The Science, Ethics and Politics of Stem Cell Research

A special issue of *Stanford Medicine*, now available in print as well as on-line through our Website ([http://med.stanford.edu](http://med.stanford.edu)), is devoted virtually entirely to “The Science, Ethics and Politics of Stem Cell Research.” This includes balanced and thorough coverage of this most important topic, which, in part due to the work of Stanford faculty and leaders, has become a centerpiece of a national debate. I would strongly encourage you to read the articles and commentaries in this issue — they will inform and equip you with the information you need to better understand the issues and reach thoughtful conclusions. However, I hasten to add that overall the authors and commentators, including me, do have a strong view that stem cell research should proceed — but with the highest ethical standards and appropriate guidelines. The bottom line is that the benefits from this evolving science can help provide keys to better understanding developmental biology and in time will almost surely result in new approaches to the diagnosis, treatment and prevention of a number of human diseases.

I also want to thank the individuals who have worked hard to make this issue of *Stanford Medicine* so relevant and important. Rosanne Spector, editor of *Stanford Medicine*, has worked tirelessly to make this (and previous issues) successful. I also want thank our science writers Michele Brandt and Amy Adams for their contributions and, of course, Paul Costello, Executive Director of Communications and Public Affairs, for his exceptional leadership and creativity. I also want to thank our School of Medicine authors as well as guest contributors including Michael J. Fox, Ron Reagan, Tom Okama and Bob Kline.

The issues surrounding the science, ethics and politics of stem cell research are both complex and, in some ways, actually quite simple. They are also important to understand and perhaps most importantly, to act on.
Thinking About Translational Medicine

As you know, *Translating Discoveries* is the overarching theme for our School of Medicine Strategic Initiatives (http://medstrategicplan.stanford.edu/). To refine our mutual understandings about translational medicine and to develop the action items to develop and enhance their implementation, a series of faculty focus groups sponsored by the Dean’s office were held during the past year. Because the focus groups were limited in number, I thought it would be helpful to share some of their ideas with you in the hope that they might generate additional comments. Please send any suggestions or recommendations that you might have to me or others in the Dean’s Office (especially Senior Associate Deans John Boothroyd (jboothr@stanford.edu) and Harry Greenberg (hbgreen@stanford.edu)).

The focus groups organized their current thoughts and ideas around a handful of cluster areas that include:

- **Creating and Sustaining Teams**: Almost by definition translational research, and especially patient-oriented research, requires the formation of teams. There are a number of ways to structure and support such teams. An important example that I have mentioned in previous Newsletters was the initiative, in 2002, by leaders in the Department of Medicine and Beckman Center to mutually support novel translational research proposals that enjoined basic and clinical scientists. This was an important initiative that has already contributed to some impressive new collaborations. Because this was a pilot project arising from leaders within the School, the issue of its sustainability over time is relevant. Accordingly, Drs. Boothroyd and Greenberg have decided to continue the support for novel research proposals by adding funding from the Dean’s office. They are also eager to address ways to direct a portion of this competitive funding to junior faculty and to encourage collaborations between Investigators (aka UTL faculty) with Clinician Scholars/Investigators (aka MCL faculty).

- **Providing Resources to Support Research**: Here the focus groups have identified the importance of identifying core facilities and research support services that will overlap among the Stanford Institutes of Medicine and thus require coordination. Based on this, Drs. Boothroyd and Greenberg have begun identifying perceived needs for core facilities. With Dr. Steve Alexander and others we are also exploring ways to better support the translational/patient-oriented research infrastructure (e.g., biostatistics, data management, information technology, etc).

- **Research Program Alignments**: The focus groups recognized the importance of sustaining and enhancing collaborations that permit population based research especially in conjunction with other institutions, such as Kaiser. Additional alignments are also being explored.

- **Overcoming Internal Obstacles**: The focus groups noted that there is a concern among junior faculty that participation in translational and/or patient-oriented research has the potential to have a negative impact on promotion. Since our traditional academic promotion process has focused on the role of faculty as
independent investigators, team-based research may be viewed as a less important means to promotion. Dr. David Stevenson has been reviewing ways of embracing team research into the appointments and promotions process for the Investigator Track as has been done, for example, for the Clinician Scholar/Investigator Track.

