

## Dean's Newsletter

### October 12, 2009

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### **Supporting a Role in Science and Medicine**

The Stanford Cancer Center held its Third Annual Comprehensive Cancer Research Training Program from September 28<sup>th</sup> - October 2<sup>nd</sup> (see: [http://cancer.stanford.edu/features/research\\_news/documents/2009CCRTPRegistrationBrochureFORM.pdf](http://cancer.stanford.edu/features/research_news/documents/2009CCRTPRegistrationBrochureFORM.pdf)), during which I addressed the challenges of supporting a career in science and medicine from the perspectives of the individual, the institution and society. Although my comments were directed at education and training for careers in clinical oncology, cancer biology and related disciplines, most of which take place in Academic Medical Centers (AMCs), they can also be extended to other academic disciplines in medicine and science.

I reviewed the history of AMCs during the 20<sup>th</sup> century and their significant growth since the introduction of Medicare and research support from the NIH. Together, these developments resulted in a more than ten-fold increase in the number of faculty along with the expansion of medical schools and AMCs. While these centers have been enormously productive and are envied throughout the world as centers for education and research as well as for advances in patient care, they are also highly dependent on funding sources that are subject to swings driven by the marketplace as well as the politics surrounding state and federal expenditures. Witness, for example, the growth of the national research enterprise when the NIH budget doubled between 1998-2003, to its contraction when the NIH budget increases were below inflation from 2003-2009, to its current (albeit likely temporary) relief due to the \$10.4 billion allocated to the NIH through the American Recovery and Reinvestment Act (ARRA) of 2009.

These rapid changes have consequences on the career plans and development of those training to be clinicians, physician-scientists and scientists, as opportunities emerge or seem to vanish. The history of research is influenced by the curiosity and interests of investigators as well as the funds available to support their work. It is not an accident that stem cell biology and regenerative medicine are so robust in California, where the \$3

billion approved for stem cell research in 2004 by Prop 71 have had such an enormous impact on the career choices of both new and seasoned investigators.

Changing economic forces as well as perceptions of career security can have profound impacts on newly minted MDs and PhDs. For decades there has been concern about the future of physician-scientists and scholars. Indeed, the high water mark for physician-scientists is truly past, having peaked in 1985 at 23,000 (or 4.6% of the MD workforce) to approximately 14,000 (or 1.4%) in 2004. Just staying even requires the entry of approximately 500 new physician-scientists each year. The challenge is even more pronounced due to the fact that the average age of the physician-scientist workforce is now 51 and the average age of the first RO1 grant is 42. While we have made progress in increasing the number of women physician-scientists, it is unfortunately also the case that attrition among women is higher – reflecting a multitude of individual, family and societal factors. Among the major issues impacting the decision to pursue a career as physician-scientist is the uncertainty of stable research and institutional support – which is accentuated by the noted shifts and changes in external funding.

These issues are of particular interest and concern to Stanford since our primary goal is to educate and train future physicians and scientists who are committed to scholarship and careers in academia. Indeed, career development is of great interest to our faculty, departments and the school – as well as our students and trainees. This was the topic of our Leadership Retreat in 2009 and will be a primary feature of our efforts over the next year(s). That said, the challenges are notable for both individuals and institutions. These concerns featured prominently in my comments to our trainees pursuing careers in clinical oncology and cancer research.

The first step for an individual is to define the type of career one wishes to pursue. For MDs the opportunities include career paths that are largely in patient care or more exclusively in research, or some combination of the two. For PhD graduates the opportunities are largely in academia or in industry. Ultimate career satisfaction for any individual rests on staying true to one's primary passion – whether as a physician or a scientist. Each has a range of positive and negative attributes, and one's career is optimized by determining the path of greatest personal interest and not one driven by the expectations of mentors, colleagues or institutions or even by the personal economic awards or compromises. Of course, each of these factors does play a role in individual choice – but it is critical to own one's choice and not to feel molded or coerced by an institutional culture or expectation(s). At the same time, it is imperative to determine whether the institution is truly supportive of the career choice one is making.

