Dean's Newsletter
April 23, 2012

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Medical Student Admit Weekend 2012

A record number of students participated in ***"Admit Weekend 2012,"*** which took place from Thursday, April 12th through Saturday, April 14th. Over a hundred students, all admitted to the Stanford MD or MSTP program, visited campus to help solidify their decision about where to attend medical school. I am very appreciative of the Office of MD Admissions staff, the Center of Excellence in Diversity in Medical Education, the Stanford University Medical Center Alumni Association and the many faculty, staff and students who worked diligently and enthusiastically to make this a great experience for our visiting students. We are so very fortunate to have so many outstanding applicants to our medical school, and we are privileged that so many of the students who have been admitted are considering matriculation in the class entering in 2012. Without question the remarkably talented students who join our community play a unique role in what makes Stanford such a unique place.

We are well aware that the students admitted to Stanford have other outstanding options available to them. We further recognize that many factors contribute to each student's decision matrix. While we are certainly biased, we also recognize that Stanford provides resources, opportunities and a learning environment that are not available at other institutions. Our comparatively small class and overall school size offer a more intimate setting for students to interact with each other and with outstanding faculty and staff. The close physical connection between the medical school and our two major teaching hospitals as well as the close physical proximity of the medical center to all of Stanford University provide seamless and unparalleled opportunities for interdisciplinary education and research.

With over 135 allopathic schools of medicine in the US, students have many different opportunities to consider. Some schools have large class sizes (the University of Illinois tops the list) while others, like Stanford, have less than a hundred students per class. Most every medical school has as its primary mission the education and training of future physicians, although they vary in their focus on primary care opportunities and

training environments in rural or urban centers. Certainly Stanford is committed to the education and training of outstanding clinicians. But it is unique among medical schools in its additional focus on educating and developing future physician-scholars, scientists and leaders. Equally importantly, Stanford embraces the entirety of the University to achieve its education and training opportunities. It thus moves beyond the boundary of health science *per se* to create an educational environment more akin to a research university, in which there are numerous interdisciplinary opportunities encompassing medicine, science, engineering, law, education and beyond. For students who are interested in a multifaceted career path, the opportunities at Stanford are truly exceptional (see: http://med.stanford.edu/education/) and, as I outlined in my April 9th Dean's Newsletter, constantly evolving.

During Admit Weekend 2012 prospective students were exposed to various facets of the life of a Stanford medical student. They participated in discussions about some of the unique features that set us apart from other schools, including our Scholarly Concentration Program, Joint Degree Programs, MD/PhD (MSTP) Program, the numerous education and support programs that enrich learning and career development (e.g., Academic Advisors, Educators for Care) and our important programs in financial aid and support. Prospective students had the opportunity to tour our unique learning environments, clinical programs, community sites and special programs. And perhaps most importantly they had time to interact with each other and with current Stanford medical students, residents, faculty and staff. We celebrate the incredible contributions being made to improve the education and life development of our students and trainees – and look forward to the beginning of new journeys this August. Of course it is important to recognize and acknowledge that we also have much work to do in the years ahead to further refine the educational experiences for our students (see below), and we are committed to doing that.

Changing Expectations for Medical School Students

Changes in medical school education – and in the educational experiences students had prior to coming to medical school – do change over time, but in a more evolutionary than revolutionary manner. As previously discussed, most medical schools still follow the preclinical and clinical division of the four year curriculum that came into being following the Flexner Report of 1910 (see: http://www.carnegiefoundation.org/sites/default/files/elibrary/Carnegie_Flexner_Report.pdf) and the review by Molly Cooke et al entitled "American Medical Education 100 Years after the Flexner Report" that was published in the New England Journal of Medicine (see: http://www.nejm.org/doi/full/10.1056/NEJMra055445). It is true that medical schools, including Stanford, have sought ways of better integrating clinical and preclinical education and training – but, for the most part, these remain discrete and even separate experiences.

