

Dean's Newsletter September 13, 2010

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Thinking About Transforming Medical Education – Again

In the August 30, 2010 issue of the Dean's Newsletter, I commented briefly that our efforts to transform medical education entered a more formal planning process with a Think Tank on August 28th. Over 40 faculty, students, staff and guests participated in a thoughtful and provocative discussion of what has changed since we introduced our "New Stanford Curriculum" in 2003 and, even more importantly, how we might construct medical education if we had the opportunity to make a truly fresh and bold new start. I hasten to add that the August 28th Think Tank on Medical Education is one of three such events we are holding this summer and fall. We began with a Think Tank on Postdoctoral Education and Training and will hold a separate Think Tank on Graduate Student Education on October 9th. These three planning activities are interconnected, and it is my intent to bring them together for interactive review and discussion at our Strategic Planning Leadership Retreat in January 2011. Prior to that we will develop more deeply the ideas and recommendations emerging from each of the Think Tanks with the goal of having action plans and implementation timelines constructed over the next six months.

The good news is that many academic medical centers are thinking about medical education and drawing linkages between undergraduate and graduate training. With the centennial anniversary of the Flexner Report, which set the stage for the education models that still exist in many programs, it is clearly time to think about the future. But this statement needs context. The education and training of physicians has changed enormously over the past many decades, and defining the physician of the future will be shaped by the enormous changes unfolding in science as well as society. Indeed, over the past decades Stanford has configured unique medical education training programs that have embraced the culture of the University and the mission of the School.

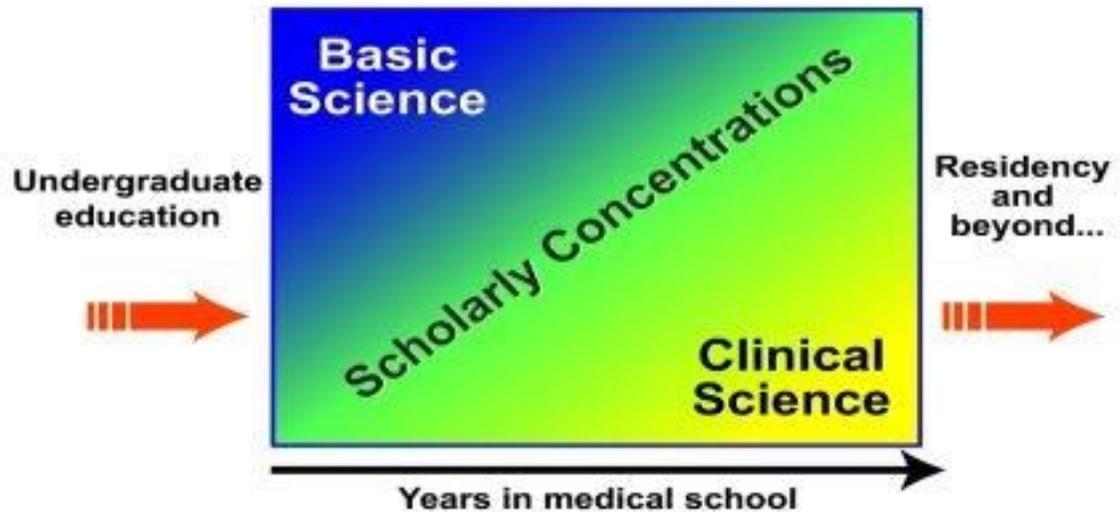
When the medical school moved to the Stanford Campus in 1959, the curriculum was structured as the Five Year Plan. Over the decades this Plan evolved from being flexible to being close to disorganized. Nevertheless, it still persists in some of its core principles today. A major reorganization and re-conceptualization resulted in the introduction of the New Stanford Curriculum (see: <http://med.stanford.edu/md/>) in the Fall of 2003. To set the stage for the changes we may contemplate, it may be helpful to

remind you about the principles and programs that guide our current curriculum. Specifically, the 2010 Stanford MD curriculum integrates basic science and clinical experience with in-depth study and independent research throughout the years of medical school (see: <http://med.stanford.edu/md/curriculum/>). Other major themes of the new curriculum include:

