Dean's Newsletter June 14, 2010

Table of Contents

Commencement 2010 Remarks from Commencement Speaker Dr. Atul Gawande Remarks from the Student Selected by MD Graduates Remarks from the Student Selected by PhD Graduates Faculty Teaching Awards Gold Foundation Humanism and Excellence in Teaching Resident Awards Gold Foundation Humanism Medical Student Honors Society Inductees Medical Student Annual Research Awards 2010 Graduates Receiving the Master of Science Degree 2010 Graduates Receiving the Doctor of Philosophy Degree 2010 Graduates Receiving the Doctor of Medicine Degree Other Awards and Honors Appointments and Promotions

Commencement 2010

Commencement both marks and celebrates an ending as well as a new beginning for students in science and medicine. Each graduate will ultimately have a unique professional portrait resulting from many individual lines of knowledge and experience – each with a beginning and a termination. How those lines come together shapes the career pathway of each of our students– and the finished portrait will be the culmination of knowledge and experience acquired over many years. The students who received the MS, MD, and PhD degrees from Stanford on June 13th have completed part of their life journey of knowledge and experience acquisition – but just a part. Of course we hope that their time at Stanford, individually and collectively, has laid a foundation for lifetime learning. And hopefully that learning and experience acquisition will be broad and deep, critical and analytical, theoretical as well as applied, visionary and innovative as well as practical and relevant.

This year's graduates came to Stanford with highly diversified educational backgrounds and life experiences. All aspired to be doctors and/or scientists, but the careers they will now begin will move them down paths most did not consider or weren't even aware of just a few short years ago. And if history predicts the future, most will have careers that evolve in packets of change that will result in both predicted and unpredicted outcomes – which will themselves change over time. This makes the foundational training and education at Stanford so important, since it will serve as the underpinning of various career trajectories that will emerge in the years ahead – whether in academia, industry, public or private service, and in local or global venues. Without doubt, the knowledge content of the (not too distant) future will replace that acquired by this year's graduates in their years at Stanford. But new insights, even if they lead to radical transformation in our understanding, will be built on prior concepts.

It is our hope that we have prepared our students well for these changes. More importantly, it is my fervent hope that they will lead the changes and shape the future. That is what a Stanford education is about. The degrees conferred on June 13 are punctuation marks in the lives of our graduates– but they are also opportunities to innovate, create and transform.

This year we are granting 47 Masters in Science degrees, 122 Doctor of Philosophy degrees and 101 Doctors of Medicine degrees. A number of students are recipients of two degrees – and each is the recipient of a unique opportunity, won through hard and diligent work over many years. We wish each student the very best of success and hope that life is filled with unanticipated opportunities to "make a positive difference" in all domains of life.

Remarks from Commencement Speaker Dr. Atul Gawande

Greetings to the graduating class of 2010. Thank you for inviting me back to this gorgeous place where I'd gone to college and worked in this school's laboratories—and even, in my sophomore dormitory, met my wife. But most of all thank you for letting me be part of this special occasion.

To take your place in those folding chairs, you have trod a long road. Many of you have worked for four solid years—or five, or six, or nine. And we are here to declare that, as of today, the twelfth of June, 2010, you officially know enough stuff to be called a graduate of the Stanford School of Medicine. You are Doctors of Medicine, Doctors of Philosophy, Masters of Science. It's been certified. Each of you is now an expert. Congratulations.

So why—in your heart of hearts—does it not quite feel that way?

The experience of a medical and scientific education is transformational. It is like moving to a new country. At first, you don't know the language, let alone the customs and concepts. But then, almost imperceptibly, that changes. Half the words you now routinely use, you did not know existed when you started: words like arterial blood gas, nasogastric tube, microarray, logistic regression, NMDA receptor, velluvial matrix.

Okay, I made that last one up. But the velluvial matrix sounds like something you should know about, doesn't it? And that's the problem. I will let you in on a little secret. You never stop wondering if there is a velluvial matrix you should know about.

Since I graduated from medical school, my family and friends have had their share of medical issues arise, just as you and your family will. And inevitably, they turn to the medical graduate in the house for advice and explanation. I remember one time when a friend came with a question.

"You're a doctor now," he said. "So tell me: where exactly is the solar plexus?" I was stumped. It was not anywhere in the textbooks.

"I don't know," I finally confessed.

"What kind of doctor are you?" he said.

I didn't feel much better equipped when my wife had two miscarriages, or our first child was born with part of his aorta missing and we had to figure out what to do, or when my daughter had a fall with a dislocated elbow that I failed to recognize, or when

my wife tore a ligament in her wrist that I'd never heard of—her velluvial matrix, I think it was.

This is a deeper, more fundamental problem than we acknowledge. The truth is that the volume and complexity of the knowledge we need to master in medicine and science has grown exponentially beyond our capacity as individuals. Worse, the fear is that the knowledge has grown beyond our capacity as a society. When we talk about the uncontrollable explosion in the costs of health care in America, for instance, about the reality that we in medicine are gradually bankrupting the country, we're not talking about a problem rooted in economics. We're talking about a problem rooted in scientific complexity.

Half a century ago, medicine was neither costly nor effective. Since then, however, science has combated our ignorance. It has enumerated and identified, according to the international disease classification system, more than 13,600 diagnoses, 13,600 different ways our bodies can fail. And for each, we've discovered beneficial remedies—remedies that can reduce suffering, extend lives, and sometimes stop a disease all together. But those remedies now include more than 6,000 drugs and 4,000 medical and surgical procedures—and growing. Our job in medicine is make sure all of this capability is deployed, town by town, in the right way at the right time, without harm or waste of resources, for every person alive. And we're struggling. There is no industry in the world with 13,600 different service lines to deliver.

It should be no wonder that you have not mastered the understanding of them all. No one ever will. That's why we as doctors and scientists have become ever more finely specialized and super-specialized. If I can't handle 13,600 diagnoses, well maybe there are fifty of them I can handle—or just one I might focus my research upon. The result, however, is that we each find ourselves to be specialists worried almost exclusively about our particular niche and not the larger question of whether we as a group are making the whole system of care better for people.

I think we were fooled by penicillin. When penicillin was discovered in 1929, it suggested that treatment of disease could be simple—an injection that could miraculously cure a breathtaking range of infectious disease. Maybe there'd be an injection for cancer and another one for heart disease. It made us believe that discovery was the only hard part. Execution would be easy.

But this could not be further from the truth. Diagnosis and treatment of most conditions require complex steps and considerations, and often multiple people and technologies. The result is that more than forty percent of patients with common conditions like coronary artery disease, stroke, or asthma receive incomplete or inappropriate care in our communities. And the country is also struggling mightily with the costs. By the end of the decade, at the present rate of cost growth, the price of a family insurance plan will rise to \$27,000. Health care will go from ten percent to seventeen percent of labor costs for business, and workers' wages will have to fall. State budgets will have to double to maintain current health programs. And then there is the frightening federal debt we will face. By 2025, we will owe more money than our economy produces. One side says war spending is the problem, the other says it is the economic bailout plan. But take both away and you've made almost no difference. Our deficit problem—far and away—is the soaring and seemingly unstoppable cost of health care.

We in medicine have watched all this with mainly bafflement—even indifference. This is just what good medicine is like, we're tempted to say. But we'd be ignoring the evidence otherwise. For health care is not practiced the same way across the country. There is remarkable variability in the cost and quality of care. Two communities in the same state with the same levels of poverty and health can differ by more than fifty percent in their Medicare costs. There is a bell curve for cost and quality, and it is frustrating but also hopeful. For those getting the best results—the hospitals and doctors measured to be at the top of the curve for patient outcomes—are not the most expensive. They are sometimes among the least.

Like politics, all medicine is local. The systems of care we are in matter. One essential characteristic of medicine is it requires the successful function of systems assemblages of people and technologies. Among our most profound difficulties is making them work. If I want to give my patients the best care possible, not only must I do a good job but a whole collection of diverse components must somehow mesh together effectively. Health care is like a car that way. In both cases, having great components is not enough.