A career as a clinician-educator (with the preponderance of one's time in direct patient care) or, at the other extreme, as a full-time investigator, brings with it the least ambiguous set of definitions, boundaries and expectations. A career as a physician-scientist, in contrast, is much more challenging, since the pushes and pulls of patient care demands are not infrequently pitted against those for academic development. This tension makes the institutional culture and support all the more important. The very opportunities

to translate knowledge from the laboratory to the patient can be squandered or lost depending on the culture and priorities of institutions and their leaders.

Institutional culture is also hard to define, in part because it consists of numerous and variegated microcosms. Indeed, it might be said that there are at least four institutional cultures on our own campus – one for the university outside of the medical school, another for the medical school (which differs among and between basic and clinical science departments), a third at Stanford Hospital & Clinics and a fourth at Lucile Packard Children’s Hospital. Further confounding this complexity is the variation in the perceived value and support for a career path as a clinician-educator, clinician-scholar/scientist, or investigator.

In addition to defining the type of career one wishes to pursue, individuals should obtain a clear understanding of the tangible institutional support available for their personal and professional development. Evidence for this begins with the resources allocated to launch one’s career (which is highly dependent on the nature of the work being done) as well as the potential for long term support to sustain a career over time. For clinician-scientists this includes support for protected time to pursue academic development, a sufficient amount of time to achieve measurable success for promotion and retention (including tenure or continuing appointment), and a range of benefits and resources to support personal as well as professional development. Coupled with these is evidence of a robust mentoring program as well as workshops and resources that define and clarify the metrics for success in career development. Support programs to assist in childcare, eldercare, family and medical leave are also important. While by no means perfect, the programs in place at Stanford or those being introduced provide strong evidence of institutional support. These programs can certainly be further enhanced and improved, but even what exists now is designed to foster success – especially when there is a match between an individual’s career choice and institutional expectations and support. When these are not aligned, opportunities for success, and especially career satisfaction, quickly become compromised.

Even when individual and institutional goals, expectations and support are aligned, societal commitments and support can alter the equation of success and satisfaction. As I have noted previously, this can be dramatically impacted by external sources of funding for research or payments and expectations for clinical care and service. The future success of clinician-educators in academic medical centers will be influenced both positively and negatively by healthcare reform. In different ways, the success of scientists and physician-scientists will be affected by the nation’s commitment to research – which for the NIH will be recast during FY11 when ARRA funding has been spent. This includes not only the total amount of research support but also the support for new and transitional investigators. Here a refinement of the “K-awards,” particularly to provide more salary support, is critical. So too is further expansion of the R29 program and, especially, the transition from K awards to R01 grants.

This transition is the area of greatest vulnerability, and attrition in the physician-scientist ranks occurs if the chasm from a K to an R award is not bridged. For both MDs

and PhDs the next vulnerability comes about if R01 funding is not renewed or additional grant support not secured. These transitions are further accentuated by the competition for federal support between new and established investigators. An additional confounding factor in the present economic climate is that a number of the private research foundations that have traditionally complemented or supplemented public support have had to reduce or dramatically curtail awards because of the loss of endowment or gift opportunities.

While many of these issues are not new, there is no denying that they are more acute during times of uncertainty and constraints on resources - such as those we face today. This is why institutional commitment and support are so important – along with informed decisions by individuals. Despite the uncertainties, a career in academic medicine – as an investigator, clinician-scholar or clinician-educator – is enormously rewarding and fulfilling. While I have no doubt that we will need to make compromises and adjustments in the years ahead as individuals, institutions and as a society, I am also convinced that if we hold true to our vision and goals we can sustain and enhance the career development of future generations – for their sake and for our communities locally and globally.

### **Influenza Vaccine for Healthcare Providers**

Most of you have received the seasonal influenza vaccine by now – which is important. Within the next weeks H1N1 immunizations will become available. As I described in the September 14<sup>th</sup> Newsletter, given the risks for widespread infection, it is imperative that all medical providers do everything possible to prevent the spread of H1N1. This includes infection control policies (i.e., handwashing, masks, appropriate isolation) and vaccination. Except for those with an allergy to eggs or a prior history of Guillan-Barre syndrome, it is imperative that all healthcare providers receive the H1N1 vaccination. The Medical Executive Committee for Stanford Hospital & Clinics and the Lucile Packard Children's Hospital will almost surely adopt this imperative, and it should be viewed as policy for all faculty, students and staff in the School of Medicine who are involved in patient contact.