- **Integration**
 - Streamlined content and optimized course sequence
 - Melding of basic science and clinical concepts throughout the curriculum
- **Individual Opportunities**
 - Blocks of unscheduled time for individual or group study, elective coursework, and research
 - Option of a fifth or sixth year of study and opportunities for earning joint degrees
- **Scholarly Concentrations**
 - Area of academic focus, or "major," designed to ground the student's education in an area of passionate interest
 - Enhance student satisfaction with the study of medicine and foster a lifelong commitment to investigation and cross-disciplinary thinking
- **Strengthening of doctor-patient communication and clinical skills instruction**
 - Broad clinical science education in the first two years with early exposure to patient care and the practice of medicine
 - Early entry into clinical clerkships
 - Broader emphasis on doctor-patient communication, ethics, and the art of medicine
- **Educators-4-CARE (E4C)**
 - The Educators-4-CARE (E4C) Program was established to enhance the development of medical students as skilled and compassionate physicians. E4C provides a formal curriculum aimed to foster the development of some of our core values – Compassion, Advocacy, Responsibility, and Empathy – from the beginning and throughout medical school.
 - Beginning in 2008, each incoming medical student has been matched with one of our Educator-4-CARE faculty, who serves as a teacher, mentor, and colleague for the duration of the student's time in our School of Medicine. Each Educator-4-CARE teaches and guides 5-6 students per class year in the following ways:
 - During the pre-clerkship years, precept students once per week in the *Practice of Medicine* (POM) course, cultivating students' acquisition and refinement of patient communication skills, physical diagnosis, clinical reasoning, and professionalism
 - During the clerkship years, continue to provide guidance for students' bedside clinical skills and professionalism through semi-monthly "Doctoring with Care" sessions in concert with the *Translating Discoveries* curriculum
 - Write letters of reference as requested
 - Collaborate with other E4C faculty, POM course directors, and

Advising Deans to assist in students' academic and professional development

- Participate in student milestone events and celebratory gatherings



Basic and clinical sciences and scholarly work are woven together throughout all years of medical education. The barriers among these disciplines are broken down by mixing elements of investigation, basic science, and clinical practice within the scholarly concentrations.

Building on the changes that have been made since 2003, a number of important themes were considered at the August 30th Think Tank that will shape our future directions. These include:

- The prospect of taking dramatic new steps in furthering the integration between basic and clinical science at the individual patient as well as broader societal and global levels. A common experience for virtually everyone who has gone to medical school is that knowledge sticks best when it is configured around the patient narrative. For nearly all, case-based learning is the optimal way to integrate basic and clinical science, but currently this happens in a fragmented manner over years of time. While there is core knowledge that every physician must possess, the reality is that much of this knowledge will evolve and change over time and will require constant renewal and the skills (and the will) for lifetime learning. Speaking personally, my own medical and scientific knowledge continues to change dramatically, now four decades since I graduated from medical school. And the pace of these changes is likely to accelerate in the years and decades ahead.
- A model we have been exploring is whether learning teams can be constructed of groups of students and a teacher-coach in which each team spends a block of time with one patient problem/disease and studies every aspect of that condition across the entire “health care value chain” – molecular, physiological, pharmacological,

health care system, social, economic, cultural. These teams can change over time but might also be configured to emphasize different career tracks or learning pathways – with flexibility but also the prospect for concentration and research as part of the learning experience.