We've been obsessed in medicine with having great components—the best drugs, the best devices, the best specialists—but we've paid little attention to how to make them fit together well. Don Berwick of the Institute for Healthcare Improvement has noted how wrongheaded this is. "Anyone who understands systems will know immediately that optimizing parts is not a good route to system excellence," he says. He gives the example of a famous thought experiment of trying to build the world's greatest car by assembling the world's greatest car parts. We connect the engine of a Ferrari, the brakes of a Porsche, the suspension of a BMW, the body of a Volvo. "What we get, of course, is nothing close to a great car; we get a pile of very expensive junk."

Nonetheless, in medicine, that's exactly what we have done.

Earlier this year, I received a letter from a patient named Duane Smith. He was a thirty-four-year-old assistant grocery store manager when he had a terrible head-on car collision that left him with a broken leg, pelvis, and arm, both lungs collapsed, and uncontrolled internal bleeding. The members of his hospital's trauma team went swiftly into action. They stabilized his fractured leg and pelvis. They put tubes in both sides of his chest to re-expand his lungs. They gave him blood and got him to an operating room fast enough to remove the ruptured spleen that was the source of his bleeding. He required intensive care and three weeks of hospital recovery to get through all this. The clinicians did almost every single thing right. Mr. Smith told me he remains deeply grateful to this day for the people who saved him.

But they missed one small step. They forgot to give him the vaccines that every patient who has his spleen removed requires, vaccines against three bacteria that the spleen usually handles. Maybe the surgeons thought the critical care doctors were going to give the vaccines, and maybe the critical care doctors thought the primary care physician was going to give them, and maybe the primary care physician thought the surgeons already had. Or maybe they all forgot. Whatever the case, two years later he was on a beach vacation when he picked up an ordinary strep infection. Without the vaccines, the infection spread rapidly throughout his body. He survived but it cost him all his fingers and all his toes.

It was, as he summed it up in his note, the worst vacation ever.

When Duane Smith's car crashed, he was cared for by good, hardworking people. They had every technology available to them. But they did not have an actual system of care. And the most damning thing is that no one learned a thing from this. The story of this man made no difference to anyone. For we have since had the exact same story occur in Boston with an even worse outcome. And I am certain it has happened here, too. Indeed, I would bet you that, across this country, we miss the basic, unglamorous step of vaccination in probably half of emergency splenectomy patients.

Why does this happen? Why does anyone receive suboptimal care? After all, society could not have given us people with more talent, more dedication, and more training than the people we have in medical science—than you. I think the answer is: we have not grappled with the fact that the complexity of science has changed medicine fundamentally. This can no longer be a profession of craftsmen individually brewing plans for whatever patient comes through the door. We must be more like engineers building a mechanism whose parts actually fit together, whose workings are finely tuned and tweaked for ever better performance in providing aid and comfort to human beings.

You come into medicine and science at a time of radical transition. You have met the older doctors and scientists who tell the pollsters that they wouldn't choose their profession if they were given the choice all over again. But you are the generation that was wise enough to ignore them. For what you are hearing is the pain of people experiencing an utter transformation of their world. Doctors and scientists are now being asked to recognize a new understanding of what great medicine requires. It is not just the focus of an individual artisan-specialist, however skilled and caring. And it is not just the discovery of a new drug or operation, however effective it may seem in an isolated trial. Great medicine requires the innovation of entire packages of care—with medicines and technology and clinicians designed to fit together seamlessly, monitored carefully, adjusted perpetually, and shown to produce ever better service and results for people at the lowest possible cost for society.

When you are sick, this is what you want from medicine. When you are a taxpayer, this is what you want from medicine. And when you are a doctor or medical scientist, this is the work you want to be part of. It is work with a different set of values from the ones medicine has traditionally had: values of teamwork instead of individual autonomy, ambition for the right process, not just the right technology, and perhaps above all humility—for we need the humility to recognize that under conditions of complexity, no technology will be infallible and no individual will be either. There is always a velluvial matrix to know about.

You are graduating from a special place. And you are joining a special profession. Doctors and scientists, we are all in the survival business, but we are also in the mortality business. Our successes will always be leavened by the limits to knowledge and human capability, by the unstoppability of suffering and death. Meaning comes from our each finding ways to help people and communities make the most of what is known and cope with what is not.

This will take science. It will take art. It will take innovation. It will take ambition. And it will take humility. But the fantastic thing is: this is what you get to do.

I've tried to think of how to sum up our task. All I could come up with is: To do cool stuff that lasts. So here is my wish for you, the 2010 graduating class of the Stanford School of Medicine: May you do cool stuff that lasts.

Remarks from Graduate Student Speaker – Kenneth Randal Schulz, PhD Candidate in Immunology

We are a part of a small subset of people that have willingly chosen to spend the majority of our lives in place that most people cannot wait to leave, the classroom. There are times, be it while staying up all night to cram the night before an exam or when having to collect samples from mice at 2am, when I am sure most of us have temporarily regretted this decision. But for the most part we enjoy this path, and we are all uniquely similar in our thirst for knowledge and passion for science.

But how did we get here? Think back to when you were in 7th grade. Think of how much you changed between the 7th grade and when you graduated from high school. We transformed from scrawny tweens whose only form of transportation was bicycle, into adults who could vote and drive, and who thought they knew it all. That is the same time span that most of us have spent in grad school. It's easy to lose track of the years in the lab, without the landmarks of new teachers and grades each year. However, this was a significant period of time that we have all learned from, struggled through, and finally completed together. And while we may not have grown 6 inches or started the need to shave we have grown in other ways, like wrinkles and gray hairs. Ironically, we may have reverted back from cars to bicycles.

The beginning of graduate school is an experience like none other. We were rounded up from around the country and plopped together, a bunch of new kids in school, all just trying to feel included as we figured out what was going on. But you quickly realize these fellow students just aren't anyone. You are in a nerd mecca, surrounded by a group of super smart people all interested in complex scientific questions most people wouldn't touch with a 10 foot pole. The Biomass camping trip really brought this to light. Where else could you find people discussing the beauty and complexity of meiosis while drinking box wine and making smores? There I met a ton of friends, in and out of my program, including my roommate for the last 3 years. And together we came back to the reality of grad school.

During grad school, we learned a lot of life lessons. In graduate school, you learn how to see a project through from beginning to end, even when there is no real end. We've all learned how to live in the most expensive place in the US while being paid peanuts. We have learned how to smell free food from miles away and how to get it even if it means sitting in on talks that you aren't invited to. We have also learned to push ourselves to get over whatever obstacle is in our way. We've learned to communicate with others about very complex subjects. If you're fortunate like me you have learned how to collaborate and create an environment that is conducive to benefitting everyone involved. Finally, we have learned to deal with vast uncertainty. Unlike that 7th grade classroom, there are no rules set in stone on what one must do to graduate. Life as a graduate student is a bit different.

Compared to simply following a curriculum handed to us, we have to make relatively uninformed decisions about which lab to join, which project to take on, and how to work on that project. It's good preparation for life. Fortunately, through these trials, we've developed tools to assist us deal with these uncertainties. As scientists, we

have been trained to think creatively and logically. We have learned how to gather data from a multitude of sources, and we have learned how to analyze that data to make decisions. It's also important to realize that ambiguities are not bad. They provide the opportunity to have a real impact, to make change. Imagine if all of the experiments you needed to do were predetermined for you. What impact, other than providing hands in the lab, would you have on the project? Instead, the best way to proceed is unknown. This gave all of us the opportunity to inject our own creativity to move a project forward. Rather than being given the correct answers, we have discovered the answers. Rather than studying from books, we have done the work that will be in the future textbooks. We did not acquire these skills by chance. We have gained the qualities, because we have worked hard to do so. We have also had the opportunity to work hard because of the effort put in by the rest of the people in our lives. We should be very grateful of all of the sacrifices made by our parents. The countless hours they spent helping us with school-work, driving us to soccer practice, and motivating us to succeed. The friends that we've had who have always listen when we've had a rough day. Professors, who, by example, teach us how we can teach others and how we can impact lives. Administrators, who make sure that we are paid on time. And finally, our peers. We've been there to help each other, whether it's help with putting together a presentation, creating a distraction to help deal with a rough day, or just being there to sing back-up during Journey's "Don't stop believing" at the karaoke bar. While graduate school has got to be the most humbling experience one could have, it makes it a lot easier when you understand how many great people you have around you. So, thank you all.