- **Fostering Applications for Team Based Research:** Traditionally, Stanford has been known as an institution that focuses on R-01 funding applications and less so on “Program Project Grants.” While recognizing the importance of continuing our great strength in independent investigation (the R-01 model) it is also clear that we need more of a “cultural acceptance” of Program Project Grants, SCOREs, etc. This will require faculty to see the desirability of such research and the need for the School to help support and value its performance. As discussed in previous Newsletters, the movement of the NIH toward these collaborations, evidenced through the NIH Roadmap, shows the need to pay attention to interdisciplinary and team based research efforts. We have made some strides in communicating new opportunities for this type of research to the Medical School community. In addition, as announced in the April 5th Dean’s Newsletter, we have appointed Mr. Chris Webb as the School’s Interdisciplinary Grants Development Manager. In that capacity, Chris is available to help faculty organize and assemble large multi-faculty, multi-departmental grant applications. He is also available to assist on grant applications involving collaborations between SOM faculty and faculty in other schools. Chris can be reached at 736-2968, or at cdwebb@stanford.edu.

- **Education and Training:** Interest has been raised in creating educational opportunities for medical students and for graduate students in translational and patient oriented research. A new Scholarly Concentration is being added to the Stanford Medical School Curriculum on Clinical Research under the leadership of Dr. Charles Prober, Professor of Pediatrics (see July 26th issue of the Dean’s Newsletter. Discussions are also being initiated with Stanford Institute of Medicine Directors to incorporate education regarding translational medicine into the agenda for each of our four Institutes. In addition, Dr. Ben Barres, Professor of Neurobiology, has proposed the development of a Masters in Medicine Program for PhD students to provide specific training in “translational medicine.” Further discussions are being initiated to explore the establishment of a PhD program for residents or fellows who have decided to pursue a career in research, modeled after the STAR program currently in place at UCLA.

- **Organization and Finance:** We are currently exploring ways to establish a Center for Translational Medicine and Patient-Oriented Research that would offer the key services necessary to successfully conduct clinical research, including the essential infrastructure (e.g., protocol design, biostatistics, data management, tissue banking, etc), and to link these services to those within departments.
There are numerous other components that are essential to enhancing our mission in translational research that are not covered in this brief listing. As noted above we would welcome your comments and additional suggestions and recommendations.

**The Road to the LCME Review**

At the September 17th Executive Committee meeting, Dr. Oscar Salvatierra, Professor of Surgery and of Pediatrics, and Rebecca Trumbull, Strategic Planner in the Office of Institutional Research, gave an orientation to the LCME accreditation process. We will be engaged in this process during this academic year. Dr. Salvatierra is serving as the Faculty Leader and Ms. Trumbull is the Project Manager.

For those who may be unfamiliar with the term “LCME”, it stands for Liaison Committee on Medical Education. This is the body that accredits all United States and Canadian medical schools. The Association of American Medical Colleges (AAMC) and the American Medical Association (AMA) jointly sponsor it. The standard accreditation process occurs every eight years and consists of an extensive self-study report submitted to the LCME followed by a site visit by LCME to the institution.

The obvious reason to participate in this process is that we must be an accredited medical school. Less obviously is that it provides an opportunity to focus on medical education using the accreditation standards as benchmarks, to identify institutional strengths and areas where remediation is needed, and to develop strategies to ensure that strengths are maintained and problems are addressed on an on-going basis.

Stanford’s last LCME site visit was in 1997. At that time a number of areas of strength were identified, including a strong university academic environment, an outstanding faculty, a strong, diverse, and supportive student body, and pre-eminence in biomedical research. However, a number of areas of concern were also identified, including inadequate facilities (also cited in the 1983 and 1991 reports), ambiguity in the Medical Center Line, insufficient faculty development, insufficient student performance assessment, and an incoherent medical school curriculum.

Since that time, extensive efforts to correct these concerns have been underway. For instance, we have renovated a number of the teaching facilities and begun the design of a new education facility, clarified faculty roles, including the Medical Center Line, and completely redesigned the undergraduate medical curriculum. In December 2003, LCME staff made an interim visit to campus and reviewed with others and me our facilities improvements, the plans for the new education facility, and the launch of our new curriculum. The feedback we received at that time was positive.

The self-study process is extensive, labor-intensive, and requires the participation of many members of the School of Medicine community. An LCME Task Force has been established to oversee and review the process. In addition, thirteen subcommittees of faculty, staff, and students have been organized, each corresponding to a section of the LCME requirements. The result of this process will be a major report submitted to...
LCME in August 2005. In addition, students will undertake an independent process that provides an avenue for them to assess their educational experience. Their report will be submitted to the LCME at the same time as the larger school report. The site visit will occur in October 2005.

