

## Dean's Newsletter

### December 3, 2007

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#### **The Medical Center Expansion Project: Update 2007**

On Monday evening November 26<sup>th</sup>, Medical Center leaders and more than 150 residents and community leaders filled the Palo Alto City Council chambers for the next stage in the process to expand the Stanford University Medical Center in net square feet and in the height of some of the hospital facilities. As I have presented in prior discussions, the Medical Center replacement plan currently calls for the rebuilding of Stanford Hospital & Clinics (SHC) as a seven-story structure that would increase the number of beds from the current 466 to 600. Importantly, the replacement would meet mandated seismic requirements, create a facility that would offer single bed rooms for patients, expand the number and size of operating rooms to permit the use of new technologies, proportionally increase the number of intensive care beds and transform and expand the emergency facilities that serve both SHC and the Lucile Packard Children's Hospital (LPCH). In tandem with the rebuilding of SHC, the Lucile Packard Children's Hospital would increase its bed capacity by adding 104 patient beds, which would bring its total to 361 beds on the Medical Center site.

These expansions in bed capacity are driven by significantly increased demands for patient care at both SHC and LPCH, and they reflect changes in patient demography as well as the current and projected programs of the community, faculty and the Medical School. The plan, at its heart, permits the realization of our overall goal of *Translating Discoveries* – bringing knowledge from research to the benefit of adults and children in our community and beyond.

The November 26<sup>th</sup> City Council meeting included testimonials and comments from over 40 individuals, the vast majority of whom supported the plans for the Medical Center expansion and the requisite rezoning requirements to make it happen (see update in the [Stanford Report](#)). Along with Martha Marsh, CEO of SHC, and Chris Dawes, CEO of LPCH, I spoke at the meeting. My remarks were in support of the hospital plans as well as the Medical School's replacement of the Grant, Alway, Lane and Edwards Buildings by the new Foundations in Medicine facilities. I also spoke of the importance of the Medical School and hospitals to each other and to our community. I must confess

that, while I am sensitive to concerns about maintaining the integrity of the greater Palo Alto community, I find it mind-boggling to hear from individuals who have little to no regard for what the Medical Center brings to their community.

In my comments I analogized this attitude to the Frank Capra movie *“It’s A Wonderful Life,”* which will show at the Stanford Theater on December 24<sup>th</sup>. In this classic film, the protagonist, George Bailey, has the opportunity to witness what his community would have been like if he had not been born. In a similar fashion, it is not inappropriate to consider what Palo Alto – and Stanford – would be like today if visionary University and community leaders had not moved the Medical School from San Francisco to the Stanford campus nearly 50 years ago. Simply put, many of the extraordinary discoveries in bioscience and remarkable innovations in technology that have transformed our understanding of human biology and disease and have led to countless translations of basic research to improve the diagnosis, treatment and prevention of human disease would not have happened without Stanford.

For example, Stanford faculty have transformed medicine and science through their fundamental discoveries in genetics that ultimately led to genetic engineering, to the sequencing of the human genome, and to the ability to display thousands of genes on a chip and discern their state of activation and correlation with various disease states. Collaborations between Stanford’s biomedical, engineering and physical scientists have led to highly original and far-reaching innovations, including the very foundations of magnetic imaging, the development of the linear accelerator, and the invention of the fluorescent activated cell sorter, among many others.

The countless fundamental discoveries by Stanford faculty in such fields as microbiology, immunology, molecular and cellular biology, biophysics and structural biology, developmental biology and the emerging fields of bioengineering, chemical and systems biology are nonpareil. And collaborations of basic and clinical scientists have resulted in startling discoveries in stem cell biology and the emerging field of regenerative medicine, which are changing the ways we think about cancer, neurobiology, and virtually every organ system. These discoveries and innovations by Stanford faculty have reshaped the fields of cancer, cardiovascular medicine and surgery, neuroscience, and transplantation, as well as immunology, infectious disease and numerous other disciplines – and they have the potential to do so with even greater impact in the years and decades ahead.

While advances in these and related fields have of course occurred at academic medical centers, universities and biomedical research centers around the world, Stanford faculty have often nucleated new disciplines with startling insights and seminal discoveries. A considerable number of these have directly resulted in benefits uniquely available at SHC and LPCH – immediately impacting the care of individuals in our community. Just as with George Bailey, had the community of Palo Alto rejected the move of the Medical School 50 years ago, it would have a very different “life” today. From my perspective, Palo Alto would be a dramatically different community if Stanford

was not located in its midst. And, most importantly, the health and well being of both adults and children in our community would not be as well served.