In a similar vein, the "premedical education requirements" have also changed relatively little – even from the time when I applied to medical school some decades ago. It is important to note that a baccalaureate degree is not required for entry to medical

school in many other parts of the world (where medical school follows high school) but that this has been a tradition in the US (with the exception of several schools that have tried to shorten the college-medical school curriculum to six years by consolidating various courses and requirements). While the major reason that US schools continue with a bachelor's degree prior to medical school is to foster a "broad educational experience," the reality is that most students wind up concentrating in variations on human biology rather than pursuing studies in the humanities or the social sciences. And the required courses, even though relatively few in number, do take up precious time, although some have questionable relevance for modern medical education.

Some schools, the University or Pennsylvania being an excellent example, offer suggested areas for undergraduate study as an alternative to "requirements" (see: http://www.med.upenn.edu/). I believe this is an area needing further discussion and we will be examining whether we should move to a similar "recommendation" model at Stanford. As someone who concentrated in philosophy as an undergraduate (like a number of my colleagues who have spent their subsequent careers steeped in science) I do believe that students should have an opportunity to explore broadly and deeply in many different disciplines before entering medical school. But this will require some further discussion – since many students are still concerned about deviating from the tried and true path to medical school, which remains traditional and somewhat limiting if not inflexible.

This dialogue will be further catalyzed by the recently approved changes to the Medical College Admission Test (MCAT), which will become operative in 2015. I have forecast some of the planned changes in prior Newsletters, and they are now being communicated more broadly through the Association of American Medical Colleges (see: https://www.aamc.org/newsroom/reporter/march2012/276772/word.html and https://www.aamc.org/initiatives/mr5/). A recent Perspective article in the April 5, 2012 issue of the New England Journal of Medicine by R Kaplan et al entitled *"Building a Better Physician – The Case for the New MCAT"* (see: http://www.nejm.org/doi/full/10.1056/NEJMp1113274) highlights the changes and some of the factors that guided them.

For perspective, the MCATs have been administered for 80 years, and the last major change in their format was in 1991. The new MCAT exam that will go into effect in 2015 will be the fifth version of this exam; this new version represents the work of dozens of academic leaders and educators over the past several years. As the headliner, the 2015 MCAT will have four components and will include a new section on behavioral and social sciences. This addition signals an expectation that the social sciences are an important part of the practice and science of medicine – but also that there is a strong movement to make future physicians more enlightened and engaged in the social determinants of disease in addition to their biological and physical science underpinnings. There is also a goal of selecting and educating future doctors who will espouse humanistic knowledge and professionalism and that these may be enhanced by more exposure to behavioral and social science education.

More specifically, here is the outline of the proposed MCAT5 as reported from the Committee (see: https://www.aamc.org/download/273766/data/finalmr5recommendations.pdf)

1. **The MCAT5 committee's recommendations describe four test sections:**
    a. Biological and Biochemical Foundations of Living Systems
    b. Chemical and Physical Foundations of Biological Systems
    c. Psychological, Social, and Biological Foundations of Behavior
    d. Critical Analysis and Reasoning Skills

2. **For the natural sciences sections, the proposed exam will:**
    a. Test introductory biology, organic and inorganic chemistry, and physics concepts,
    b. Test highly-rated biochemistry concepts at the level taught in most first-semester biochemistry courses,
    c. Test cellular/molecular biology topics at the level taught in most introductory biology sequences,
    d. Target basic research methods and statistics concepts described by many baccalaureate faculty as important to success in introductory science courses, and
    e. Ask examinees to use their knowledge of natural sciences concepts to demonstrate skill in scientific inquiry and reasoning, research methods, and statistics.

3. **For the social and behavioral sciences, the proposed exam will:**
    a. Test examinees' knowledge and use of concepts in psychology, sociology, and biology that provide a solid foundation for learning in medical school about the behavioral and socio-cultural determinants of health,
    b. Target concepts taught at most colleges and universities in one-semester introductory psychology and one-semester introductory sociology courses, and
    c. Require examinees to use knowledge of social and behavioral sciences concepts to demonstrate skill in scientific inquiry and reasoning, research methods, and statistics.