The LCME accreditation process is critically important for the School of Medicine. If you are asked to provide data, I hope you will respond in a timely manner. If you have been asked to serve on a subcommittee, I hope you will participate fully. Each contribution matters and will add to the success of this effort.

If you have questions about this process, please direct them to Rebecca Trumbull at trumbull@stanford.edu.

Stanford Medical Curriculum Continues to Evolve

Last fall the School introduced the New Stanford Curriculum that was the result of a nearly two-year planning process led by Dr. Julie Parsonnet, Senior Associate Dean for Medical Education. Also key to this endeavor were the efforts of Dr. Neil Gesundheit, Associate Dean for Medical Education; Dr. Ted Sectish, Chair of the Committee on Courses/Curriculum (CCC); and Dr. Oscar Salvatierra in his role as Chair of the School of Medicine Faculty Senate. I should hasten to add that many dozens of other faculty, staff and students played critical roles in bringing the New Stanford Curriculum to life and, during the past year, to continue to nurture and further develop and refine it. I wish I could thank everyone by name – but I surely want to thank each individual for making the New Stanford Curriculum a high priority and an opportunity for our students and our School.

I have presented numerous updates on the New Stanford Curriculum in prior Newsletters and the details are well delineated on the School’s Education Website (http://med.stanford.edu/md/). Because September 15th was the first meeting of the new academic year for the Faculty Senate, an update on the Stanford Curriculum and some of the new and future projects related to the curriculum were presented.

To remind you, the New Stanford Curriculum intersects education in basic and clinical science with the practice of medicine and individual scholarship. Five major themes define the New Stanford Curriculum and include:

1. **Integration** – includes a dramatically more streamlined content and optimized course sequence than was present before the fall of 2003. A major overarching goal is to meld and integrate basic science and clinical medicine through all years of medical education (and indeed, to serve as a training platform for life-long learning).

2. **Flexibility** – builds on Stanford’s past education programs and now provides blocks of unscheduled time (during the first two years) for individual or group study, elective course work, Scholarly Concentrations, and research. The program is also flexible enough to permit students to choose a fifth or sixth year of education and to pursue joint degrees.
3. **Early Instruction in Clinical Practice** – now includes a broad education in clinical science that begins with the first year and nearly immediately includes exposure to patients and the practice of medicine.

4. **Scholarly Concentrations** - provides opportunities for longitudinal in-depth learning, scholarship, and research and which, in many ways, serves as the centerpiece of the New Stanford Curriculum. Each student who enrolled beginning August 2003 is required to choose a Scholarly Concentration that can be tailored to either the Scholars Track or the Original Research Track. It is our hope that nearly all students will choose the Original Research Track. Currently there are ten Scholarly Concentrations to choose from including Bioengineering, Biomedical Ethics and Medical Humanities, Biomedical Informatics, Clinical Research, Community Health and Public Service, Health Services and Policy Research, Immunology, Molecular Basis of Medicine, Women’s Health, and Independent Design. Each offers an opportunity for students to develop deeper knowledge and expertise and serves as a template for increasing analytical thinking, research experience and, importantly, an increased passion for medicine, scholarship and inquiry. The Scholarly Concentrations also provide an opportunity to pursue joint degrees within the School of Medicine or with other Schools at Stanford (e.g., Law, Business, Humanities and Sciences or with the UC-Berkeley School of Public Health). Dr. Pat Cross has played a critical role in overseeing the Scholarly Concentrations and is a resource to our students about this exciting aspect of the New Stanford Curriculum.

5. **Mentoring** - is essential to the success of each student, and a revitalized Advising Program has been established to help each student achieve her or his professional and personal goals.

Building on these initiatives, Dr. Parsonnet discussed the next major phase of curriculum reform, the clinical rotations. This will include a critical review of the current clinical teaching programs, an expectation that each department will develop an education committee if not already in place, and that a more robust evaluation program will be put in place. In that regard, Drs. Elizabeth Stewart, Professor of Pediatrics, and Miriam Curet, Assistant Professor Surgery, described the very significant progress they are making in significantly improving the evaluation system. One important effort underway is to provide a tutorial for faculty evaluators, students and clerkship directors on clerkship evaluations in order to help guide each group about expectations, components of the evaluation process and the appropriate way to complete the evaluation. These can be viewed at [http://med.stanford.edu/clerkship_eval/](http://med.stanford.edu/clerkship_eval/). The overarching goal is to assure that we develop a system of evaluation that is fair, accurate, complete and fully reflective of our student’s performance. Further updates regarding these efforts will be discussed in future Dean’s Newsletters.