- The length of time of medical education is simply too long, and one of the opportunities worth exploring is how to better integrate education from high school and college through undergraduate, graduate and post-graduate training. Creating a horizontally and vertically integrated learning pathway could be uniquely accomplished at Stanford and has the prospect for better integrating basic and clinical science, reducing redundancy and shortening the overall education and training period. Of course this would require cooperation among the Schools of Humanities & Sciences, Engineering and Medicine – but based on the discussion at our Think Tank and the input from Deans Saller (H&S) and Plummer (Engineering) the prospects for doing this are feasible and opportune.
- It was also clearly recognized that the world of medicine as we know it will be changing dramatically in the years ahead. As knowledge emerges from fields like genetics and genomics, the prospects for individualizing patient risk, early diagnosis, care and prevention will change in ways that can only barely be predicted. Innovations in health and disease management will need to take center stage, and outcomes based on evidence and underpinned by quality, safety and service will further define medicine of the 21st century. Education will need to be anchored not just in the traditional hospital setting but also increasingly in ambulatory and community programs – regionally and globally. While doctors will continue to play a central role, they will also need to be part of the healthcare team and system. Other providers will play increasingly important roles and team based education will become important – something that we are well poised to do in our Immersive Learning Center in the new Li Ka Shing Center for Learning and Knowledge.
- Because Stanford offers unique opportunities for interdisciplinary learning and research, we want to continue to foster the opportunities for joint programs with other Stanford Schools that have been developed over the past several years. We also want to continue to select students who have the opportunities to develop transformative career paths in their own right – but who also can lead change at local, regional, national and global levels.

These are just some of the issues and themes that emerged at the August 30th Think Tank. We will continue to refine the ideas that have been put forward and to establish Work Groups to further develop and refine them over the next several months. In my opinion, we are building on excellence and have an opportunity to take our education programs to a new level. We have no choice but to move to greater excellence while respecting our past, staying true to our mission but ready to shape the future.

Letter to the Nation's New Medical Students

This week we were asked by Department of Health and Human Services Secretary Kathleen Sebelius and National Coordinator for Health Information Technology David Blumenthal, MD to distribute the letter that follows to first year medical students. This letter is adapted from Dr. Blumenthal's commencement address to the University of Florida College of Medicine 2010 graduating class. I felt the content of the letter merited sharing it with our entire community.

An Open Letter to New Medical Students

Congratulations on entering the profession of medicine. Many of you and your families have sacrificed enormously to get to this moment. We understand the tide of emotions you and your families are experiencing: pride, relief, gratitude, anticipation – and perhaps a little anxiety. After all, most of you will now begin the rigors of medical school and residency, from which you will emerge as fully trained physicians, but only after another long and demanding next phase in your professional life.

You are entering one of the most admired and privileged professions known to man, and with that honor comes great responsibility. You will be the bearers of hope: the hope of every parent for the recovery of a sick child, of every spouse for the healing of a suffering partner, of every son and daughter for the longevity of an aging parent.

We are struck by the fact that you are the first class of medical students to start since Congress passed and President Obama signed into law the Affordable Care Act of 2010, also known to some as the health reform law.

We believe deeply that the Affordable Care Act will be good for you and for your patients, and for the health system overall. We hope each of you can and will play a vital role in ensuring the vision of reform becomes the reality of high-quality, high-value health care for your patients, your families, and your neighbors.

It starts with making sure each of you understands what is in the new law so you can communicate both what it means in terms of the health care coverage options your patients may be eligible for, and how it gives both patients and doctors more control over their health care decisions. The best place to start this education process is our new consumer web site – HealthCare.gov. This new tool, which has been widely praised as being straightforward and easy to use, not only will help patients find health care coverage options, but will also give them detailed information about what will happen when, as well as some important tips for healthy living.

While the implementation of this major new law will unfold over years, many positive provisions are already taking effect. Many of you and your siblings are undoubtedly under the age of 26. Before the enactment of the Affordable Care Act, health plans decided when dependent child coverage would end, and, in many cases, such coverage would end the moment you left college unless you went on to graduate school. Without college coverage, your families or the families of your friends have had to find individual insurance plans in the private market – plans whose premiums are unaffordable to many Americans – or

pass up health insurance altogether, which many have unfortunately done. The result: 3 in 10 young adults are currently uninsured in the U.S. Under the Affordable Care Act, you and your brothers or sisters will now be able to stay on your families' insurance policies until you are 26. While this part of the law is scheduled to go into effect for plan years beginning on or after September 23, 2010, more than 65 insurance companies, including the nation's largest, have already voluntarily extended coverage to age 26.