4. **The proposed exam eliminates the Writing Sample section and replaces it with a Critical Analysis and Reasoning Skills** section will test examinees' reasoning by asking them to critically analyze information provided by passages from a wide range of social and behavioral sciences and humanities disciplines. This section will not require specific knowledge in these disciplines but, by calling them out, may prompt students to read broadly as they prepare for medical school. Along with many others, passages about ethics and philosophy, cross-cultural studies and population health will be included.

It is likely that over the next several years a number of changes in undergraduate education and medical school requirements will take place. This is an opportunity for Stanford to assume a leadership role and to seek ways to create better links between

college and medical school education and, equally importantly, to better prepare future physicians, scientists, scholars and leaders for the career opportunities that will unfold in the future. These and the related changes underway could further evolve to become more revolutionary – which would be good.

More Thoughts About Our Learning Environment

Since I commented on a "Respectful Learning Environment for our Students" in the February 20, 2012 issue of the Dean's Newsletter, I have had numerous further discussions with leaders in medical education, faculty, students and staff. From the numerous discussions and forums I have participated in, it seems clear that student mistreatment that is based on sex harassment or gender or racial bias is exceedingly rare at Stanford. But then again, this should **never** take place in any education setting or in any part of our workplace. Behavior represented as sexual or gender harassment is unacceptable and intolerable. Any evidence of this kind of behavior impacting students and trainees should be brought to the attention of our Ombudsperson, the Associate Dean for Student Life or my office directly. Such complaints would be carefully investigated in a confidential manner that is designed to protect against any form of retaliation. There is zero tolerance for such behavior.

I have also learned that concerns about the learning environment in medical education are being expressed at medical schools across the nation and they focus on experiences of public humiliation, concerns about physical harm and requests for personal services. Clearly these are different experiences and require different assessments and outcomes. From what I have learned since my February communication, experiences of public humiliation are not infrequent. At a minimum they represent a clash between, on one hand, previously accepted approaches to pedagogy or perspectives on medical education and the training of doctors, and, on the other, what any of us should consider acceptable methods of teaching in the 21st century. While some of these approaches may be well intentioned and often are referred to as the "Socratic Method" of education, it is also clear that this style of education, especially in clinical settings, is too frequently associated with feelings of "humiliation" – both perceived and real. Encounters experienced as humiliation occur almost exclusively in clinical settings and result from student interactions with faculty, residents, nurses, fellow students – and even patients.

I recognize that we all experience human interactions differently and with different feelings and perceptions. I also recognize that some encounters experienced as "humiliation" were not intended to be such – but that in other situations the humiliation was intended and purposeful, regardless of the motivation. While it is not unlikely that the more serious incidences of "humiliation" are experienced by a subset of our community – the reality is that many students have had an encounter that has raised concern. While we certainly need to better prepare students for some of the events and challenges they will encounter in clinical settings, we also need to raise the awareness of our broader community – faculty, residents, nurses, students, staff – that some intended teaching and educational encounters are being experienced negatively.

My intention in this communication is not to assign blame or to overstate or understate the issue of student mistreatment. It is to convey that the problems and perceptions about mistreatment experienced as public humiliation are real and that we need to address them as a community. Over the next months we will be gathering additional data and engaging in various discussions and dialogues with students, trainees, faculty and staff. I am certainly cognizant that some members of our community have expressed a concern that too much public discourse might inadvertently increase reporting of perceived or real mistreatment. It is true that when issues once repressed become more public, there can be an increase in reportable events. But it seems far better for our community to be forthright and transparent – and to be willing to learn and help each other better understand the scope and nature of factors or interactions that are negatively impacting our learning environment. Then we will be able to deal with them responsibly and honestly. This will require engagement by all of us.

Medicine and the Muse 2012

The symposium on Medicine and the Muse has become a deeply valued experience and tradition at Stanford. I have had the opportunity to attend virtually every one of these events over the last decade – but unfortunately I was away when the 11th Annual Medicine and the Muse Symposium was held this April. I heard from many members of our community that it was an outstanding event. Since I couldn't share an update with you based on my own experiences, I asked Dr. Audrey Shafer, Professor of Anesthesia and Co-Director, Biomedical Ethics and Humanities Scholarly Concentration, to prepare a summary of the symposium. I am pleased to share it with you here.