An additional exciting facet of the review of clinical clerkships will be the program in Applied Basic Sciences. As discussed by Dr. Parsonnet, this will involve venues for including basic science topics into the clinical rotation curriculum as a means of better integrating science and clinical medicine. These will include rotation specific study topics, a focus on translational medicine, and case-based discussions with basic and
clinical science faculty as well as intercessions that may be class-wide as compared to rotation specific.

Curriculum reform is a constant work in progress and must, if it is to be viable, continue to evolve and improve. There is little doubt that the past year has witnessed considerable change and that the years ahead will continue to reflect further refinements, new additions, and hopefully some deletions as well. But to be effective and optimal for future generations of students the New Stanford Curriculum will continue to develop so that it is truly always new and exciting and prepares our students to be outstanding physicians, scientists and leaders.

**Executive Committee Discusses Medical Student Admissions**

Over the past year, the Executive Committee has had a number of discussions about medical student admissions. While everyone acknowledges that we are most fortunate to have had outstanding students enter our medical student classes, we have also recognized the importance of aligning the interests and aspirations of prospective students to the directions, goals and missions of the School of Medicine. With the New Stanford Curriculum and its enhanced focus on scholarship and Scholarly Concentrations, it is increasingly important to assure that applicants are aware of the School’s chosen emphasis and that the faculty and students are as optimally matched as possible.

Earlier this year I appointed a Subcommittee of the Executive Committee to work with Dr. Gabe Garcia, Director of Admissions, to review and address ways of further optimizing the admissions process. The Subcommittee was chaired by Dr. Bill Mobley (Neurology and Neurological Sciences) and included Drs. Ron Pearl (Anesthesia), Suzanne Pfeffer (Biochemistry), Mary Lake Polan (Obstetrics/Gynecology), Judy Swain (Medicine), Irv Weissman (Pathology, Developmental Biology), Kathy Gillam (Special Assistant to the Dean), and Gabe Garcia. Among the recommendations of this Subcommittee, which will go into effect immediately, is a request that applicants familiarize themselves with the New Stanford Curriculum and write an essay about how the Scholarly Concentrations help them to achieve their goals. Students who are offered interviews (clearly a small fraction of the overall pool of applicants), will meet with a faculty member who matches their area of scholarly concentration interest as well another faculty member and student. Importantly, the number of senior faculty members engaged in the interview process will be expanded (with the support of the Executive Committee) and the rolling admission process, used in the past, will be abandoned in favor of a more consolidated interview and admission season extending from December though February.

The Executive Committee acknowledged the importance of working with the Committee of Five and Faculty Senate and also recognized the excellent job that Dr. Garcia has done as Director of Admissions. It is our shared goal to make the admissions process more meaningful for applicants and as optimized as possible in selecting students who are most likely to benefit from the New Stanford Curriculum and equally become leaders in the future of medicine and the biosciences.
Government Affairs Update

On September 15th, the Senate Appropriations Committee approved the fiscal year 2005 Labor, Health and Human Services, Education and Related Agencies Appropriations bill. Within this, the portion of the appropriations bill related to HHS totaled $142,317 billion. Some of the programs of specific relevance to academic medical centers include:

National Institutes of Health -- The bill includes $28.9 billion, an increase of $1.1 billion over the FY'04 appropriation and $380 million over the President's budget request.

Centers for Disease Control & Prevention -- The bill includes an increase of $345 million over the budget request, for a total of $4.8 billion.

Global AIDS -- The bill includes $660 million for global HIV/AIDS activities. Within this total, $149 million is included for the Global Fund for HIV/AIDS/TB, which is $50 million over the budget request and the same as last year. In addition, $118.8 million is included in the CDC budget for global HIV/AIDS/TB activities.

Pediatric Graduate Medical Education – The bill includes $303 million, the same as the President's request.

Pandemic Flu -- The bill includes $75 million in new funding to ensure that an adequate supply of vaccine would be available in the event of a severe flu outbreak.

Substance Abuse & Mental Health Services -- The bill provides $3.5 billion, an increase of $133.8 million over last year. SAMHSA is responsible for supporting mental health programs and alcohol and other drug abuse prevention and treatment services throughout the country.

