

Dean's Newsletter

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Don't forget to vote on Tuesday November 2nd. Needless to say this is perhaps one of the most important elections in generations and the immediate future of our nation and consequently the world will be impacted by the results of the Presidential election. As you also know there also are a number of initiatives on the ballot in California this year, some which impact health and science. I hope you will pay particular attention to Propositions 71 and 61 when you cast your ballots. Your vote will count!

BioX and Bioengineering at Stanford University

BioX, which brings together faculty and students from the life and physical sciences as well as from law and business, now numbers more than 270 faculty from 57 departments in the Schools of Medicine, Engineering, Humanities and Sciences, Earth Sciences, Law and Business. The BioX and its related Bioengineering initiatives stand as an exemplar of interdisciplinary research and education at Stanford and will be joined by the International Initiative and the Initiative on the Environment to define Stanford's broad commitment to the future.

On Friday October 22nd, the leadership of BioX (Matt Scott, Professor of Developmental Biology and Genetics and Chair of the BioX Leadership Council) and of Bioengineering (Scott Delp, Chair and Associate Professor of Mechanical Engineering and Paul Yock, Co-Chair and Martha Meier Weiland Professor of Medicine) met with the Scientific Advisory Council on the Interdisciplinary Biosciences to provide an update and status report as well as to receive critical feedback regarding future planning for this important initiative.

Based on the advice and recommendations of several visionary faculty members a planning committee for BioX commenced in 1998. Since then the BioX program at

Stanford has evolved to facilitate collaborations and interactions among the fields of basic science, engineering and clinical science. The opening of the James H. Clark Center in 2003 created a home for BioX and the newly formed department of Bioengineering (the first interschool joint department at Stanford) as well as the opportunity to cross-fertilize interactions and collaborations between faculty throughout the university. Several key themes have been defined to date, with the understanding that they will evolve over time. At this juncture, the current BioX research themes include: Biocomputation, Biodesign, Biomedical Imaging, Biophysics, Brain and Behavior, Cell/Molecular Engineering, Chemical Biology, Genomics and Proteomics, and Regenerative Medicine.

BioX now includes a number of important programs. The ***Interdisciplinary Initiatives Program*** that has supported novel multidisciplinary research through highly competitive internal seed funding to help launch larger publicly funded research efforts. ***The Advanced Instrumentation Program*** has helped faculty to leverage matching funds from other sources to bring important and expensive equipment to Stanford or to help design and build original equipment. The ***BioX Teaching Initiatives*** foster cross-disciplinary training for undergraduate and graduate students and postdoctoral scholars who come from different disciplines and programs. ***BioX Symposia and Seminars*** offer a forum to exchange data and ideas on cutting edge-research in the biosciences and biotechnology. Each of these programs/initiatives has met with success but all are now compromised by limitations in funding – obviously an important issue for the future.

In addition, the BioX Graduate Student Fellowships have been recently announced. Thanks to a generous gift from an anonymous donor, seven fellowships were announced for this year. All of the recipients are amazingly qualified students.

In tandem with BioX, the new Department of Bioengineering has gotten off to an excellent start under the leadership of Drs. Scott Delp and Paul Yock. The mission of the new Department of Bioengineering is “to create a fusion of engineering and the life sciences that promotes scientific discovery and the invention of new technologies and therapies through research and education.” Although the Department is just getting started, its goals are ambitious and include becoming ranked among the top five departments within five years and the Number One program in 10 years!

Fulfilling this important mission and achieving these ambitious goals will rest largely on the faculty and students who are recruited to join the new department. So far, Drs. Delp and Yock have gotten off to a great start, with wonderful new faculty recruitments. From a broad national search, three outstanding new faculty members have already been recruited. They are Steve Quake from Cal Tech, Jennifer Cochran from MIT and Karl Deissroth from Stanford. They are joined by current Stanford faculty who will have joint appointments in the department of Bioengineering. These include: Russ Altman, MD, PhD; Dennis Carter, PhD; Scott Delp, PhD; Greg Kovacs, MD, PhD; Norbert Pelc, ScD; Matt Scott, PhD; James Swartz, PhD; Charlie Taylor, PhD and Paul Yock, MD. In addition, a search for one to two additional new faculty members is being

initiated and it is anticipated that over the next 5-10 years, a total of 20-24 new faculty will join this department – ideally bringing diverse and exciting backgrounds and skills.