With that in mind, the decisions that will be made by the City Council and the citizens of Palo Alto regarding the Medical Center expansion will have an enormous impact on the future of the community. One would hope that 50 years hence the child or grandchild of a current member of the Palo Alto leadership would not have to ask why her or his parent or grandparent made a decision that had so negatively impacted their personal health or that of their family or community. Fortunately that won't happen if Stanford Medicine continues to live and thrive in Palo Alto – and if George Bailey and “*It’s A Wonderful Life*” continue their annual reminder in the decades to come.

### **NIH and Bioscience**

The National Institutes of Health (NIH) and academic centers like Stanford are struggling with the downturn in funding and the perceived opportunities for academic careers for biomedical scientists. In recently compiled data from the NIH, some worrisome trends are clearly defined:

	<b>1980</b>	<b>1998</b>	<b>2006</b>
<i>Number and average age of NIH Principal Investigator (PI)</i>	<b>14, 887 39.1 yrs</b>	<b>17,761 42.7 yrs</b>	<b>25,419 50.8 yrs</b>
<i>Number and average age of new PIs</i>	<b>1,843 37.2 yrs</b>	<b>1,355 39.0 yrs</b>	<b>1,346 42.4</b>
<i>Number of Medical School faculty positions</i>	<b>53,552</b>	<b>73,413</b>	<b>121,468</b>
<i>Average age of Medical School faculty</i>	<b>43.1</b>	<b>45.2</b>	<b>48.7</b>
<i>Average age of first time Assistant Professor</i>	<b>33.9</b>	<b>35.4</b>	<b>37.7</b>

While it is notable that the numbers of both faculty positions and grants increased in the post-NIH doubling phase that began in 1998 and ended in 2003, it is of course worrisome to note as well the fact that the number of new PIs in 2006 is no different from that in 1998 – perhaps reflecting the impact of current funding declines and the competition for new RO1 awards. Equally disturbing is the rising age of medical school faculty and, most importantly, the time it takes to become a first time Assistant Professor. The major question at the heart of the current situation is whether the current climate will discourage promising young students from entering the bioscience career pathway and, in

particular, whether there will be opportunities for them in academia in the future proportionate to their numbers and excellence.

There is no question that the NIH and academic medical centers are united in their concerns about the future and about the need to increase funding, at least to keep pace with inflation (which has proven unsuccessful during the past 4 years) as well as in the need to assure that promising young PhDs and biomedical scientists have career opportunities and pathways accessible to them. I have previously written about our alignments with industry to foster the connections between research and development and the agenda of innovation. But that is just one component of what must be a national advocacy movement that unites universities, professional organizations and societies with industry and community leaders to advocate for the NIH and federally supported research. We all recognize the challenges, given the nation's economic limitations and political agendas – but 2008 offers some opportunity to address both of these, hopefully in more successful ways.

While national planning and advocacy are essential, so too is institutional reflection about the support for graduate student education, postdoctoral training, faculty career development and the investments in biomedical research. I am deeply committed to doing all that we can to foster and support our students and faculty – and we will be shaping our agenda for our efforts at the School's Annual Leadership Retreat at the end of January 2008, which will focus on "*Quality and Balance*." In anticipation of that planning exercise I am interested in comments from you about how to advance our efforts at Stanford in the biosciences, recognizing that we are a small – but incredibly important – part of the global scene.

## **Questions on the Cost of Research**

A comment of mine in the November 5<sup>th</sup> Newsletter under the heading of "*NIH Funding and Peer Review*" generated a number of questions and comments. On the topic of the funding of the research mission, I stated:

*"Research is obviously an important mission that has many important dividends, but it requires significant institutional support since research per se is not a revenue generating operation. We know this to be true at Stanford, where, despite the enormous success of our faculty in receiving peer-reviewed NIH funding (in fact the highest amount per faculty member of any medical school in the nation), every dollar brought in through research requires nearly 30 cents of institutional support. One can say that, viewed simplistically, the larger and more extensive the research enterprise, the more institutional support required."*

Our major source of funding at Stanford is sponsored research, most of which comes from the NIH. This comes with the NIH overhead referred to as indirects – which is an institutionally negotiated percentage of the direct research dollars (that which goes to the investigator). However, indirects do not cover the full costs of research since the government assumes that there will be an institutional contribution to the overall costs.