As of October 9<sup>th</sup> 37 states are reporting widespread influenza, virtually all of which is H1N1. While the good news is that the morbidity and mortality related to H1N1 has not been greater than seasonal flu, it is important to underscore that we are still in the early days of this infection, and the opportunities for change in the profile or severity of this novel infection remain a concern. Accordingly, our best response is prevention (which includes vaccination and infection control practices) as well as antiviral treatment of high-risk groups (pregnant women, infants and children, those > 65 years of age and individuals receiving immunosuppressive therapy) along with chemoprophylaxis for healthcare providers who are exposed to infection. With the imminent availability of the H1N1 vaccine, be sure to get vaccinated if you have any patient care activities. Updates on vaccine availability as well as other important information on influenza will be posted on the Stanford Emergency Preparedness website – see: <http://stanfordmedicine.org/flu/index.html>.

## **Stanford and Industry Relations**

As most of you know, during the past several years we have established a number of governing principles, guidelines and policies regarding relationships with industry. These are codified on our website at <http://med.stanford.edu/coi/siip/>. While we seek ways to develop collaborative and productive relationships with industry, we want to avoid interactions that create overt or subtle influences or that engage Stanford directly or even inadvertently in marketing for industry. Our policies have been modeled by many other institutions, are consistent with or acknowledged by the Institute of Medicine (IOM) and Association of American Medical Colleges (AAMC) and graded “A” by the American Medical Student Association (AMSA). And while compliance is quite excellent (and much appreciated) there have been a couple of recent examples where faculty, primarily from basic science departments, proposed or planned education or training programs that could have led to violations of our policies had they not been discovered and corrected. These recent experiences prompt me to remind you about these policies and to encourage you to review them directly or the FAQs sheet that accompanies them (see: <http://med.stanford.edu/coi/siip/faqs.html>). Thank you.

## **The Role of Academic Health Centers in Workforce Planning During Healthcare Reform**

Once again progress in national healthcare reform seems more likely, although its scope and depth await further debate and reconciliation between the Senate and House of Representatives. This seems slated to take place during the next weeks to months, although it should be expected that the full dimensions of reform will likely take years to unfold. We hope for changes that eventually lower healthcare costs, improve access as well as the quality of care and reverse some of the perverse incentives that have guided the medical marketplace. At the same time it must also be anticipated that virtually every sector (doctors, hospitals, insurance companies, the pharmaceutical and device industry, consumers and many others) will experience negative as well as (hopefully) positive impacts from the changes that place – even though many will be take years to be fully appreciated.

Because of their higher costs and multiple missions, which include education and research as well as patient care, academic medical centers (AMCs) are particularly vulnerable. Even though AMCs and teaching hospitals train physicians, nurses, dentists, pharmacists and other healthcare providers, and conduct basic and clinical research, they are rarely mentioned or featured prominently in the discussions and debates on healthcare reform. Although a number of professional societies and organizations have offered opinions to state and federal legislators as well as the Executive Branch, it is not clear that a consistent message is being delivered. Given the complexity of the issues and the interests of the multiple constituencies that comprise an AMC this is hardly surprising. But it is not necessarily helpful.

The AAMC and AAHC have been among the organizations that have been highlighting the unique role and importance of AMCs. I have taken part in a number of these discussions, and on October 6<sup>th</sup> I participated in a congressional briefing on this topic. One of the key messages we delivered is that academic medical centers are critically important to our nation's future precisely because they are at the intersection of education, research and patient care. However, these missions are expensive and interconnected, and two of them (education and research) require institutional support to supplement the shortfalls from tuition or research grants and contracts. Because of their not-for-profit status, AMCs have supported education and research with funds received from the public sources (for state schools and universities), from gifts or endowment and from clinical income.

Given the economic downturn, public support has been severely contracted for nearly all state institutions, and gifts and endowment income have been dramatically diminished – and will likely remain so for years to come. This has made the dependency on support from clinical income, generated largely at teaching hospitals, more critical to many AMCs. At the same time, a report released by the AAMC on October 8<sup>th</sup> demonstrates how important AMCs are to the local and national economy. In the aggregate 131 medical schools and nearly 400 teaching hospitals are reported to have had an economic impact of over \$512 billion on state and national economies. The report notes that AMCs employ 1.86 million individuals and are directly or indirectly responsible for approximately 3.3 million full time jobs across the nation (for full report see:

[https://services.aamc.org/publications/index.cfm?fuseaction=Product.displayForm&prd\\_id=268&prv\\_id=329](https://services.aamc.org/publications/index.cfm?fuseaction=Product.displayForm&prd_id=268&prv_id=329)).