While the quality of the faculty is certainly an important key to the success of the department, so too are the students who are selected to join the department. Although the applications period was limited to just a couple of weeks this past winter (due to the timing of the Academic Senate's approval of the graduate program) over 350 students applied and 19 were selected. Each came with very strong backgrounds in engineering and biomedicine, per Dr. Delp they are a very bright and energetic group.

Progress is also being made in developing the bioengineering core curriculum under the leadership of Dr. Greg Kovacs, Professor of Electrical Engineering and, by courtesy, of Medicine. This will encompass a yearlong sequence of courses that teaches biology to the students in the program, who are expected to have a strong background in mathematics, physics and engineering. The evolving curriculum also requires students to take a "depth sequence" to assure that they graduate with disciplinary depth in addition to interdisciplinary skills. This pattern mirrors our "scholarly concentrations" in the School of Medicine curriculum.

The future seems bright for the new Bioengineering Department, which, over the next several years, will recruit additional faculty and begin preparations for offering an undergraduate major. Equally importantly, the new department is evidence that collaboration between schools at Stanford can work, and this bodes well for larger interdisciplinary initiatives like BioX and the University-wide Initiative on the Environment and the International Initiative.

Appointment of Senior Associate Dean for Diversity and Leadership

I am very pleased to announce the appointment of Dr. Hannah Valantine, Professor of Medicine (Cardiovascular Medicine) as the first incumbent of a new School of Medicine leadership position – Senior Associate Dean for Diversity and Leadership. This role has been created to emphasize our commitment to enhancing diversity and to developing and supporting leadership across the School. Over the next several years this will be a major focus for the School.

Dr. Valantine is well qualified to assume this inaugural role. She has been on the faculty at Stanford since 1989 and currently serves as Co-Director of the Post-Transplant Cardiac Transplant Service as well as Director of the Post-transplant Clinical Research Program. In her research she has focused on understanding the mechanism mediating acute and chronic allograft failure and, in particular, on the role of microvascular injury in acute allograft failure as well as the mechanisms of mediating transplant coronary heart disease. Dr. Valantine has also played important leadership roles both at Stanford and more broadly. At Stanford, she has been a member of the Medical Student Admissions Committee, the Medical School Committee on Diversity, and the Medical School Faculty Senate. In addition, she was a member of the Stanford Committee for the Development of a Women's Health Curriculum. Externally, she has served on the editorial boards of

Graft and of Ethnicity & Disease and on the UNOS Scientific Advisory Committee. She has also been a member of the Board of Directors of the Western States Affiliate of the American Heart Association and has served as the Chairperson of its Advocacy Committee. I am delighted that Dr. Valentine will bring this wealth of experience and understanding to our efforts in diversity and leadership in the School of Medicine.

Putting Diversity and Leadership in the Forefront of our Next Retreat

During the next year we will be redoubling our efforts to place initiatives in diversity and leadership at the forefront of our School-wide Strategic Planning efforts. While the School of Medicine has made strides in achieving diversity among its undergraduate medical student body, and increasingly among graduate students, we have performed less well, in my opinion, in achieving diversity among our postgraduate trainees (residents and fellows) and faculty. To be a world-class medical school encumbers a responsibility to achieve a much deeper and broader level of diversity across our school, including students, staff and faculty. We will be examining a number of initiatives and approaches and will be discussing them at our Annual Leadership Retreat in late January. Following that will come an implementation plan that I will share with you, and for which I will want to engage your help and support.

