, he was named Associate Chair of Molecular & Cellular Physiology. His scholarly work focuses on the molecular mechanisms of ion channel function and their role in electrical signaling. He is the recipient of numerous awards for his research and, in 2000, was elected a Fellow of the Biophysical Society. He is currently the president of the Society of General Physiologists.

Dr. Aldrich is both a valued colleague and an outstanding University citizen. I know that each of you joins me in extending best wishes to Dr. Aldrich as he undertakes this important assignment.

Academic Appointments and Promotions

The June Advisory Board approved the following actions:

- Appointment of Joseph Belanoff to Assistant Professor of Psychiatry and Behavioral Sciences
- Promotion of Francis Blankenberg to Associate Professor of Radiology, with tenure, effective July 1, 2001.

Congratulations to Drs. Belanoff and Blankenberg.