Of course, the problem of insurance companies denying coverage to patients who need it most goes beyond young people. Practitioners of adult medicine have routinely faced the same thing: patients with heart disease, cancer, multiple sclerosis, diabetes, or lupus losing their coverage; or running up against annual and lifetime dollar limits; or getting frozen into a job because, if they changed where they work, they could no longer get insurance that covered their pre-existing conditions. That led to tough choices for them and their doctors, too: how to space out or prune away appointments and tests and treatments to minimize costs – how to decide which necessary medicines were *really* most essential. Sometimes, these patients just disappeared from care without explanation, ashamed to admit they could no longer pay their bills.

As a result of the Affordable Care Act, those of you treating adults will no longer face these tough, troubling choices during your careers. Starting in 2014, around the time when you begin your residencies, insurance companies will have to sell coverage to all Americans, regardless of their health status. That means absolutely no one can be turned away. Insurance companies won't be able to place annual or lifetime limits on coverage, or take it away when patients get sick. Your patients' lives will be better off as a result, and you will have a new level of clinical autonomy that preceding generations of physicians never enjoyed: the ability to do what is right and best for your sickest, most vulnerable patients who are not eligible for government programs like Medicare and Medicaid.

These are just a few of the Affordable Care Act's benefits that are already being realized. But we also want to tell you about some other critical reforms to our health care system that have taken effect recently, and where we especially need your help to get the message out. One really significant way that we can reform the way we practice medicine is through the adoption and meaningful use of electronic health records.

Every doctor knows that she is only as good as the information she has about her patients. Information is the lifeblood of medicine. Without clinical data – progress notes, laboratory data, images, microbiology reports – we're reduced to guesswork.

Yet, the United States today lives with a health information system that relies on the same technology – pen and paper – that Hippocrates used 2400 years ago. Every aspect of your lives is computerized, from laptops to cell phones to pagers. You're connected 24/7. Yet, most doctors go to work and pick up a pen or pencil to record the most precious resource of their trade – data about their patients' health problems.

Can you imagine caring for patients 20 years from now without computers, without electronic health records, without the ability to send patient

information electronically from your office to the hospital, from one hospital to another, from the hospital to your office? It would be like practicing medicine with one hand tied behind your back.

The President and Congress have authorized a huge amount of resources – literally billions of dollars – toward implementation of electronic health records for the entire nation through the HITECH Act. This is a new federal initiative dedicated to creating a modern, 21st-century electronic health information system for the nation's clinicians and their patients.

The Department of Health and Human Services has been granted important new authorities to help create a private and secure nationwide interoperable electronic health information system. Our ability to make change pales in comparison with the power of your generation to transform medicine by insisting, by *demanding*, that wherever you end up practicing, you have a modern electronic health information system at your disposal to help you be the best physicians you can be. We in the federal government will do our best to support you.

When you finish medical school, send the hospitals and residencies that are recruiting you a clear message. It is past time for them to enter the electronic age. It is past time for them to give you the information tools you need to do your jobs. You will change the face of medicine forever and for the better.

Every generation should be better off than the last. Well, we think the stars are aligned for you now. As you start your careers, medicine retains its age-old ability to apply the balm of hope, while scientific progress continually increases your ability to turn that hope into the reality of disease avoided or cured, of life prolonged, of suffering relieved.

And you and your patients will benefit from a new era in which the compassionate impulses of the American public have been translated into a commitment that all your patients will have access to the best care this country has to offer. Now, as pioneers of a revolutionary transition in the delivery of care, you have the responsibility to ensure that your successors have the same advantages – and more – that you will have. Good luck with that challenge, and congratulations.