In addition to diversity, we will also be focusing on leadership development across our entire community. Equipping students, faculty and staff with leadership skills, as well as good citizenship, are all important to fostering an environment that will optimize individual as well as institutional success. This, too, will be a major topic at our January Leadership Retreat and also one about which I will send frequent updates beginning early next year.

Continuing Efforts to Achieve and Sustain a Respectful Workplace

In several past newsletters I have highlighted our commitment to assure that we do everything possible to provide a work environment that values the integrity and respect for our employees throughout the School of Medicine. I consider this one of our highest priorities. Last year, our efforts were focused on briefings for Faculty, as well as a pilot for a staff briefing. This year, our efforts will focus on the staff briefings. Ten departments have been scheduled for briefings so far over the next year, and others are in the process of being scheduled. These briefings will cover communication and a variety of respectful related behaviors in the academic workplace, along with resources to assist in addressing concerns that may arise. I encourage all School of Medicine staff to attend these briefings.

The sessions consist of a 45-60 minute briefing with time for questions and answers. The presenters will include some combination of the following:

Cori Bossenberry, Director of Human Resources
Norma Leavitt, Associate Director, Employee Relations
Jennifer Fortmann, Employee Relations Representative

Martha McKee, Ombuds
Ellen Waxman, Director of Faculty Relations

I strongly encourage all staff to arrange your schedules so that you will be present for these important sessions.

Competencies and Objectives for Medical Student Education

At the Medical School Faculty Senate Meeting on Wednesday October 20th, Dr. Julie Parsonnet, Senior Associate Dean for Medical Education, reviewed the criteria and components for assessing the competency of medical education at Stanford. These criteria, noted below, have been adapted from those put forth from the AAMC. Please review them and direct any comments to Dr. Parsonnet (parsonnt@stanford.edu). It is important to recognize that our medical education goals include the development of outstanding clinical knowledge and skills as well as evidence of scholarship and leadership.

1. Knowledge of the Basic Medical Sciences and Organ Systems

A graduate is expected to:

- Know the normal structure and function of the body (as an intact organism) and of each of its major organ systems
- Know the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis
- Know the various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of maladies and the ways which they operate on the body (pathogenesis)
- Know the altered structure and function (pathology and pathophysiology) of the body and its major organ systems that are seen in various diseases and conditions
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2. Ability to Apply Clinical Skills in the Care of Patients

A graduate is expected to:

- Obtain an accurate medical history that covers all essential aspects of the history, including issues related to age, gender, sexuality, and socio-economic status
- Communicate with patients and their families in culturally appropriate ways regarding: sexuality and sexual function, domestic violence, substance abuse, financial obstacles to health, end-of-life issues, and other topics that materially affect patient well-being
- Communicate clearly, both orally and in writing, with patients, patients' families, colleagues, and others with whom physicians must exchange information in carrying out their responsibilities
- Conduct a thorough and accurate physical exam, including psychiatric, neurologic, genital, and orthopedic examinations in adults and children
- Perform routine technical procedures used in medicine and surgery

- Interpret the most frequent clinical, laboratory, roentgenologic, and pathologic manifestations of common maladies
- Reason deductively in solving clinical problems
- Construct appropriate management strategies (both diagnostic and therapeutic) for patients with common conditions, both acute and chronic, including medical, psychiatric, and surgical conditions, and those requiring short- and long-term rehabilitation
- Recognize and outline an initial course of management for patients with serious conditions requiring critical care
- Appropriately relieve pain and ameliorate the suffering of patients

3. *Awareness of the Social and Community Context of the Practice of Medicine*

A graduate is expected to:

- Demonstrate a commitment to advocate at all times for the interests of one's patients over one's own interests
- Demonstrate respect for the roles of other health care professionals and a willingness/commitment to collaborate with others in caring for individual patients and in promoting the health of defined populations
- Demonstrate a commitment to provide care to patients who are unable to pay and to advocate for access to health care for members of traditionally underserved populations
- Understand and work within existing healthcare systems in order to provide optimal care for patients
- Understand the various approaches to the organization, financing and delivery of health care