The 11th annual ***Medicine and the Muse Symposium***, hosted by the Arts, Humanities and Medicine Program, Stanford Center for Biomedical Ethics, and the Center for Innovation in Global Health, welcomed an audience of 200 to LKSC on April 11, 2012 to celebrate the artistic creativity of our students and to focus on the role of journalism in global health.

Organized by first year medical student Meghan Galligan, who directed an enthusiastic team (Anna Do, MSI; Prajakta Jaju, MSI; Rachel Lee, MSI; Gloria Yiu, MSIV and Bonnie Chien, MSI) under the theme of "Transcendence," the event featured an original composition for violin by Ben Robison, MSI, inspired by the deep relationship of health and culture as expressed in the music of the Sicangu Lakota tribe and Brazilian avante-guard; belly dancing by Patricia Ortiz-Tello, MSTP IV; a group poem on the body by the Creative Writing class; an original composition for voice and guitar written for the Family Medicine Clerkship module on end-of-life issues – entitled Ode to Advance Directives by Nicole D'Arcy, MSIV and Anna Krawitz, MSIV; and a reading by Shervin Wang, MSI, on the importance of respecting the fears of a pediatric patient and what can be learned from an equine class on communication and teamwork. Senior Associate Dean Prober opened with remarks on the remarkable dedication to the arts and humanities by members of the medical school, and Senior Associate

Dean Michele Barry emphasized the importance of communication literacy in global health and the launch of the fellowship on global health and the media. Audrey Shafer, MD, awarded prizes to the winners of the first Medicine and the Muse Global Health student writing contest to runners up Amrapali Maitra, MSII and Pria Anand, MSII and to the first place recipient, Laura Saucier, MSI, who read her essay on the value of putting a face on the otherwise benumbing statistics of global AIDS deaths.

Another first for Medicine and the Muse was the delivery of the keynote speech by an alum of the medical school: Sheri Fink, MD, PhD, a Pulitzer prize winning journalist for her article on Memorial Hospital in the aftermath of Katrina and the author of a book on the desperate work by physicians and health care workers during the Bosnian War. Fink spoke on the power of the word, the ethical obligations to be cognizant of that power, the separate roles of reporter and aid worker (she has also done humanitarian work), and the importance of exhaustive fact checking and obtaining as complete a story as possible even in the current age of sound bite journalism. The symposium closed with an exhibit displaying the amazing array of visual arts talent at the medical school and center.

The National Advisory Council Visits the School of Medicine

Today, April 23rd, is the annual visit of the School of Medicine's National Advisory Council (NAC). The NAC is comprised of outstanding national leaders in medicine and science who review high-level strategic initiatives taking place at Stanford and report their observations and recommendations to the President and Provost. NAC members include:

- ***Dr. Ed Benz***, President, Dana Farber Cancer Institute, Harvard University. Dr. Benz serves as chair of the NAC.
- **Dr. Huda Akil**, Co-Director and Research Professor, Molecular and Behavioral Neuroscience Institute, University of Michigan
- **Dr. Tom Boat**, Vice President for Health Affairs and Dean, University of Cincinnati College of Medicine
- **Dr. Jennifer Rubin Grandis**, Vice Chair of Research and Professor, Department of Otolaryngology, University of Pittsburgh School of Medicine
- **Dr. Helen Hobbs**, Director, McDermott Center for Human Growth and Development and Professor of Medicine and Molecular Genetics, UT-Southwestern Medical Center
- **Dr. Larry Kaiser**, Senior Executive Vice President for Health Sciences and Dean, School of Medicine, Temple University School of Medicine
- **Dr. Dan Lowenstein**, Professor of Neurology and Director of Physician Scientist and Education Programs, UCSF School of Medicine
- **Dr. Trudy Mackay**, Professor of Genetics, North Carolina State University
- **Dr. Elizabeth Nabel**, President, Brigham & Women's Hospital, Harvard Medical School

- **Dr. Arthur Rubenstein**, Past Dean and Professor of Medicine, University of Pennsylvania
- **Dr. Bill Stead**, Director of the Informatics Center and Associate Vice Chancellor for Health Affairs, Vanderbilt University Medical Center