Remarks from Medical Student Speaker – Ian Charlston Chua

To our esteemed faculty, staff, friends, family, and colleagues, good afternoon and welcome! And to my family... I'm sorry for keeping this a secret, but I figured, I didn't need to give you more reason to bring more cameras

Family... indeed, it manifests itself in many ways... there's my biological family now sitting with shocked faces who've always been there for me, even willing to haul a 100 or so mugs from Mexico or willing to welcome and tour my friends around the Philippines... then there's this extended family at Stanford that I've become a part of and will miss dearly.

It was just yesterday that Sumit, Mark and I were in the MSOB cubicle on an interview day discussing how cool it would be if we were all classmates at Stanford Med, and then soon after I found myself recording a Stanford rendition of Titanic on a cruise ship during spring break with them and a dozen other classmates, and now I'm here graduating with them.

Through these 5 years at Stanford, I've come to meet so many great colleagues among them a few opera singers, NASA rocket scientists, seasoned travelers, dancers, pianists, Olympic athletes, and Honduran badminton champions to name a few; only here is climbing mountains like Kilimanjaro or working in Africa considered "a bit common." I've also seen my entering class and other different Stanford Med classes go through many serious life experiences together whether it be supporting a classmate's family deal with cancer, dealing with divorce, coming out to friends, celebrating weddings, or celebrating the birth of a baby and having a room full of white-coat wearing medical student friends in a labor and delivery suite.

And now we've all transitioned from being nervous premeds starting med school to nervous med students about to start residency; we've all gone from pestering student services for social funds to pestering the financial aid counselors about how we're going to pay off our loans... In a way, we've grown up...

We've all seen each other grow... and we have our mentors, and our loved ones who've been patient with our periodic grumpiness, schedules, and stressful panicking over residency matching to thank. But we also have our colleagues to thank...just like siblings, we've influenced each other and taught each other in many ways and I believe that we will continue to do so for many years to come.

We all started with wanting to partner up with Kunle, Eugene or whomever had bulging, non-missable veins for our first blood draws, then proceeded to watch (and laugh) as we saw each others' horrified faces while we performed our first pelvic exams with certified sexologists who were quite comfortable with their bodies... and by the time we were in clinics, we were consulting each other about patients' or about family members' medical questions.

And today we become doctors... officially. But more specifically, we are Stanford doctors. As scared or nervous as you may be, I hope you realize how awesome you guys are (yes, you class of 2010)... as many doubts you may have about the future, you're stronger, smarter, and more compassionate than you may know, and a lot of people are proud of you.

To you my Stanford colleagues and siblings, I hope you continue to shine and make your Stanford family proud. You've passed your way to an MD and now is the time to show those residency programs what we're made of! But before you go out and win your nobel prizes, I hope you remember the wise counsel of our parent figures here at Stanford, our fantastic advising deans.

First of all, remember to bring your humanity along wherever you go -- we haven't needed honors, medals or awards to motivate us or to certify our worth, let graduating from Stanford mean that we are intrinsically humanistic, compassionate, and pride ourselves in our ability to be empathetic.

Remember the important people in your lives -- it's easy to be stuck in work-mode all the time, but there are people around us who sacrifice a lot and patiently plan their lives around ours...they deserve our attention, gratitude, and love.

Remember where you came from -- it wasn't long ago that we were clinical students, preclinical students, premeds, so as we move up the ranks, don't forget that there are people that look up to us who are looking for inspiration.

Remember that what you do matters -- as low as we may feel on the medical totem pole, and as tired as we may be, just remember that little idealistic premed in each of us that wanted to change the world... because for our patients, we may be treating the one person that means the world to them... and we are their doctors, their safety blankets, their shoulders to cry on.

I hope that as we move away from this place we've called home, and pursue residency, business, fellowship, more fellowships and become urology prostate kings, or the next Dr. Nortons who dare to mess with the pancreas, we'll be able to remember the reason we wanted to become doctors and that moment Dr. Garcia called to say that

Stanford saw potential in us.

Remember that day that you became part of this sometimes dysfunctional, continuously improving, but always excellent Stanford Medical School Family. In the end, we share both the hard times and the happy times with family, and it is this human connection that matters and keeps us going. We came to Stanford with different stories to tell, and now we leave Stanford with different stories to write, but for the 4, 5 to 10 years that we were here, we were carrying out one script, we now have a shared history... and that makes a family.

And so now, let's cherish this day that we close this chapter of our lives and officially become doctors, and let's also celebrate today remembering those who've made sacrifices for us and been there for us. For some, residency may start tomorrow, but today also belongs to them... our family and friends in the audience.

Thank you colleagues for giving me this privilege to speak before you and our loved ones. It has truly been an honor to be part of this family. Thank you.

Faculty Teaching Awards

The Henry J. Kaiser Family Foundation Award for Excellence in Preclinical Teaching:

- *Rita Popat, Ph.D.*, Clinical Assistant Professor, Health Research & Policy Epidemiology
- *Ellen Porzig, Ph.D.*, Professor (Teaching), Developmental Biology
- *Julie Theriot, Ph.D.*, Associate Professor, Biochemistry; Associate Professor, Microbiology & Immunology

The Henry J. Kaiser Family Foundation Award for Excellence in Clinical Teaching:

- *Craig Albanese, MD*, Professor of Surgery and, by courtesy, of Obstetrics & Gynecology and Pediatrics
- Rebecca Blankenburg, MD, Clinical Instructor, Pediatrics General
- Yvonne Karanas, MD, Valley Medical Center, Santa Clara

Arthur L. Bloomfield Award in Recognition of Excellence in the Teaching of Clinical Medicine

- Yasser El-Sayed, MD, Professor of Obstetrics and Gynecology
- *Paul Mohabir, MD*, Clinical Assistant Professor, Medicine Pulmonary & Critical Care Medicine
- *Tracy Rydel, MD*, Clinical Instructor, Medicine Family & Community Medicine

Alwin D. Rambar-James B.D. Mark Award for Excellence in Patient Care

• *Philip Sunshine, MD*, Professor Emeritus, Pediatrics - Neonatology

Kaiser Family Foundation Award for Outstanding Innovative Contributions to Medical Education

• David Gaba, MD, Professor, Anesthesia

Franklin G. Ebaugh Jr. Award for Excellence in Advising Medical Students

• *Bertha Chen, MD*, Associate Professor of Obstetrics and Gynecology and, by courtesy, of Urology

Lawrence H. Mathers Award for Exceptional Commitment to Teaching and Active Involvement in Medical Student Education

• *Preetha Basaviah, MD*, Clinical Associate Professor, Medicine - General Internal Medicine

Outstanding Lecture/Presentation

• *Ben Barres, MD, Ph.D.*, Professor of Neurobiology, Developmental Biology and Neurology and Neurological Sciences and, by courtesy, of Ophthalmology

Outstanding Community Preceptor (Pre-Clerkship)

- *Mina Charon MD*, Clinical Assistant Professor (Affiliated) of Medicine (General Internal Medicine)
- *Marina Martin MD*, Clinical Instructor (Affiliated) of Medicine (General Internal Medicine)

Outstanding Community Preceptor (Clerkship)

- Jana Mannan MD, Department of Obstetrics & Gynecology
- Kalpana Nathan MD, Department of Pediatrics

Outstanding Teaching Assistant

• Deepa Galaiya, SMS 2

Stanford University School of Medicine Award for Graduate Teaching

• Jennifer Raymond, PhD, Associate Professor of Neurobiology

Stanford University School of Medicine Award for Outstanding Service to Graduate Students