Kathleen Sebelius and David Blumenthal, MD

The Potential Impact of Healthcare Reform Legislation on Graduate Medical Education

I have discussed previously the potential impact of healthcare reform on graduate medical education (GME), which has been largely funded by Medicare (except for pediatric GME, which is covered not by Medicare but by the Children's Hospitals Graduate Medical Education Payment Program). Given the passage of the Patient Protection and Affordable Care Act and the likely changes that will impact healthcare costs in general and Medicare in particular, the potential impact on GME is of interest and concern to every academic medical center. This important topic was recently addressed by John K. Iglehart in a Health Policy Report in the July 21st issue of the New

England Journal of Medicine (see: <http://healthpolicyandreform.nejm.org/?p=3770>) and has been a topic for consideration by virtually every professional group. One of these, the Association of Academic Health Centers (for disclosure, I serve as the chair of the Board of Directors), recently issued a perspective on GME that highlights some of the ideas likely to receive attention over the next years. Each has supporters and detractors, and it remains uncertain as to whether one or more will gain traction. But change in GME as we now know it seems inevitable. In broad terms the dominant themes will include advocacy for one or more of the following:

- ***Broadening the pool of contributors to fund GME beyond that provided by Medicare and Medicaid.*** In the past this has been referred to as the “all payer pool” and, while there has been support from some constituencies, it is likely that the decreasing flow of dollars to healthcare payers and providers will make this a major debate.
- ***Making the funding “follow the student/trainee.”*** This would also give rise to a lot of challenges. Currently DME and IME payments are made to teaching hospitals rather than training programs. While the impact on the financial status of teaching hospitals would be significant, reforms are needed if training is to become more ambulatory than hospital based. Clearly this would also call into focus the balance between service and education as part of GME.
- ***Expanding and reallocating the currently capped number of residency slots.*** This is a major issue that impacts specialty as well as primary care training as well as the economics of academic medical centers.
- ***Expanding GME support to a broader community of health professionals.*** Obviously this has its primary advocacy from non-MD groups and as team based care continues to emerge this focus may gain further traction.

While it is unclear how and when changes in GME will unfold, the next years will surely be witness to one or more changes. This is another important issue to prepare for as healthcare reform evolves.

Defining and Committing to Patient-Centric Standards of Care

In my December 1, 2008 Dean’s Newsletter I addressed the important issue of Professionalism and Patient-Centricity. Over the past months some progress in improving the patient experience has taken place, as I highlighted in the July 26, 2010 Newsletter, which included a letter to medical staff from Drs. Ann Weinacker and Bryan Bohman. Expectations for what I might call “minimum” standards for patient-centric care were discussed with the Council of Clinical Chairs meeting on September 10th. These standards have been developed by the Clinical Advisory Council and will be presented to faculty and medical staff by department chairs and service chiefs with the expectation that they will become normative behavior. From my perspective these “standards” are quite basic, and I thought it would be helpful to share them directly as a prelude to the

discussions that should take place at division and department meetings. They include physician standards for ambulatory and inpatient settings. I hasten to add that comparable or complementary standards will apply to all staff involved in patient care.

Outpatient Physician Patient-Centric Standards:

1. Physician leader and Clinic Manager should review/reassess clinic schedules at least every quarter.
2. Arrangements for leave of absence coverage must be communicated to clinic managers.
3. Clinic appointments should not be cancelled within 30 days of appointment.
4. Mechanism(s) should be available for urgent/same day visits.
5. Physicians should be in the clinic when the patient is ready.
6. If you have patient care responsibilities you must be available by page or cell phone.
7. Inbox requests should be answered within two business days when “on duty.”
8. Referring physicians should receive a written letter/report within one week.

Inpatient Physician Patient-Centric Standards

1. Attending of record (or covering Attending) completes daily rounds on hospitalized patients.
2. Attending of record (or covering Attending) should be immediately available by pager or cell phone during business hours or clearly assign coverage.
3. Inpatient consults should be seen within 24 hours, documented appropriately and discussed with the Attending, as necessary. Urgent consults should be seen within a clinically appropriate timeframe.
4. Recommendations by consults should be communicated in Epic as soon as possible and by phone whenever the clinical situation dictates.
5. Consultants should avoid sending mixed messages to patients by communicating with the primary team before outlining a recommended plan of care to the patient.
6. Patients should be discharged in a timely manner (specific time standards to be determined). Discharge planning and paperwork should be started in advance to allow this to occur.
7. Attending presence for procedure standards (time standards to be determined).