This is compounded by the fact that the costs of running a research operation include additional expenses not covered at all by NIH or other funding agencies. Among these costs are: salaries that may exceed the NIH cap; administrative expenses (many of which have risen in recent years due to compliance issues); the costs for recruitment, retention, and interim research funding of new faculty; graduate student tuition and stipends, especially under the new tuition cap; covering the lesser overhead reimbursements of training and most foundation grants; and costs for renovations and building. Thus, on the average, as great as Stanford scientists are in receiving competitive grants (even in tough times) there are many costs which in the aggregate add up to major funding needs from non-grant sources. We are able to do this - but it is true that the larger our research portfolio, the more we have to expend on research. Centers that have not anticipated this or that receive lower proportional funding from NIH or are simply less productive, expend even more - and in these tough times, can get into trouble.

The Dean's Office did a study in 2003 of the cost to the School of the research mission. Julia Tussing, Managing Director of Finance and Administration, presented the results of the study to the Executive Committee in June of 2003. There are many ways to approach such a study, as demonstrated by several other schools with whom we exchanged ideas and methodologies, and each will give somewhat different answers; we used two different methodologies to establish a minimum and maximum number, and averaged the two to come up with an "investment" by the School in research of \$85M or 29% of the direct costs spent of sponsored projects. Of the \$85M investment the School made, spending on patent income accounts made up 2.4%, endowment accounts were 6.5%, gifts designated for research accounted for 21.7%, and the remaining 70% came from other School sources. This translates to 28 cents per research dollar spent.

Of course I view these costs as central to our mission and an excellent investment in the future and reputation of our institution, in our ability to attract and retain excellent faculty, and in our ability to teach our students and treat our patients into the future. Indeed without this investment Stanford could not achieve its current level of excellence – and that makes it an essential investment. Put another way, the more successful our faculty become in gaining grant funding, the more successful is the School. The fact that there is a cost associated with the mission is a given; it also costs money to teach students, and in many cases to provide clinical care to our patients.

Thus I want to underscore that my message about the costs of research should not be interpreted as a negative one or one that does not fully acknowledge the extraordinary contributions of our faculty. It is simply an affirmation of what is required to run a highly successful school of medicine. Of course, the more efficient we can be, the more we can extend our dollars, and we strive to improve in this area. But no institution that I know of breaks even or comes close to breaking even on research that is primarily government-funded. More importantly, these investments in basic research allow scientists to generate fundamental knowledge – which is the essential underpinning of translating discoveries.

## **Stanford-Taiwan Biomedical Fellowship Program**

Thanks to the vision and leadership of *Dr. Alan Yeung*, Li Ka Shing Professor of Medicine (Cardiology), and *Dr. Peter Fitzgerald*, Professor of Medicine, we signed an agreement with the National Applied Research Laboratories (NARL), a non-profit organization in Taiwan, to establish the Stanford-Taiwan Biomedical Research Program. As part of this agreement NARL will contribute \$2.4 million to establish an interdisciplinary biomedical training program that will focus on cardiovascular medicine but will also interface with disciplines in the Schools of Engineering and the Graduate School of Business as well as biotechnology leaders in Silicon Valley. This agreement represents another in a series of important international interactions focusing on discovery and innovation. The signing agreement included Dr. Feng-Ching Lin, Minister of State, Science and Technology Advisory Group (STAG), the Executive Yuan (the Cabinet) of Taiwan; Dr. Wen-Hsiung Huang, Deputy Minister of the National Science Council; and Dr. Jer-Nan Juang, President of the National Applied Research Laboratories (NARL), along with other government and NARL members.

## **Remembering Dr. Duncan Govan**

On Friday evening November 29<sup>th</sup> a standing-room only crowd of family, friends and colleagues of Dr. Duncan Eben Govan gathered in the Bechtel Conference Center to commemorate his life and accomplishments. Dr. Linda Dairiki Shortliffe, Stanley McCormick Memorial Professor and Chair of the Department of Urology, organized and hosted this wonderful celebration – which featured remarks from Robert Chase, Emile Holman Professor of Surgery, Emeritus; Kathy Stamey who read the remarks of her husband, Thomas Stamey, Professor of Urology; Fuad Freiha, Professor of Urology, Emeritus; Robert Kessler, Professor of Urology; Malinda Mitchell, Former President and CEO of Stanford Hospital & Clinics; and Dr. Duncan's children. His wife, Paddy, was in attendance along with his grandchildren. A common theme emerged of an extraordinary physician and surgeon whose life was dedicated to medicine, science and his family and who evidenced enormous integrity and professionalism that won him the respect of the Stanford and international medical community. Dr. Duncan first arrived at Stanford in 1961, and he helped to develop the Department of Urology as well as the newly moved School of Medicine. His legacy lives on in his trainees, colleagues and family – and clearly will continue to do so for generations to come.