• *John Huguenard, PhD*, Professor of Neurology and Neurological Sciences and, by courtesy, Molecular and Cellular Physiology

Arnold P. Gold Foundation Humanism and Excellence in Teaching Resident Awards

More than 70 Residents were nominated for this award by clinical medical students and this year, six were selected as awardees, including:

- *Eva Delgado, MD*, Department of Pediatrics
- *Marie Gonella, MD*, Department of Neurology

- *Marie Holapfel, MD*, Department of Obstetrics and Gynecology (Santa Clara Kaiser Medical Center)
- Tom Nguyen, MD, Department of Surgery
- *Margie Teng, MD*, Department of Surgery (Emergency Medicine)
- Shirin Zarafshar, MD, Department of Medicine

Arnold P. Gold Foundation Humanism Medical Student Honors Society Inductees

This is the first year that Stanford has participated in the Arnold Gold Humanism Honorary Society. Based on the recommendations of a committee comprised of students and faculty, seventeen students were inducted into the Gold Humanism Honors Society. They are:

- Chris Bennett, SMS 3
- James Berbee, SMS 3
- Wendy Caceres, SMS 4
- John Carter, SMS 3
- *Tiffany Castillo*, SMS 4
- Carlene Chun, SMS 3
- Michael Galvez, SMS 4
- Jonathan Kleinman, SMS 3
- Flynn LaRochelle, SMS 3
- Elise Min, SMS 3
- Kristin Raj, SMS 3
- Jamie Rubin, SMS 3
- Kierann Smith, SMS 3
- Shobha Stack, SMS 4
- *Michael Sundberg*, SMS 3
- John Vorhies, SMS 3
- Gavitt Woodward, SMS 4

Medical Student Annual Research Awards

Five students received awards for outstanding poster/abstract presentations from the 27th annual Medical Student Research Symposium on May 13. The following were chosen from the 37 projects presented at the symposium:

- *Nathan Meng*, "Pre-clinical validation of a portable infant warmer using phase-change material not dependent on a continuous external supply of energy." *Mentor: Vinod Bhutani, MD*, professor of neonatology.
- *Paul Nuyujukian*, "A high-performance cortically-controlled motor prosthesis enabled by a feedback control perspective." *Mentor: Krishna Shenoy, PhD, associate professor of electrical engineering.*
- Hersh Sagreiya, "Extending and evaluating warfarin pharmacogenetic

algorithms using CYP4F2 and rare variants in CYP2C9." *Mentor: Russ Altman, PhD, professor of bioengineering, genetics and medicine.*

- Jane Whitney, "Neuropsychological characteristics of children and adolescents at risk for bipolar disorder." Mentor: Kiki Chang, MD, professor of child and adolescent psychiatry.
- **R.** *Tyler Hillman*, "Neuropilins are essential positive regulators of mammalian hedgehog signaling." Mentor: Matthew Scott, PhD, professor of developmental biology, genetics and bioengineering.

The Graduates of 2010

The following are the students who received Masters, PhD and MD degrees in 2010. A number of these graduates are dual degree recipients. Again, congratulations to all.

Kameelah Abdullah Epidemiology

Eva Balint Epidemiology

Sarah Bannan Human Genetics and Genetic Counseling

Deborah Isabel Barragan Human Genetics and Genetic Counseling

Abraham Issac Bassan Developmental Biology

Liz Yovanna Bayes Santos Epidemiology

Fritz Richard Bech Epidemiology

Steven Lee Chang, MD Health Services Research

Tara I -Hsin Chang Epidemiology

Grace Lynn Chen Genetics Christopher Boyd Chisholm Health Services Research

Richard Chiu Epidemiology

Diana Catherine Darcy Human Genetics and Genetic Counseling

Alexis Suzanne Davis Epidemiology

Ellyn Rachelle Farrelly Human Genetics and Genetic Counseling

Jennifer D Frankovich Epidemiology

Alexander Angelov Gaidarski III Biomedical Informatics

Rajesh Gupta Health Services Research

Mofiz Haque Epidemiology

Hans Dieter Katzberg

Epidemiology

Amanda Marie Knoth Human Genetics and Genetic Counseling

Keane K Lee Health Services Research

Barrett George Levesque Health Services Research

Vincent Liu, MD Health Services Research

Yen Yu Lo, MD Epidemiology

Melissa Bradford Mills Human Genetics and Genetic Counseling

Alexander Anthony Morgan Biomedical Informatics

James Don Murphy Epidemiology

An My Nguyen Master of Science in Medicine

Phuong Vi Nguyen Chemical and Systems Biology

Nicholas Michael Perry Biomedical Informatics

Julia Asa Rasooly Master of Science in Medicine

Jesse M Rodriguez Biomedical Informatics

Gabriela Schmajuk Epidemiology Jennifer Jane Schneider Health Services Research

Huy Seng Biomedical Informatics

Trevor Raymond Shaddox Biomedical Informatics

Ravi Narain Sharaf Epidemiology

Lamiya Abdul Azeez Sheikh Epidemiology

Jacqueline Baras Shreibati Health Services Research

Crystal Marie Smith-Spangler Health Services Research

Shila Shyam Soni Epidemiology

Kristan Lea Staudenmayer Health Services Research

Nikki McDougal Stoddart Epidemiology

April Mae Weissmiller Neurosciences

Stephan Woditschka Epidemiology

Robert Maxwell Zamkow Biomedical Informatics

Doctor of Philosophy

Colin Echeverria Aitken Biophysics *Ribosome Dynamics and Translation*

Matthew Zack Anderson

Genetics Genetics of Toxoplasma Gondii Tackyzoite to Bradyzoite Differentiation

Erin Lynn Barnhart

Biochemistry Oscillations, Waves, and Symmetry Breaking in Cell Motility

Odmara Liz Barreto-Chang

Neurosciences Regulation of Neuronal Survival and CREB - dependent Transcription by CaV1.2 L-type Calcium Channels

Robert J Barretto

Biophysics Optical Microendoscopy for Imaging Cells Deep Within Live Tissue

Leigh Ashley Baxt

Microbiology and Immunology Characterization of Rhomboid Protease in Entamoeba Histolytica

Veronica Graciela Beaudry

Cancer Biology Characterizing the Role of the P53/P63 Target Gene, Perp, in Epidermal Homeostatis and Cancer

Jacqueline Marie Benjamin

Cancer Biology Beyond Cell-cell Adhesion: Aphacatenin Organization and Function in Cellular Dynamics and Regulation of the Actin Cytoskeleton

Marina Bershteyn

Cancer Biology Missing in Metastasis in a Basal Bodyassociated Protein that Regulates Ciliogenesis Sonic Hedgehog Signaling and Hair Follicle Regeneration

Craig Michael Betts

Biochemistry Cell Cycle Regulation of Centromere Formation

Melanie Cruz Bocanegra

Cancer Biology Genomic and Functional Analysis of Breast Cancer

Michael Paul Bokoch

Biomedical Informatics NMR Spectroscopy for Structural and Dynamic Studies of the Beta2adrenergic Receptor

Ian Michael Brennan

Biochemistry Chemical Inhibitor Studies of Polo-like Kinase 1 in Late Mitosis and Cytokinesis

Alayne Lisette Brunner

Genetics Genome-wide Analysis of Mammalian DNA Methylation Patterns

Paul David Bryson

Microbiology and Immunology Novel Targets Within the Hepatitis C. Virus Nonstructural Protein NS4B and Their Inhibition Using Distince Classes of Small Molecules

Trever Bradley Burgon

Microbiology and Immunology Evasion of Innate Immune Responses to Poliovirus: A Genetic Analysis

Deborah Lynn Burkhart

Cancer Biology Understanding Transcriptional Networks Encompassing Rb-family Regulation

Brittany Burrows

Neurosciences Shared Neural Mechanisms Underlying Distinct Varieties of Visual Attention