The complete listing is available at http://appropriations.senate.gov/releases/record.cfm?id=226159

Community Lecture Series Begins for 2004-2005 Season

Under the leadership of Senior Associate Deans John Boothroyd and Harry Greenberg, the Community Faculty Lecture Series began its second season on Tuesday, September 7th. Dr. Rick Myers, Stanford W. Ascherman, M.D., F.A.C.S. Professor and Chair of the Department of Genetics, gave a wonderful overview of the human genome project and its relevance to understanding genetic differences among species and, ultimately, how the knowledge created will result in new approaches to the diagnosis, treatment and prevention of disease. Dr. Myers spoke to a capacity audience in the Clark Center Auditorium and engendered considerable discussion about human genetics as well as the exciting research that is occurring in this field, much stimulated by investigators at
The Community Faculty Lecture Series is designed to bring cutting-edge innovation and discovery to members of our local community. The purpose of these monthly events is to engage our community in the work being done by Stanford scientists and physicians and, as a result, makes them more appreciative of the critical role that the Medical Center plays in our local and global communities.

Lectures have been scheduled for the first Wednesday evening of each month (except December and January) through June 2005. A wide diversity of topics will be presented including “Creativity, Mood, and Temperament” and “New Treatments for Mood Disorders” on October 6th, “Regenerative Medicine: A Hope for the Future on November 3rd, “Skin Cancer” on February 2nd among others.

Awards and Honors
Sam Gambir will receive the Gold Medical from the Society of Molecular Imaging. This Achievement Award is “given to an individual who has made a fundamental discovery in the field of Molecular Imaging that has changed the direction of the field, or enabled new in vivo investigations that were not possible prior to their contribution”.

Dr. Fernando Mendoza, Professor of Pediatrics at the Lucile Salter Packard Children's Hospital, was selected by the California Latino Medical Association (CaLMA) to receive their highest award bestowed on Latino healthcare leadership, the Juan Villagomez, M.D. Humanitarian Award. The recipient of this award embodies the commitment that is necessary to create change and possess a vision by which he works towards the betterment of Latino healthcare. Dr. Mendoza was honored with this award on Saturday, September 18, 2004 at the Dorothy Chandler Pavilion in Los Angeles, California.

Congratulations to Dr. Gambir and Dr. Mendoza.

Announcements
The Ninth Biennial National Symposium on Hematopoietic Cell Transplantation will be held in the Fairchild Auditorium from September 30-October 2. You can find the registration form on http://bmt.stanford.edu/symposium/, which can then be faxed, to Sonni Doran at 725-8950.

A CME Event sponsored by the Center for Clinical Immunology at Stanford entitled “Clinical Immunology: An Interdisciplinary Medical Science” will be held on Saturday October 23rd from 7:45 am – 1:00 pm in the Clark Center. Registration forms can be found at http://ccis.stanford.edu.

Community Lecture Series: As noted above, in our continuing lecture series to educate the community about important research findings or issues impacting patient care, Dr. Terence Ketter, Associate Professor of Psychiatry and Behavioral Sciences, will lecture on Creativity, Mood, and Temperament and Dr. Alan Schatzberg, Kenneth T. Norris, Jr.
Professor of Psychiatry and Behavioral Sciences, will lecture on *New Treatments for Mood Disorders* on Wednesday, October 6th at 7:00 p.m. in the Clark Center Auditorium.

*The Center for Clinical Immunology at Stanford (CCIS)* announces their second Continuing Medical Education (CME) event to be held at the Clark Center Auditorium on Saturday, October 23rd from 7:45 am to 1:00 pm. The event is entitled: *Clinical Immunology: An Interdisciplinary Medical Science* and will include a discussion of New therapies to treat immune-based diseases in rheumatology, IBD, and dermatology. Speakers include Drs. Chakravarty, Fiorentino, Genovese, Shizuru and Strober from Stanford, Dr. Abbas from UCSF and Dr. Papadakis from UCLA.

The mission of the CCIS is to educate physicians, trainees, and the public in order to bring discoveries in basic science to bear on immune-mediated inflammatory diseases, ranging from cancer to diabetes and from arthritis to infectious disease, bridging the spectrum of research from the genetic and molecular level to clinical trials, and sharing information and resources in order to speed the translation of new therapies from the laboratory bench to the patient's bedside. The program and registration forms can be found on the CCIS web site at: [http://ccis.stanford.edu](http://ccis.stanford.edu). Breakfast and a lunch will be provided for all registered attendees.

**Appointments and Promotions**

- *Manuel Amieva* has been appointed Assistant Professor of Pediatrics (Infectious Diseases) and of Microbiology and Immunology, effective 9/1/2004 to 8/31/2007.
- *William Maloney* has been appointed Professor of Orthopedic Surgery, effective 9/1/2004.