## **Department of Medicine Welcomes New Faculty Leaders**

Since Dr. Ralph Horwitz joined Stanford a year ago as the Chair of Medicine and Arthur L Bloomfield Professor of Medicine, he has been working diligently to enrich and enhance the Department of Medicine. In addition to new programs, Dr. Horwitz has recruited a number of departmental leaders, and, on Tuesday evening, November 27<sup>th</sup>, he hosted a reception in the Schwab Center to welcome three of them. They include:

- *Dr. Glen Chertnow*, Professor of Medicine and Chief of the Division of Nephrology
- *Dr. Pankaj Jay Pasricha*, Professor of Medicine and Chief of the Division of Gastroenterology and Hepatology

- **Dr. Abraham Verghese**, Professor of Medicine and Senior Associate Chair for the newly established program in the Theory and Practice of Medicine.

Each of these are excellent recruitments to Stanford and I ask you to join me in welcoming them – and in thanking Dr. Horwitz for his success in bringing them to Stanford.

### **The Arthritis Foundation Honors Dr. Irv Weissman**

On Thursday evening November 29<sup>th</sup>, the Arthritis Foundation of Northern California hosted a gala celebration to honor the contributions of **Dr. Irv Weissman**, the Virginia and DK Ludwig Professor of Cancer Biology and Director of the Stanford Institute for Stem Cell Biology and Regenerative Medicine and the Stanford Cancer Center. For nearly 60 years the Arthritis Foundation has funded education, research and patient care programs focusing on adults and children with arthritis and related inflammatory diseases. Indeed the Foundation is the largest source of private funding for arthritis research in the world. The evening included a wonderfully funny “roast” by producer, writer and director Jerry Zucker, who served as the Master of Ceremonies. I had the opportunity to deliver the evening’s keynote address, which was followed by a wonderful video tribute to Dr. Weissman. All of us at Stanford are well aware of Irv’s many remarkable accomplishments in science as well as his leadership as an advocate for research unhindered by politics or religion. It was a wonderful tribute to Irv. Please join me in congratulating Dr. Weissman for yet another major award.

### **Awards and Honors**

**Donna Cronister**, Administrative Services Manager of Radiological Science Laboratories and Lucas Center for Magnetic Resonance Imaging, has been awarded the 2007 Marsh O’Neill Award. This award, now in its 17<sup>th</sup> year, is given to staff who make “outstanding contributions” to Stanford’s research mission. Congratulations, Donna.

### **Appointments and Promotions**

- **Amy Heerema-McKenney** has been appointed as Clinical Assistant Professor (Pathology), effective 5/01/2008.
- **Shelli Kesler** has been appointed to Assistant Professor (Research) of Psychiatry and Behavioral Sciences, effective 12/01/2007.
- **Bruce Linenberg** has been reappointed as Clinical Assistant Professor (Affiliated) (Psychiatry and Behavioral Sciences), effective 9/01/2007.
- **Linda Lotspeich** has been appointed as Clinical Professor (Psychiatry and Behavioral Sciences), effective 1/01/2008.

- ***Hugh M. O'Brodovich*** has been appointed to Professor of Pediatrics, effective 1/01/2008.
- ***Lars Osterberg*** has been promoted to Clinical Associate Professor (Medicine), effective 9/01/2007.
- ***Hemal Parekh*** has been reappointed as Clinical Assistant Professor (Affiliated) (Medicine), effective 9/01/2007.
- ***Ellen F. Porzig*** has been promoted to Professor (Teaching) of Developmental Biology, effective 12/01/2007.
- ***Sunita Sastry*** has been promoted to Clinical Associate Professor (Anesthesia), effective 01/01/2008.
- ***Scott Soltys*** has been promoted to Clinical Assistant Professor (Radiation Oncology), effective 9/01/2007.
- ***Payam Tabrizi*** has been promoted to Clinical Assistant Professor (Affiliated) (Orthopaedic Surgery), effective 12/01/2007.
- ***Andrea Tom*** has been appointed as Clinical Assistant Professor (Affiliated)(Medicine), effective, 12/01/2007.
- ***Charlie Young*** has been reappoint as Clinical Assistant Professor (Affiliated) (Medicine), effective 9/01/2007.