John David Cahoy

Developmental Biology Genomic Analysis of Highly Purified Astrocytes Reveals in vivo Astrocyte Gene Expression: A New Resource for Understanding Astrocyte Development and Function

Jeff Dennis Campbell

Immunology The Effects of Limiting the T Cell Repertoire in the Mouse

Hector Yesier Caro

Molecular and Cellular Physiology Regulation of Adenomatous Polyposis Coli Protein During Growth Factor Mediated Cell Extension

Matthew Carter

Neurosciences Optogenetic Reverse Engineering of Brain Sleep/Wake Circuitry

Yingguang Frank Chan

Developmental Biology The Genomic Basis of Parallel Evolution in Three-spined Sticklebacks

Daniel Lee Chao

Neurosciences Understanding Mechanisms of Synaptogenesis in C. Elegans: from Cell Adhesion to Vesicle Transport

Heather Jean Clemons

Biochemistry Depot-specific Gene Expression Programs of Adipocytes: Physiological and Developmental Implications

Agnieszka D Czechowicz

Developmental Biology Gaining Access to Hematopoietic Stem Cell Niche - Novel Non-myeloablative Conditioning Approaches

Bernie Joseph Daigle

Genetics Using Heterogeneous Sources of Biological Knowledge to Improve the Identification of Differentially Expressed Genes

Erin Lane Davies

Developmental Biology Molecular Logic of Adult Stem Cell Selfrenewal and the Commitment to Differentiation in the Drosophila Testis Stem Cell Niche

Emily Marie Deal

Microbiology and Immunology Primary Peripheral Human Plasmacytoid Dendritic Cell Responses to Rotavirus Infection: Mechanisms of Induction and Consequences for Pathogenesis

Sridharan Devarajan

Neurosciences Neural Mechanisms of Visual and Auditory Attention

Natalie Dye

Biochemistry The Assembly and Interactions of MreB in the Maintenance of Cell Shape in Caulobacter Crescentus

Andreas H Ehrensberger

Biophysics Purification of a Promoter-specific and Activator-dependent Nucleosome Disassembly Factor

Patrick R Eimerman

Microbiology and Immunology

Characterization of the Extracellular Growth of Listeria Monocytogenes

Eric Joseph Espinosa Biochemistry *Tethering and Fusion of Rab9 Vesicles at the Trans Golgi Network*

Ivette Shiba Estay Cancer Biology *Ubiquitin Ligase Regulation of GLI Transcription Factors*

Christopher Brian Franco

Immunology Distinguishing Mast Cell and Granulocyte Differentiation at the Single Cell Level

Sarah Theresa Kerfoot Garcia

Genetics Genomic and Regulatory Network Diversity Revealed by REST/NRSF, Maltase Glucaomylase and the Protocadherin Gene Cluster

Nanibaa' Angela Garrison

Genetics Genetic Architecture of Human Pigmentation

Jonathan Isaiah Gent

Genetics Aenorhabditis Elegans RNA-directed RNA Polymerase RRF-3 in Endogenous RNA Interference

Kenneth Demire Gibbs, Jr. Immunology

Cytokine Regulation of Normal and Leukemic Hematopoiesis

Andrew Timothy Girvin Immunology High-speed Measurements of TCRproximal Signaling: Implications for Ligand Discrimination

Kristina Marie Godek

Biochemistry Molecular Mechanisms of Centromeric Chromatin Assembly

Natalia Gomez-Ospina

Chemical and Systems Biology CACNA1C: One Gene, Multiple Proteins, Diverse Functions

David Goode

Genetics Evolutionary Constraint Facilitates Interpretation of Genetic Variation in Resequenced Human Genomes

Viviana Gradinaru

Neurosciences Mechanisms of Deep Brain Stimulation Revealed by Optogenetic Deconstruction of Diseased Brain Circuitry

Eric Lieberman Greer

Cancer Biology Dietary Restriction Pathways and Chromatin Regulation in C. Elegans Longevity

Carolyn Ines Hall

Microbiology and Immunology Chemically Proving Mechanisms of Invasion and Egress in the Protozoan Parasite, Toxoplasma Gondii

Mindy Claire Hebert-Derouen

Cancer Biology Investigation of Non-cell Autonomous Factors Regulating Sonic Hedgehog Target Gene Induction in Skin

David Gillis Hendrickson

Chemical and Systems Biology

Systematic Identification of MicroRNA Targets and the Steps in Gene Expression Regulated by MicroRNAs

Lena Wai Mun Ho

Immunology ATP-dependent Chromatin Remodeling BRG/Brahma-associated Factors (BAF) Complexes in the Regulation of Mammalian Stem Cell Self-renewal and Development

Daniel Joseph Hogan

Biochemistry Regulation of Gene Expression by RNAbinding Proteins and MicroRNAs

Andrew Neely Hotson

Microbiology and Immunology Host Intracellular Signaling Networks are Perturbed During Bacterial Infection

Michael Howitt

Microbiology and Immunology A Novel Chemotaxis Regulator in Helicobacter Pylori is Functionally Conserved in the Epsilonproteobacteria

Megan Leigh Insco

Developmental Biology Regulation of the Switch from Proliferation to Differentiation in an Adult Stem Cell Lineage

Siddhartha Jaiswal

Immunology CD47 Expression During Leukemic and Stress Hematopoeisis Alters Phagocytic Activity of Macrophages

Brandon Eugene Johnson

Molecular and Cellular Physiology Alternate Exons in the C. Elegans Slo-1 Gene Act in Concert to Diversify Ca2+ Dependence and Activation Rate of BK Channels

Jonathan Wiley Jones

Microbiology and Immunology Molecular Mechanisms of the Cytosolic Innate Immune Response to Francisella Tularensis

Rachel Stern Kalmar

Neurosciences Moving Through the Brain: A Study of Movement Preparation in the Oculomotor and Reach Systems

Tiara Lynn Aiko Kawahara

Cancer Biology Control of Transcriptional Programs of Aging by NF-kappaB

Michael Chinwen Ke

Neurosciences Neural Instructive Signals in the Cerebellum

Nicholas William Kelley

Biophysics Application of Novel Sampling Methods to the Simulation of Protein Misfolding and Oligomerization

Lawrence Otto Klein

Biophysics Dynamics of Initial Events in T-cell Activation: Ligand Binding and Signaling

Juliet Klasing Knowles

Neurosciences P75 Neurotrophin Receptor Mediated Protection from Amyloid-beta Induced Neurodegeneration

Jocelyn Friedman Krey Neurosciences

From Calcium Channels to Autism: Effects of the Timothy Syndrome Mutation in CAV 1.2 on Neuronal Development

Angela Landrigan

Immunology Toll-like Receptor Ligands Directly Activate Primary and Malignant T Lymphocytes

Evonne Chen Leeper

Genetics Genomic Analysis of Neuron-restrictive Silencer Factor Activity in Neuronal and Non-neuronal Human Cell Lines

Jessica Ashley Linderman

Immunology Immune Reconstitution after Allogeneic Hematopoietic Stem Cell Transplant

Gwen Liu

Microbiology and Immunology Control of MicroRNA Activity: Regulatory Information Beyond Mature MicroRNAs

Ryan K Louie

Molecular and Cellular Physiology The Roles of Adenomatous Polyposis Coli and Binding Partners EB1 and Beta-catenin in the Regulation of Microtubule Dynamics and Organization

Del Michael Lucent

Biophysics The Role of Solvent in Protein Folding In Vivo

Eric Maurice Mabery Immunology Eiger's Role in Drosophila Melanogaster Immunity

Jeffrey Jacobs Margolis

Microbiology and Immunology Environmental Implications of Francisella Tularensis Biofilms

Heather Louease McCullough

Genetics Systematic Analysis of Ribosome Occupancy and Density in the Human Transcriptome

John Kenneth Mich

Biochemistry Roles for Hedgehog Signaling in Zebrafish Development

Madeleine Grace Moule

Microbiology and Immunology Francisella Tularensis Host-pathogen Relationships: Dissecting Bacterial Interactions with the Drosophila Innate Immune System