This year's meeting has a different perspective, given the leadership transitions that will take place in the School over the next couple of years (obviously including my own). With that in mind, this year's NAC is focused on some of the major ongoing challenges we face in the immediate future. The NAC meeting begins with my "State of the School Update", some of which is gleaned from the issues I summarized in my January 9, 2012 DNL entitled "What Comes Next". The internal and external forces impacting medical schools, including Stanford, are notable and include the challenges of funding for research, especially from the NIH, the continuing impact of economic decline, the uncertain changes that will emerge from healthcare reform – or at a minimum, the reductions in healthcare payments overall as well as how payments are formulated.

This is a time that requires institutions to be clear minded about their missions and goals and focused on how to assure their integrity during challenging times. Given this reality, we will be sharing a review of the integrated clinical planning underway with SHC and LPCH and how we are preparing for the future in this domain. We will review the major capital projects underway in the Medical Center and how they will be supported and coordinated. This is a time of major and remarkable facilities growth and transformation. We will also discuss how new technologies are transforming education and how we will prepare medical students and graduate students for successful futures. Enriching the diversity of our faculty has been a major initiative and an update on this work in progress will be shared with the NAC. Finally, the evolving initiative in precision medicine and population health sciences will be a topic for review and discussion. Needless to say, there are major other initiatives underway that we will be discussing with the NAC – all of course aimed at making Stanford an ever better school of medicine.

Stanford Medicine Features the Future of Psychiatry

Once again *Stanford Medicine*, the award-winning publication of our Office of Communication and Public Affairs, has succeed in addressing an important issue with thoughtful exposition. The spring issue addresses the Future of Psychiatry and offers a number of important and provocative stories and reports. *Stanford Medicine* is available on line at http://med.stanford.edu/ism/2012/april/magazine.html. Once again I want to thank Rosanne Spector, Paul Costello and the team in the Office of Communications and Public Affairs for another compelling report.

Upcoming Event

On Thursday, May 3rd, the **29th Annual Medical Student Research Symposium** will be held in the LKSC Ballroom from 3:00-6:00 pm. Close to 50 MD and MD/PhD

students will present their original research ranging from: *Maternal glucose response to betamethasone administration* to *Nanomedicine at the forefront of medical diagnostics.*

Students will be available at their posters for informal discussion from 3:00-5:30 pm. Following closing remarks the event will culminate at 5:45 pm with the announcement of student awards by the Stanford Medical Center Alumni Association. This promises to be a terrific event and I hope you will join our students for this year's Student Research Symposium.

Awards and Honors

- **Dr. Garry Nolan**, Rachford and Carlota Harris Professor, Baxter Laboratory, Department of Microbiology and Immunology, is the winner of the highly competitive Teal Innovation Award from the Department of Defense. The funds will be used to apply single cell technology developed by the Nolan Lab to ovarian cancer.
- **Dr. Gabriel Garcia**, Professor of Medicine and co-founder of a program that trains Stanford undergraduates to serve as volunteers in local health clinics, will receive the 2012 Miriam Aaron Roland Volunteer Service Prize at an awards luncheon this week.
- **Dr. Oxana Palesh**, Assistant Professor of Psychiatry & Behavioral Sciences, has been selected by the American Psychological Association's Socioeconomic Status Related Cancer Disparities Program (SESRCD) to serve as a Behavioral Social Science Volunteer (BSSV) Awardee to assist regional cancer serving organizations to address health disparities in cancer.

- Of the 220 individuals elected to the ***American Academy of Arts and Science***s, nine are members of the Stanford faculty, including three in the School of Medicine. They are:

    - **Ann Margaret Arvin**, Vice Provost and Dean of Research, Lucile Salter Packard Professor of Pediatrics and Professor of Microbiology and Immunology
    - **Ben A. Barres**, Professor of Neurobiology, Developmental Biology, and Neurology and Neurological Sciences
    - **Stuart K. Kim,** Professor of Developmental Biology and of Genetics

    Congratulations to Drs. Arvin, Barres and Kim.