It was noted that patient-specific standards for the Operating Room, Clinical Laboratory and Radiology are forthcoming. I am sure that physician readers of this list will view these standards as pretty self-evident. That said, the data available suggests that they are not routinely employed – something that clearly needs to change if we are to improve the patient experience. Indeed, in the new world of healthcare it is essential that we do so.

Updates on New Facilities: The Consequences of Moving in While Work is Still Ongoing

If you have been walking along Discovery Walk or Foundation Way to the Li Ka Shing Center for Learning and Knowledge (LKSC) or the Lorry Lokey Stem Cell

Research Building (aka Stanford Institutes of Medicine 1) you will have noted continued changes along the way. And if you have been in the LKSC you will surely have noted that lots of things are still being “completed.” I am happy to say that all of the ongoing work will be done by the time of the Grand Opening of the LKSC on September 29th. But until then it will be apparent that this is still a “work-in-progress.” There are advantages and disadvantages of “opening” a facility before it is fully completed. We knew that there would be ongoing disruptions and challenges, but we also recognized that “living in and using” the LKSC would be a great way to work out all the challenges associated with a brand new facility. Over the next two weeks the flooring on the entry level will be finished and the new Café will open. Internal and external signage will be completed as well. And importantly, some of the difficulties with the AV systems, especially in the Millie and Paul Berg Hall, will be rectified (some just became apparent when the first Department of Medicine Grand Rounds was held there this past week). Overall, the LKSC is functioning magnificently, and it truly provides a new face and an incredible resource for the medical school and university.

Faculty will start moving into the Lorry Lokey Stem Cell Research Building in late September. In addition to working in new labs I am sure they (and everyone else) will be amazed by the incredible Dale Chihuly glass sculpture that is filling the atrium and that will provide an incredible glow both day and night. This artwork was gifted to Stanford by My Blue Dots, a nonprofit organization founded by Sue McCollum, with the purpose of combining art with science to create healing, hope and health. Careful observers may have noticed lots of windows being changed in the past weeks. In fact a cosmetic defect was found in a number of glass panels after they had been installed; this discovery led to the decision to change more than 300 glass panes (by the manufacturer of course). The Grand Opening is scheduled for October 27th.

Clearly these are our current “major” projects. That said, there are an incredible number of projects being coordinated by our Facilities Group. These include the planning and move-out from 701 and 703 Welch Road, a large number of smaller renovations throughout the medical school campus, important sustainability and retrofit projects from Beckman and the MSLS buildings, and planning for Fairchild Science as well as the new Friedenrich Center for Translational Research, which will be located on Welch Road. In addition, there is very active planning to meet current and future vivarium needs along with major efforts regarding our current off-site facilities and options both to consolidate them and to create new opportunities. And despite the impact of the financial downturn, we are still planning for the eventual construction of Foundations in Medicine 1 as well as Stanford Institutes of Medicine 2. In other words, there is lots going on – both in what you see and what you may not be aware of. As always, exciting times lie ahead.

Thanks to Drs. Al Lane and Karla Kirkegaard for their Leadership as Department Chairs

I want to once again offer my deep appreciation and gratitude for the outstanding leadership of two of our department chairs. Dr. Al Lane retired as Chair of the Department of Dermatology after 15 years of remarkable service. During his tenure he

built on the contributions of prior leaders in dermatology Drs. Gene Bauer and Gene Farber, and helped make the current department one of the jewels of Stanford as well as the nation. In addition to his attention to faculty, resident and student development, Dr. Lane led by example with great personal integrity and excellence. We are all indebted to his many efforts.