4. *Knowledge of the Principles of Evidence-based Medicine*

A graduate is expected to:

- Understand the important non-biological determinants of poor health and the economic, psychological, social, and cultural factors that contribute to the development and/or continuation of maladies
- Know the epidemiology of common maladies and the systematic approaches useful in reducing the incidence and prevalence of those maladies
- Understand probability, risk and cost-benefit analysis as they relate to disease risk factors, diagnostic tests, screening, and clinical decision making.
- Understand the power of the scientific method in establishing the causation of disease and efficacy of traditional and non-traditional therapies

5. *Commitment to Ethics and Professionalism*

A graduate is expected to:

- Know the theories and principles that govern ethical decision making, and of the major ethical dilemmas in medicine, particularly those that rise at

the beginning and end of life and those that arise from the rapid expansion of knowledge of genetics

- Demonstrate compassionate treatment of patients, and respect for their privacy and dignity
- Demonstrate honesty and integrity in all interactions with patients' families, colleagues, and others with whom physicians must interact in their professional lives
- Know the threats to medical professionalism posed by the conflicts of interest inherent in various financial and organizational arrangements for the practice of medicine

6. *Commitment to Personal and Professional Development*

A graduate is expected to:

- Demonstrate the capacity to recognize and accept limitations in one's knowledge and clinical skills and a commitment to continuously improve one's knowledge and ability
- Demonstrate a commitment to engage in lifelong learning to stay abreast of relevant scientific, health care, and public health advances
- Demonstrate the ability to retrieve (from electronic databases and other resources), manage, and utilize biomedical information for solving problems and making decisions that are relevant to the care of individuals and populations
- Demonstrate a commitment to work collaboratively with colleagues in healthcare, research and leadership teams
- Demonstrate leadership in the various branches of medicine and the health sciences

7. *Commitment to an Area of Scientific and/or Clinical Inquiry*

A graduate is expected to:

- Recognize unresolved clinical or scientific questions, formulate an hypothesis, and identify methods and resources to address this hypothesis
- Conduct investigation in an area of interest related to patient care or scientific endeavor
- Understand the scientific theory and methodology that form the basis of medical discoveries
- Understand the ethical requirements for laboratory, animal-based and patient-oriented scientific inquiry
- Communicate new knowledge obtained from scientific inquiry responsibly and clearly

Efforts Underway to Establish a Center on Longevity

Thanks to the work of Dr. Tom Rando, Associate Professor of Neurology and Neurological Sciences, and Laura Carstensen, Professor of Psychology, as well as other faculty leaders in the School of Medicine and other Stanford schools, efforts are

underway to establish a Center for Longevity at Stanford. Importantly, a Provost's planning committee has been established, and a recent meeting was generously hosted by Paul Brest at the Hewlett Foundation. In addition to Stanford faculty, participants included Duncan Moore (optical engineer, University of Rochester), Robert Putnam (sociologist, Harvard), Irwin Feller (economist, AAAS), Marc Freedman (President, Civic Ventures, SF), Leonard Guarente (molecular biologist, MIT (by phone)), and Richard Suzman (National Institute on Aging). Based on this positive meeting, an internal Provost's Exploratory Committee was established that includes Lawrence Friedman, Karen Cook, John Shoven, Alan Garber, Tom Rando, Al Bandura, Bill Damon, Tom Andriacchi, Jon Krosnick, Chip Blacker, Randy Bean, Iris Litt, Mary Goldstein, and Jennifer Aaker.

A summary of the work to date can be found at <http://longevity.stanford.edu/> (*login*: longevity, *password*: changingaging). If you are interested in this initiative please contact Tom Rando or Laura Carstensen.

Honors and Awards

- **Doris Duke Awards:** On October 28th, the Doris Duke Charitable Foundation announced that it was recommending four distinguished scientists to receive the 2004 Distinguished Clinical Scientist Award in "Bench-to-Bedside Research." This is the fifth year that this distinguished grant has been awarded. It is remarkable to note that two of the four individuals recommended for the award are at Stanford:
 - **Dr. Sam Gambir**, Professor of Radiology: Project title: Molecular Imaging of Cancer with a Voltage Sensor
 - **Dr. Robert S. Negrin**, Professor of Medicine: Project title: Regulatory T Cells in Bone Marrow Transplantation.