Though there is wide recognition and support for cost containment as part of health care reform, reimbursement reforms need to take into account the collateral impact that could affect the sustainability of academic health centers. Among the concerns is support for graduate medical education (including the need to expand the number of Accreditation Council for Graduate Medical Education [ACGME] approved residency slots) through changes in Medicare. This has specific ramifications for defining the future healthcare provider workforce.

It is frequently noted that the ratio of primary care to specialty physicians is skewed toward specialists in the United States compared to other resource rich nations. Current efforts to increase the number of physicians graduating from medical school will not address this successfully unless there are changes in the opportunities and benefits for a career as a generalist (e.g., internist, pediatrician, family physician) – including compensation as well as perceived and real career satisfaction. In the current system these are often seen as disincentives, impacting also the geographic distribution of the physician workforce in both urban and rural settings. While many argue that the need for primary care providers mandates training more physicians, this should not be viewed as the sole solution. In many ways, the health and care needs of communities would be better served by teams of providers that include doctors, nurses and others trained to provide preventive and general care in addition to high-end and chronic care.

Unfortunately, creating this balance is unlikely to take place in a rational way when various providers and professional groups focus on their self-interests compared to the needs of the communities they should serve.

Because AMCs train the entire range of healthcare providers, they should play a more prominent role in orchestrating team-based education, training and care models. With that in mind, the AAHC has argued that too little attention is being paid to comprehensive workforce reform as an essential ingredient of healthcare reform. I agree, although this is also somewhat of a chicken and egg phenomenon – namely, the needed workforce will also be defined by the nature of the future healthcare system itself. That said, in our congressional briefing (as well as other meetings that have been held), we argued for a health workforce planning body to address the nation’s urgent health workforce needs in a comprehensive and coordinated manner. This should be an integral part of healthcare reform.

## **Fall Issue of Stanford Magazine is out**

I am pleased to let you know that the fall issue of the *Stanford Medicine* magazine is now available. This issue offers several timely stories, among them three tales of modern medical detection. Readers follow physician-scientists, the experts at solving medicine mysteries, as they use technologies to turn up clues unimagined in writer Arthur Conan Doyle’s day – a telltale quirk in a gene’s sequence, for example, or a peculiar hormonal secretion. The issue is available both online at <http://stanmed.stanford.edu> and in print (650 736-0297). For additional information, please contact Susan Ipaktchian at (650) 725 --5375 ([susani@stanford.edu](mailto:susani@stanford.edu)), or M.A. Malone at (650)723-6912 ([mamalone@stanford.edu](mailto:mamalone@stanford.edu)) or email [medmag@stanford.edu](mailto:medmag@stanford.edu).

## **Upcoming Event**

### ***Symposium: “Fetal Cardiac Intervention”***

Thursday, November 5th

9:00 am - 3:00 pm

Freidenrich Auditorium, Lucile Packard Children’s Hospital

Open to the public

This symposium will be led by Drs. Mike Longaker, Dan Bernstein and Frank Hanley. Keynote addresses will be given by Drs. Mike Harrison from UCSF and Deepak Srivastava from the Gladstone Institute. For more information, contact Subia Ahmad at (650) 736-1829; [subia.ahmad@lpch.org](mailto:subia.ahmad@lpch.org) or Lindsay Okamoto at (650) 497-8160; [lindsay.okamoto@opsch.org](mailto:lindsay.okamoto@opsch.org).

## **Awards and Honors**

- ***Dr. Harry Greenberg***, Senior Associate Dean, Research and Training and the Joseph D. Grant Professor in the School of Medicine, **will be this year’s medical honoree** at



the American Liver Foundation (ALF) Salute to Excellence Awards Gala in March of 2010, in recognition of his many contributions to molecular virology and hepatitis. The ALF honors those who have made an outstanding contribution to biotechnology or medical innovation. Congratulations, Dr. Greenberg.