Dr. Karla Kirkegaard has completed her 5-year term as Chair of the Department of Microbiology and Immunology, where she has contributed significantly to the department, medical school and university. During her tenure the department completed a number of important faculty recruitments and promoted the excellence of graduate students and trainees. Dr. Kirkegaard also forged important interactions with the Institute for Immunity, Transplantation and Infection as well as with a number of clinical departments and faculty. We are grateful for her many insights and contributions. In the tradition of rotating five-year terms for most basic science faculty, Dr. Kirkegaard will be succeed as Department Chair by Dr. Peter Sarnow. As I thank Karla I also welcome Peter to this important role.

Birthday Celebration for Dr. Hugh McDevitt

A Celebration of Achievement was held on September 11th in honor of Dr. Hugh Mc Devitt's 80th birthday. A symposium featuring outstanding leaders in immunology from the USA and Europe focused on the field of "MHC and Disease," which Dr. McDevitt helped create during his incredible career as a physician-scientist at Stanford. We offer our commendation for all that Dr. McDevitt has achieved during his illustrious career and also wish him a very happy birthday.

Awards and Honors

- On September 9th a reception was held to celebrate the appointment of two new holders of endowed professorships:
 - **Dr. Michael Snyder** as the Stanford W. Asherman, MD Professor of Genetics
 - **Dr. Tobias Meyer** as the Mrs. George A Winzer Professor of Cell Biology
- **Dr. Michele Barry**, Professor of Medicine and Senior Associate Dean for Global Health, is the recipient of the 2010 Ben Kean Medal, awarded by the American Society of Tropical Medicine and Hygiene to a clinician or educator whose dedication to clinical tropical medicine and impact on the training of students, fellows and/or practitioners of tropical medicine is in keeping with the tradition established by Dr. Kean. The medal is awarded every third year.
- **Rebecca Rakow-Penner**, MD/PhD candidate in biophysics and graduate student in the Radiological Sciences Laboratory has been honored with the 2010 Norman Blank Award for the outstanding medical student in radiology. The award was

created in memory of longtime faculty member and Director of Admissions Norman Blank, MD.

- **Dr. Shreyas Vasanawala**, assistant professor of radiology, received the GE Healthcare 2010 Thought Leader Award for innovation in pediatric MRI at the Annual Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM) in Stockholm, Sweden on May 7th, 2010.
- **Dr. Grant Miller**, Stanford Health Policy core faculty member, has been awarded the "Inter-American Award for Research on Social Security 2010" by the Conferencia Interamericana de Seguridad Social Centro Interamericano de Estudios de Seguridad Social, along with his co-authors Diana Pinto (Javeriana University) and Marcos Vera-Hernandez (University College London).

Dean's Fellows

The following 34 postdoctoral scholars were selected as Dean's Fellows starting this past July. Each will receive \$21,500 in stipend for the coming year to work on proposed research projects with a faculty mentor.

Dr. Robert Ahrends, Chemical and Systems Biology, working with Tobias Meyer, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Robert_Ahrends/

Dr. Manuel Castellano-Munoz, Otolaryngology, Head & Neck Surgery, working with Anthony Ricci, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Manuel_Castellano%20Munoz/

Dr. Raymond Chen, Biochemistry, working with Patrick Brown, MD, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Raymond_Chen/

Dr. Tzu-Chun Chen, Microbiology and Immunology, working with Peter Sarnow, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Tzu%20Chun_Chen/

Dr. Pak-Yan Cheung, Biochemistry, working with Suzanne Pfeffer, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Pak%20Yan_Cheung/

Dr. Eileen Clancy, Microbiology and Immunology, working with Karla Kirkegaard, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Eileen_Clancy/

Dr. Emilee Connors, Molecular and Cellular Physiology, working with Richard Lewis,

PhD - http://med.stanford.edu/profiles/postdocs/researcher/Emilee_Connors/

Dr. Pascal Courville, Neurology and Neurological Sciences, working with Richard

Reimer, MD - http://med.stanford.edu/profiles/postdocs/researcher/Pascal_Courville/