The recipients of this distinguished award each receive up to \$1.5 million to be used over 5-7 years "to support research teams translating scientific advances into new ways to prevent, diagnose, treat or cure disease."

This is clearly wonderful news for Drs. Gambir and Negrin and also quite an achievement for Stanford. This is the first time that an institution has had more than a single recipient of the award. Congratulations to all!

- **2004 SPIRIT Awardees:** At the Staff Recognition Dinner on Thursday, November 4th, two individuals will receive the SPIRIT Award in acknowledgement of the outstanding contributions they have provided to the mission and vision of the School of Medicine. The two awardees are:
 - **Jeannie Heschele**, Research Management Group Operations Coordinator
 - **Woody Lorman**, Clinical Financial Analyst

Please join me in congratulating Ms. Heschele and Mr. Lorman.

- **Dr. Edward Harris**, George DeForest Barnett Professor of Medicine, Emeritus, received the Distinguished Rheumatologist Award from the American College of Rheumatology during the ACR Annual Scientific Meeting last week. The Distinguished Rheumatologist Award is awarded each year to an ACR member who has made outstanding contributions in the areas of patient care, clinical scholarship or service to benefit patients with rheumatic diseases.
- **Dr. Craig Miller**, Professor of Cardiothoracic Surgery, has been named the recipient of the Santa Clara Medical Association's 2004 "Outstanding Achievement Award in Medicine".

Announcements

Community Faculty Lecture Series: The next presentation of this series will be held on Wednesday, November 3rd at 7:00 p.m. Dr. Margaret Fuller, Chair, Department of Developmental Biology, will lecture on *Regenerative Medicine: A Hope for the Future* in the Clark Center Auditorium.

This free event represents an opportunity for faculty to communicate with our neighboring community about advances in science and medicine and the important role that Stanford is playing in generating new knowledge as well clinical interventions.

Appointments and Promotions

- **Aijaz Ahmed** has been reappointed to Assistant Professor of Medicine (Division of Gastroenterology and Hepatology) at the Stanford University Medical Center, effective 1/1/2005.
- **Russ Altman** has been promoted to Professor of Genetics and of Medicine and also, Professor, by courtesy, of Computer Science, effective 11/1/2004.
- **Carol Conrad** has been reappointed to Assistant Professor of Pediatrics (Pulmonology) at the Lucile Salter Packard Children's Hospital, effective 2/1/2005.
- **Yasser El-Sayed** has been reappointed to Associate Professor of Obstetrics and Gynecology at the Stanford University Medical Center, effective 10/1/2004.
- **William Fearon** has been appointed to Assistant Professor at the Stanford University Medical Center, effective 10/1/2004.
- **Gregory Hammer** has been promoted to Professor of Anesthesia and Professor and by courtesy, of Pediatrics in the Stanford University Medical Center, effective 10/1/2004.
- **Griffith Harsh** has been appointed to Professor of Neurosurgery at the Stanford University Medical Center, effective 2/1/2005.

- ***M. Bruce MacIver*** has been reappointed to Associate Professor (Research) of Anesthesia, effective 7/1/2005.
- ***Michael Moseley*** has been promoted to Professor of Radiology, effective 10/1/2004.
- ***Judith Shizuru*** has been promoted to Associate Professor of Medicine. effective 11/1/2004.
- ***R. Lane Smith*** has been reappointed to Professor (Research) of Orthopedic Surgery at the School of Medicine, effective 11/1/2004.
- ***Simon Stertzer*** has been appointed to Professor of Medicine at the Stanford University Medical Center, effective 10/1/2004.
- ***Dee West*** has been appointed to Professor of Health Research and Policy at the School of Medicine, effective 11/1/2004.