Madhumitha Nandakumar

Genetics The Role of Long Chain Fatty Acids in the Caenorhabditis Elegans Innate Immune Response

Ryan Michael Nottingham

Biochemistry RAB GTPase-activating Proteins at the Golgi:endosome Interface

William Edward O'Gorman

Microbiology and Immunology Single-cell Analysis of In Vivo Cytokine Response Networks Activated by Infection

Julia Oh

Genetics A Robust Platform for High-throughput Genomics in Microorganisms

Kostandin Pajcini

Microbiology and Immunology Molecular Analysis of Mammalian Muscle Differentiation, Fusion and Regeneration

Ricardo T Paniagua

Immunology Tyrosine Kinase Pathways in the Rheumatic Diseases

Poornima Parameswaran

Microbiology and Immunology Molecular Signatures of Virome-host Interactions

Maulik Ramesh Patel

Neurosciences Molecular Mechanisms of Presynaptic Assembly at Defined Synapses in C. Elegans

Renee Darlene Paulsen

Chemical and Systems Biology Genome-wide siRNA Screening for Novel Mechanisms of Maintaining Genomic Stability

Mickey Joseph Pentecost

Microbiology and Immunology Molecular Mechanisms of Listeria Invasion of the Intestinal Epithelium

Emily C Piccione

Cancer Biology Identification and Characterization of a Novel Epidermal Growth Factor Receptor Variant

Elizabeth Lenz Ponder

Microbiology and Immunology Probing Protease Function and Drug Target Potential in Plasmodium Falciparum

Andy Chunyue Poon

Chemical and Systems Biology Temporal Independence in Mitotic Events due to Feedback Regulation

Yi Nuo Vivian Poon

Neurosciences Extrinsic and Intrinsic Regulators of Polarized Axonal Trafficking and Synapse Formation and Axonal Trafficking in Caenorhabditis Elegans

Laura Marie Prolo

Neurosciences Impaired Myelination in a Mouse Model of the Free Sialic Acid Storage Disorders

Gabriel Aurelio Quinones

Cancer Biology Missing in Metastasis Mediates Directional Sensing During Guided Cell Migration

Amy Nicole Radermacher

Immunology PKC Alpha Plays an Essential Role During Negative Selection in T Cell Development by Modulating Bim Transcription

Rebecca Rakow-Penner

Biophysics Advances in Breast MRI

Jason Anthony Reuter

Genetics Modeling Human Tumor Progression -Identifying an Extracellular Matrix Interaction Network Involved in Epithelial Carcinogenisis

Roberto Rafael Ricardo-Gonzalez Immunology

The Roles of STAT6 and STAT4 in Glucose and Lipid Homeostasis

Daniel P Riordan

Genetics Identification of RNA Regulatory Information in the Saccharomyces Cerevisiae Transcriptome

Eon Joseph Rios

Immunology Regulation of Mast Cell Function by Membranes Trafficking Events

Kimberly Salvia

Neurosciences Synaptic Vesicle Protein B0AT3 (SLC6A17) Catalyzes Na+-coupled Neutral Amino Acid Transport

Robert John Schafer

Neurosciences Neural Mechanisms Linking Perception, Action and Cognition in the Primate Brain

Tobi Lyn Schmidt

Microbiology and Immunology Cytokine-induced Killer Cell Tumor Trafficking to Tumors: A Chemokinedirected Migration

Jennifer Cynthia Shieh

Neurosciences The Role of Endocytosis in Neuronal Migration

Kenneth Randal Schulz

Immunology Varying IL-6 Concentration Initiates by Membranes Trafficking Events

Paul Andrew Sigala

Biochemistry Physical and Energetic Dissections of Enzyme Active Site Properties

Tim Stowe Cancer Biology *The Role of Pericentriolar Satellites in Centrosome and Cilia Function*

Lora Beatrice Sweeney

Neurosciences Semaphorins in Drosophila Olfactory Neural CircuitWiring

Meng How Tan

Developmental Biology Investigating Novel Cell Cycle-regulated Genes in Caulobacter Crescentus

Joy Sing-Yi Tea

Neurosciences Chromatin Remodeling and Dendrite Wiring Specificity in the Drosophila Olfactory System

Esteban Toro Gomez

Developmental Biology Chromosome Segregation and Structure In Caulobacter Crescentus

Robin Deis Trujillo

Microbiology and Immunology The Role of the Let-7 Primary Transcript in Target Recognition and Repression

Nicole Breaux Trunnell

Cancer Biology Multisite Phosphorylation Generates Ultrasensitivity I the Regulation of Dcd25C by Cdk1

Christopher Van

Chemical and Systems Biology Characterizing the Mechanism of Confinued Primer Synthesis at Stalled Replication Forks and Its Contribution to Checkpoint Activation

Saul Abraham Villeda Neurosciences Age-related Changes in the Systemic Milieu Regulate Neurogenesis in the Adult Brain

Susan Elizabeth Vleck

Microbiology and Immunology The Role of Glycoprotein H in Varicellazoster Virus Pathogenesis

Lou-En Wai

Immunology Investigating the Role of Natural Killer Cells and Its Activating Receptors in Transplantation

Jordon Kuo-Ming Wang

Cancer Biology From Non-coding RNAs to Histone Demethylases: Identifying Novel Epigenetic Regulators of the HOX Loci in Development and Cancer

Daniel Zachary Wetmore

Neurosciences Computational, Electrophysiological, and Behavioral Studies of Cerebellumdependent Memory Encoding and Retrieval

Heather Elizabeth Wheeler

Genetics Genomic Convergence Association Studies of Expression and Aging in the Human Kidney

Alissa Meyer Winzeler

Developmental Biology The Role of Myelin Lipids in CNS Regenerative Failure

Lauren Elizabeth Woodard

Cancer Biology Safety and Utility of Phage Integrases for Gene Therapy

Rong Xu

Biomedical Informatics Automated Information Extraction from Biomedical Literature

Zhen Peggy Yao

Biomedical Informatics Sampling-based Exploration of Folded State of Protein Under Geometry and Kinematic Constraints

Luis Alejandro Zúñiga

Immunology The Role of IL-17 in Adipose, Glucose, and Bone Metabolism

DOCTOR OF MEDICINE

Afsheen Afshar The Goldman Sachs Group, Inc. New York, NY

Asya L Agulnik Children's Hospital of Boston Boston, MA • Pediatrics-Primary Care

Marissa Aillaud Manzanera

Stanford Hospital and Clinics Palo Alto, CA • Pediatrics

Raag Dar Airan

Washington Hospital Center Washington, DC • Medicine-Preliminary Johns Hopkins Hospital Baltimore, MD • Diagnostic Radiology

Tessa Minchen Andermann

Stanford Hospital and Clinics Palo Alto, CA • Internal Medicine

Jason Alan Bartos Stanford Hospital and Clinics Palo Alto, CA • Internal Medicine

Sonny Batra

Hospital of the University of Pennsylvania Philadelphia, PA • Radiation Oncology

Jacob Samuel Brenner Stanford Hospital and Clinics Palo Alto, CA • Internal Medicine

Carmen G Butts University of California at Davis Medical Center Sacramento, CA • Family Medicine

Jorge Alejandro Caballero Santa Clara Valley Medical Center San Jose, CA • Transitional

John David Cahoy Johns Hopkins Hospital Baltimore, MD • Orthopaedic Surgery

Trevor Chufay Chan Kaiser Permanente Medical Center Santa Clara, CA • Medicine-Preliminary Stanford Hospital and Clinics Palo Alto, CA • Anesthesiology

Daniel Lee Chao Santa Clara Valley Medical Center San Jose, CA • Transitional University of Miami Bascom Palmer Eye Institute Miami, FL • Ophthalmology

Ian Ying-Li Chen Stanford Hospital and Clinics Palo Alto, CA • Internal Medicine

Monika Kimberley Chock Santa Clara Valley Medical Center San Jose, CA • Transitional Stanford Hospital and Clinics Palo Alto, CA • Dermatology