Dr. Maria Jose da Silva Teixeira Costa, Endocrinology - Pediatrics, working with Brian Feldman, MD, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Maria%20Jose_Da%20Silva%20Teixeira%20Costa/

Dr. Brett Foster, Neurology and Neurological Sciences, working with Josef Parvizi, MD,

PhD - http://med.stanford.edu/profiles/postdocs/researcher/Brett_Foster/

Dr. Brian Grone, Psychiatry & Behavioral Sciences, working with Emmanuel Mignot,

MD, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Brian_Grone/

Dr. Anett Gyurak, Psychiatry & Behavioral Science, working with Amit Etkin, MD, PhD -

http://med.stanford.edu/profiles/postdocs/researcher/Anett_Gyurak/

Dr. Katja Herges, Neurology and Neurological Sciences, working with Lawrence Steinman, MD - http://med.stanford.edu/profiles/postdocs/researcher/Katja_Herges/

Dr. Hugo Hilton, Structural Biology, working with Peter Parham, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Hugo%20Godfrey%20Harness_Hilton/

Dr. Kai Kohlhoff, Bioengineering, working with Russ Altman, MD, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Kai_Kohlhoff/

Dr. David Martinelli, Neurosciences Institute, working with Thomas Sudhof - http://med.stanford.edu/profiles/postdocs/researcher/David_Martinelli/

Dr. Gonzalo Olivares, Developmental Biology, working with Margaret Fuller, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Gonzalo_Olivares/

Dr. Ying Pan, Urology, working with Joseph Liao, MD - http://med.stanford.edu/profiles/postdocs/researcher/Ying_Pan/

Dr. Guillem Pratx, Radiation Physics, working with Lei Xing, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Guillem_Pratx/

Dr. Elena Rastew, Infectious Diseases, working with Upinder Singh, MD - http://med.stanford.edu/profiles/postdocs/researcher/Elena_Rastew/

Dr. Annette Scharf, Chemical and Systems Biology, working with Joshua Elias, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Annette_Scharf/

Dr. Sejal Shah, Endocrinology - Pediatrics, working with Laura Bachrach, MD - http://med.stanford.edu/profiles/postdocs/researcher/Sejal_Shah/

Dr. Paige Shaklee, Biochemistry, working with James Spudich, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Paige_Shaklee/

Dr. Hadas Shiran, Cardiovascular Medicine, working with Michael Fischbein, MD, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Hadas_Shiran/

Dr. Amy Silder, Bioengineering, working with Thor Besier, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Amy_Silder/

Dr. Marion Silies, Neurobiology, working with Thomas Clandinin, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Marion_Silies/

Dr. Min Song, Genetics, working with Stanley Cohen, MD - http://med.stanford.edu/profiles/postdocs/researcher/Min_Song/

Dr. Michael Tadross, Molecular and Cellular Physiology, working with Richard Tsien, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Michael_Tadross/

Dr. Sheela Thomas, Nephrology, working with Alan Pao, MD - http://med.stanford.edu/profiles/postdocs/researcher/Sheela_Thomas/

Dr. I-Ning Wang, Cardiovascular Medicine, working with Phillip Yang, MD - http://med.stanford.edu/profiles/postdocs/researcher/I-Ning_Wang/

Dr. Yasuto Yamaguchi, Hematology, working with Lawrence Leung, MD - http://med.stanford.edu/profiles/postdocs/researcher/Yasuto_Yamaguchi/

Dr. Fangfang Yin, Pathology, working with Matthew Bogyo, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Fangfang_Yin/

Dr. Qiong Yang, Chemical and Systems Biology, working with James Ferrell, MD, PhD - http://med.stanford.edu/profiles/postdocs/researcher/Qiong_Yang/

Dr. Maria Zoudilova, Pathology, working with Eugene Butcher, MD - http://med.stanford.edu/profiles/postdocs/researcher/Maria_Zoudilova/

Congratulations to all!