- **2009 McCormick Faculty Awardees:** The School of Medicine and the Office of Diversity and Leadership are pleased to announce the recipients of the 2009 McCormick Awards. These awards provide research/project funding to junior faculty women pursuing advancement, or to junior faculty men or women who support the advancement of women in medicine and/or medical research. This year's McCormick Award winners include:
  - **Claudia Mueller**, MD, PhD, Assistant Professor, Department of Surgery
  - **Kim Rhoads**, MD, Assistant Professor, Department of Surgery
  - **Erika Schillinger**, MD, Clinical Associate Professor, Department of Medicine, Family and Community Medicine

Congratulations to each.

- **Dr. Carla Shatz**, Professor of Biology and Neurology, is this year's recipient of The Mika Salpeter Lifetime Achievement Award. This award, which recognizes an individual with outstanding career achievements in neuroscience who has also significantly promoted the professional advancement of women in neuroscience, will be given on October 19th at the Annual Society for Neuroscience Meeting. Congratulations, Dr. Shatz.

## **Appointments and Promotions**

**Maja Artandi** has been promoted to Clinical Assistant Professor of Medicine (General Internal Medicine), effective 9/01/09..

**Kim D. A. Bullock** has been promoted to Clinical Associate Professor of Psychiatry and Behavioral Sciences (Behavioral Medicine), effective 9/01/09.

**Annette Chavez** has been reappointed as Clinical Associate Professor (Affiliated) of Surgery, effective 9/01/09.

**Susan Frayne** has been reappointed to Associate Professor of Medicine at the Veterans Affairs Palo Alto Health Care System, effective 9/01/09.

**Susan Galel** has been reappointed to Associate Professor of Pathology at the Stanford University Medical Center, effective 9/01/09.



**Gill Harcharan** has been reappointed to Associate Professor of Urology at the Stanford University Medical Center, effective 9/01/09.

**Kimberly Hill** has been promoted to Clinical Associate Professor of Psychiatry and Behavioral Sciences (Behavioral Medicine), effective 9/01/09.

**Peter H. Hwang** has been promoted to Professor of Otolaryngology – Head and Neck Surgery at the Stanford University Medical Center, effective 9/01/09.

**Kathleen Kenny** has been reappointed as Clinical Assistant Professor of Medicine (General Internal Medicine), effective 9/01/09.

**Seung Kim** has been promoted to Professor of Developmental Biology, effective 9/01/09.

**James Lau** has been appointed as Clinical Associate Professor of Surgery (General Surgery), effective 8/01/09.

**Jason T. Lee** has been reappointed to Assistant Professor of Surgery at the Stanford University Medical Center, effective 9/01/09.

**Marc B. Lee** has been promoted to Clinical Assistant Professor of Neurosurgery, effective 9/01/09.

**Bryant Lin** has been promoted to Clinical Assistant Professor of Medicine (General Internal Medicine), effective 9/01/09.

**Kristine H. Luce** has been promoted to Clinical Associate Professor of Psychiatry and Behavioral Sciences (Behavioral Medicine), effective 9/01/09.

**Jeffrey A. Norton** has been reappointed to Robert L. and Mary Ellenburg Professor in Surgery effective 9/01/09.

**David Peng** has been appointed as Clinical Associate Professor of Dermatology, effective January 1, 2010.

**Rita Popat** has been reappointed as Clinical Assistant Professor of Health Research and Policy, effective 9/01/09.

**Zakia Rahman** has been reappointed as Clinical Assistant Professor (Affiliated) of Dermatology, effective July 1, 2009.

**Lisa Shieh** was promoted to Clinical Associate Professor of Medicine (General Internal Medicine), effective 9/01/09.

**Michael Snyder** has been appointed to Professor of Genetics, effective 9/01/09.

**Susan M. Swetter** has been promoted to Professor of Dermatology at the Veterans Affairs Palo Alto Health Care System and at the Stanford University Medical Center, effective 9/01/09.

**Ian Tong** has been promoted to Clinical Assistant Professor of Medicine (General Internal Medicine), effective 9/01/09.

**Mytilee Vemuri** has been promoted to Clinical Assistant Professor of Psychiatry and Behavioral Sciences (Behavioral Medicine), effective 8/01/09.

**Joanna Wysocka** has been reappointed to Assistant Professor of Chemical and Systems Biology and of Developmental Biology, effective 9/01/09.