Ian Charlston Chua Stanford Hospital and Clinics Palo Alto, CA • Pediatrics

Bennett William Clark Johns Hopkins Hospital Baltimore, MD • Internal Medicine

Andrea Leah Crowell Emory University School of Medicine Atlanta, GA • Psychiatry

Josephine Ann Czechowiz Stanford Hospital and Clinics Palo Alto, CA • Otolaryngology

Swati Devendra Deshmukh

Beth Israel Deaconess Medical Center Boston, MA • Medicine-Preliminary Johns Hopkins Hospital Baltimore, MD • Diagnostic Radiology

Andra Lee Dingman

University of Colorado School of Medicine Denver, CO • Child Neurology University of Colorado School of Medicine Denver, CO • Pediatrics

Thuy Doan

Santa Clara Valley Medical Center San Jose, CA • Medicine-Preliminary University of Washington Seattle, WA • Ophthalmology

Crystal Jean Duke University of Chicago Medical Center Chicago, IL • Pediatrics

Shaundra Lana Eichstadt Stanford Hospital and Clinics Palo Alto, CA • Plastic Surgery

Elena Garcia Ewert Denver Health Medical Center Denver, CO • Emergency Medicine

Chantal Veronique Forfota

San Mateo Medical Center San Mateo, CA • Psychiatry

Mani Foroohar

Master of Business Administration Columbia University School of Business New York, NY

Carolyn Anne Fredericks

Stanford Hospital and Clinics Palo Alto, CA • Medicine-Preliminary Johns Hopkins Hospital Baltimore, MD • Neurology

Carly Isabel Gomes

New York Presbyterian Hospital Columbia University Medical Center New York, NY • Pediatrics

Natalia Gomez -Ospina

Postdoctoral Fellow Stanford University School of Medicine Palo Alto, CA **Rajesh Gupta** Postdoctoral Fellow Stanford University School of Medicine Palo Alto, CA

Mark Morris Hammer

Albert Einstein Medical Center Philadelphia, PA • Transitional Barnes-Jewish Hospital St. Louis, MO • Diagnostic Radiology

Lingmin He

Santa Clara Valley Medical Center San Jose, CA • Medicine-Preliminary Stanford Hospital and Clinics Palo Alto, CA • Ophthalmology

Luke James Higgins

Harbor Hospital Center Baltimore, MD • Transitional Johns Hopkins Hospital Baltimore, MD • Diagnostic Radiology **Stanley T Hoang** Stanford Hospital and Clinics Palo Alto, CA • Neurological Surgery

Mark Hsu Stanford Hospital and Clinics Palo Alto, CA • Urology

Cindy Hsiao-ching Hwang

Stanford Hospital and Clinics Palo Alto, CA • Medicine-Preliminary Oregon Health & Science University Portland, OR • Anesthesiology

Afraaz Rustom Irani

University of South Carolina School of Medicine Palmetto Health Richland Columbia, SC • Orthopaedic Surgery

Natalia Isaza Stanford Hospital and Clinics Palo Alto, CA • Pathology

Siddhartha Jaiswal

Massachusetts General Hospital Boston, MA • Pathology

Emily Elizabeth Johnston

Stanford Hospital and Clinics Palo Alto, CA • Pediatrics

Maziyar Arya Kalani

Stanford Hospital and Clinics Palo Alto, CA • Neurological Surgery

Nirav Vikram Kamdar

Stanford Hospital and Clinics Palo Alto, CA • Medicine-Preliminary Massachusetts General Hospital Boston, MA • Anesthesiology

Michael George Kattah Brigham & Women's Hospital

Boston, MA • Internal Medicine

Michael Chinwen Ke

Stanford Hospital and Clinics Palo Alto, CA • Medicine-Preliminary/Neurology Stanford Hospital and Clinics Palo Alto, CA • Neurology

Alex Sogomon Keuroghlian

Massachusetts General Hospital Boston, MA • Psychiatry

Joseph Atherton Knowles Postdoctoral Fellow University of Alabama Birmingham, AL • Otolaryngology

Gavriel David Kohlberg

New York Presbyterian Hospital The University Hospital of Columbia and Cornell New York, NY • Otolaryngology

Brooke Lane Brigham & Women's Hospital Boston, MA • Pathology

Steven Yu-Ta Lin O'Connor Hospital San Jose, CA • Family Medicine

Ryan K Louie U.S. Department of State Washington, D.C. Residency to Begin in 2011

Mitchell Ryan Lunn Brigham & Women's Hospital Boston, MA • Internal Medicine

Gabriel J Martinez -Diaz Hennepin County Medical Center Minneapolis, MN • Transitional University of Pittsburgh Medical Center Medical Education Program Pittsburgh, PA • Dermatology **Donald Hiroshi Matsuda** Public Health Research Santa Clara and San Mateo, CA

David William Meister Medical College of Wisconsin Affiliated Hospitals Milwaukee, WI • Orthopaedic Surgery

Mark Heinz Michalski St. Mary's Medical Center/UCSF San Francisco, CA • Internal Medicine

Kimberly Gayle Montez University of California at San Diego Medical Center San Diego, CA • Pediatrics

Melissa Morelos University of California at San Diego Medical Center San Diego, CA • Pediatrics

Jayson Allen Morgan University of California at San Francisco San Francisco, CA • Internal Medicine

Matthew Christopher Mori Massachusetts Eve and Ear Infirmary

Boston, MA • Otolaryngology

Jason Matthew Moss University of California at Irvine Medical Center Irvine, CA • Medicine-Preliminary SUNY Downstate Medical Center Brooklyn, NY • Ophthalmology

Sarah Elizabeth Nelson Lahey Clinic Medical Center Burlington, MA • Medicine-

Preliminary/Neurology Tufts Medical Center Boston, MA • Neurology

Jacqueline Ka-Wan Ng

Santa Clara Valley Medical Center San Jose, CA • Transitional Oregon Health & Science University Portland, OR • Ophthalmology

Juno Obedin-Maliver

University of California at San Francisco San Francisco, CA • Obstetrics & Gynecology

Olakunle Ogunrinade

Memorial Sloan Kettering Medical Center New York, NY • Transitional New York Presbyterian Hospital Weill Cornell Medical Center New York, NY • Dermatology

Paulina Margarita Ortiz Rubio Lopez Portillo

Children's Hospital of Boston Boston, MA • Pediatrics

Larry U Ozowara

New York Presbyterian Hospital Columbia University Medical Center New York, NY • Psychiatry

Erin Ann Palm

Stanford Hospital and Clinics Palo Alto, CA • General Surgery

Ricardo T Paniagua

University of Massachusetts Medical School Worcester, MA • Medicine-Preliminary University of Texas Southwestern Medical School Dallas, TX • Dermatology

Luiz Carlos Pantalena-Filho

Kaiser Permanente Medical Center Santa Clara, CA • Medicine-Preliminary University Hospitals Case Medical Center Cleveland, OH • Dermatology

Joe Sixto Peraza IV

University of Arizona/UPHK Graduate Medical Education Consortium Tucson, AZ • Emergency Medicine

Ashley Serene Plant

University of California at Los Angeles Medical Center Los Angeles, CA • Pediatrics

Ricardo Alberto Pollitt

Colorado Health Foundation Denver, CO • Transitional University of California at San Francisco San Francisco, CA • Dermatology

Michael Andrew Pouliot

Stanford Hospital and Clinics Palo Alto, CA • Orthopaedic Surgery

Jennifer Lee Pretz

Massachusetts General Hospital Boston, MA • Medicine-Preliminary Brigham & Women's Hospital Boston, MA • Radiation Oncology

Adam Lee Prickett

Kaiser Permanente Medical Center Santa Clara, CA • Medicine-Preliminary University of Illinois at Chicago Illinois Eye and Ear Infirmary Chicago, IL • Ophthalmology

Katie Lynn Pricola

Massachusetts General Hospital Boston, MA • Neurological Surgery

Jeremiah Wayne Ray

University of Utah Affiliated Hospitals Salt Lake City, UT • Emergency Medicine

Eon Joseph Rios Santa Clara Valley Medical Center San Jose, CA • Medicine-Preliminary Stanford Hospital and Clinics Palo Alto, CA • Dermatology

Sepideh Saber

Albert Einstein College of Medicine Montefiore Medical Center Bronx, NY • Surgery-Preliminary Albert Einstein College of Medicine Montefiore Medical Center Bronx, NY • Plastic Surgery

Sumit Anil Shah

University of California at San Francisco San Francisco, CA • Internal Medicine

Mengkai Shieh

Research and Clinical Program I.M. Sechenov Moscow Medical Academy Moscow, Russia

David Sunwoong Shin

Kaiser Permanente Medical Center Santa Clara, CA • Medicine-Preliminary University of Washington Affiliated Hospitals Seattle, WA • Diagnostic Radiology

Jacqueline Baras Shreibati

Stanford Hospital and Clinics Palo Alto, CA • Internal Medicine

Richard Silva

University of California at San Diego Medical Center San Diego, CA • Pediatrics

Peter John Simon

University of California at San Francisco San Francisco, CA • Pediatrics-Primary Care

Maneesh Hakam Singh Hospital of the University of Pennsylvania Philadelphia, PA • Internal Medicine

William Slikker III Rush University Medical Center Chicago, IL • Orthopaedic Surgery

Philippa Naomi Soskin

University of California at San Francisco San Francisco, CA • Emergency Medicine

Meera Sridhar

University of California at San Francisco San Francisco, CA • Obstetrics & Gynecology

Adam Sebastian Tenforde

Kaiser Permanente Medical Center Oakland, CA • Medicine-Preliminary Stanford Hospital and Clinics Palo Alto, CA • Physical Medicine & Rehabilitation

Ly-Huong Nguyen Truong

Postgraduate Studies

Thomas Chen-Chia Tsai

Brigham & Women's Hospital Boston, MA • General Surgery

Carlos Andres Uquillas

New York University School of Medicine New York, NY • Orthopaedic Surgery

Michael Anthony Vaninetti Brigham & Women's Hospital

Boston, MA • General Surgery

Diana Liza Wertz Stanford Hospital and Clinics Palo Alto, CA • Psychiatry

Kristen Rose Whitaker University of California at Los Angeles Medical Center Los Angeles, CA • Obstetrics & Gynecology

Ariel Aila Williams

Johns Hopkins Hospital Baltimore, MD • Orthopaedic Surgery

Ryan Patrick Williams

Children's Hospital of Philadelphia Philadelphia, PA • Child Neurology St. Louis Children's Hospital St. Louis, MO • Pediatrics

Eugene Sun Yim

Beth Israel Deaconess Medical Center Boston, MA • Emergency Medicine

Maurice Henry Zissen

Scripps Mercy Hospital San Diego, CA • Transitional Massachusetts General Hospital Boston, MA • Diagnostic Radiology

Other Awards and Honors

- Dr Tom Sudhof, the Avram Goldstein Professor in the Department of Molecular and Cellular Physiology and Member of the Howard Hughes Medical Institute, is the 2010 recipient of the Kavli Prize. In addition to being an enormously distinguished award, it also includes \$1 million – making it one of the richest prizes in science. Tom Sudhof is a Member of the Stanford Neurosciences Institute. The other two Kavli Prize recipients in neuroscience are Richard Sheller (now at Genetech) and James Rothman (now at Yale) – both of whom were previously faculty members at Stanford.
- Dr. William T. Newsome, Professor of Neurobiology, has received this year's prestigious Champalimaud Vision Award for his groundbreaking research into the brain circuitry underlying the mysterious cognitive process that is vision and, ultimately, another equally mysterious process: decision making. He shares the \$1.3 million award– the largest monetary award in the field of vision science and one of the largest scientific and humanitarian prizes in the world with Anthony Movshan, PhD, from New York University.
- *Lisa Freeman, Director of the VA Palo Alto Health Care System*, is the recipient of the 2010 Distinguished Executive Presidential Rank Award, acknowledging her leadership qualities and performance results. The VA Palo Alto Healthcare System is one of the largest and most complex such facilities in the nation and has the highest Veteran satisfaction scores. Stanford is fortunate to have a close relationship with the VA and with Ms Freeman.
- *Harry Greenberg, MD, the Joseph D Grant Professor and Senior Associate Dean for Research* has been elected a fellow in the American Academy of Microbiology and honor bestowed on the most distinguished members of the microbiology community.
- *Kerry-Ann Stewart, SMS 2*, has been named a 2010 American Medical Association Foundation Minority Scholar.

Please join me in congratulating all the recipients for these wonderful honors.

Appointments and Promotions

Gill Bejerano has been reappointed to Assistant Professor of Developmental Biology, effective 2/01/10.

Caroline Bérubé has been promoted to Clinical Associate Professor of Medicine, effective 6/01/10.

Peter Cahill has been reappointed as Clinical Assistant Professor (Affiliated) of Surgery, effective 10/10/09.

William Cheng has been promoted to Adjunct Clinical Assistant Professor of Medicine, Division of General Internal Medicine, effective 5/01/10.

Cheryl Cho-Phan has been reappointed as Clinical Assistant Professor of Medicine, effective 5/01/10.

Fiona G.M. Clements has been appointed Clinical Professor of Anesthesia, effective 7/01/10.

Lawrence Crane has been promoted to Adjunct Clinical Assistant Professor of Medicine, Division of General Internal Medicine, effective 5/01/10.

John Cunniff has been promoted to Adjunct Clinical Assistant Professor of Medicine, Division of General Internal Medicine, effective 5/01/10.

Zubin Damania has been promoted to Adjunct Clinical Assistant Professor of Medicine, Division of General Internal Medicine, effective 5/01/10.

Gansevoort H. Dunnington has been appointed Clinical Assistant Professor of Cardiothoracic Surgery, effective 8/01/10.

Ira M. Friedman has been promoted to Clinical Professor of Pediatrics and of Medicine, effective 4/01/10.

Adella M. Garland has been reappointed Clinical Assistant Professor (Affiliated) of Surgery, effective 10/10/09.

Richard D. Gregory has been appointed Clinical Associate Professor of Cardiothoracic Surgery, effective 6/01/10.

T. Kyle Harrison has been reappointed as Clinical Assistant Professor (Affiliated) of Anesthesia, effective 9/1/10.

Malcolm Lawton was reappointed as Clinical Assistant Professor (Affiliated) of Orthopaedic Surgery, effective 9/01/09.

David K. Levin has been reappointed as Clinical Associate Professor (Affiliated) of Obstetrics and Gynecology, effective 9/01/10.

Margaret C. Lin was promoted to Clinical Assistant Professor of Radiology, effective 7/01/10.

Steven S. Lipman has been promoted to Clinical Associate Professor of Anesthesia, effective 9/01/10.

David W. Lowenberg has been appointed as Clinical Professor of Orthopaedic Surgery, effective 6/15/10.

Katushide Maeda has been promoted to Clinical Assistant Professor of Cardiothoracic Surgery, effective 7/01/10.

John D. Mark has been promoted to Clinical Professor of Pediatrics, effective 7/01/10.

Randal R. Peoples has been appointed Clinical Associate Professor of Neurosurgery, effective 8/01/10.

Donald E. Potter has been reappointed Clinical Professor of Pediatrics, effective 6/15/10.

Thomas A. Rice has been reappointed as Clinical Professor (Affiliated) of Ophthlmology, effective 5/01/10.

Ahmad Salehi has been appointed Clinical Associate Professor (Affiliated) of Psychiatry and Behavioral Sciences, effective 7/01/10.

Gerald M. Shefren has been reappointed Clinical Professor of Obstetrics and Gynecology, effective 6/17/10.

Greg Zaharchuk has been reappointed to Assistant Professor of Radiology, effective 10/01/10.