



UNCMD-PhD Newsletter

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Special Commencement Address for our grads!

Each year at our annual MD-PhD Graduation Party we are honored to have an accomplished physician-scientist give a commencement address to our graduates, current students, friends and family. With a new round of graduates getting ready to don their regalia in a few weeks and move into the next stage of their training, we wanted to share with you the words of a close friend of the program, Dr. Jim Evans, MD, PhD, who was our commencement speaker last May. Dr. Evans is the Bryson Distinguished Professor of Genetics and Medicine at UNC who is an exemplary researcher, teacher and mentor to all medical students. As both a physician and a scientist, he delivered an outstanding and thoughtful commencement address in which he outlined and tried to make sense of 10 paradoxes of being just that, both a physician and a scientist. We have shared them with you all below. Enjoy!

Paradox #1: In contrast to other spheres of your life, your patients will actually listen to what you have to say.

Especially as a parent the idea that what I say will actually be accorded respect comes as a continual shock. But your patients **do** listen to you - and even more remarkably, they sometimes do what you advise. So be careful with you're advice and make sure its sound. Weigh your words carefully; don't think out loud! Of course that patient's headache might be because of a brain tumor! Every time I get a headache I figure it's a brain tumor. Or maybe it's that some exotic parasite has taken up residence in my temporal lobe. But it usually isn't and there isn't any point in scaring the hell out of your patient until you have some sound data to go on.

Paradox #2: Your clinic may be packed, but hardly any of those patients really want to come see you.

It's a humbling realization that in spite of the ridiculous level of respect we're accorded, for the most part our patients don't really want to come see you. Remember that your patients are often scared. No matter how busy you are, no matter how hard of a day you are having, their day is probably worse. Fortunately, though, they also don't really expect us to solve all their problems. They usually understand your limitations and know that your job is to cure sometimes, to relieve often, but to comfort always.

Paradox #3: While you have entered one of the most noble and honored of professions, you will regularly deal with humanity at its most gritty.

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I don't say this to disillusion you. There is more inspiration and beauty in the gritty reality of our profession than in the myths that surround it. You will meet and interact with people (and their secretions) who come from all walks of life, from the destitute and homeless to CEOs. Some will astound you with their nobility and insights; others with the inventive ways in which humans can make messes of their lives. You can learn from them all.

Paradox #4: As MD/Ph.Ds your lab life and your clinic will, at times, seem unrelated. Work to make this less of a paradox, for you will stay saner and you will be happier if you can find a way to make your clinical pursuits relevant to your research and *vice versa*.

Paradox #5: In spite of our amazing technology and knowledge, in the end you will be humbled by complexity and uncertainty, both in the lab and in the clinic.

As a clinician I regularly sit across from people and try to grasp the fact that the disease they are battling and the tragedy they've witnessed in beloved family members results from a single nucleotide among the 3 billion in the human genome which happens to be in the wrong place. And in the research setting I'm continually reminded of how much we don't know and how profoundly myopic our vision often is.

For all of your skills and knowledge, if you aren't humbled on a daily basis then you clearly aren't paying attention.

Paradox #6: Your profession demands that you employ both science and humanity.

I was privileged to deliver the very first lecture of medical school to many of you. At that time I

quoted bioethicist Edmund Pellegrino: "Medicine is the most humane of the sciences and the most scientific of the humanities". As such it is the most fulfilling of professions. We all need to strive to reconcile and synthesize these sometimes competing demands of our profession.

Paradox #7: Disease is both ugly and beautiful.

You are understandably - and rightly - fascinated by disease. But I'll never forget how horrified my non-medical father was when he learned that doctors often have "favorite" diseases. Temper your intellectual fascination (at least around those who are suffering from a disorder) by regularly reminding yourself of the human side to disease. No matter how fascinating, remember that disease and pathology are scourges that can destroy the lives and happiness of your patients and their families. But don't lose that fascination and use it to drive your research.

Paradox #8: In medicine you will receive extra credit just for being a decent human being.

This never ceases to amaze me and I'm afraid that it is a severe indictment of the state of our profession. Patients are often stunned when we simply return their phone calls or take even an extra 60 seconds to talk with them about their dog or their child or their trip to the beach. Your patients deserve to be treated with the same respect as your friends, professional colleagues or the head of your department. And we'll know we've made progress as a profession when we no longer get extra credit simply for being courteous and respectful of others' time.

Paradox #9: We live in the wealthiest country on earth and we spend more as a percentage of our GDP on health care than any other nation. Yet we



have lousy results by most measures such as life expectancy, infant mortality rates, etc. As clinicians and the future leaders of medicine you should work to address that depressing paradox. The only way to do that is through engaging policy makers. So identify the ways in which you feel that paradox can be remedied and work towards it. We don't exist in a vacuum.

Paradox #10: You will strive to heal and to understand disease yet ultimately we will all fail.

As grim as that sounds it may be the most inspiring and uplifting lesson we can derive from a life in medicine, because ultimately we are in the same boat as our patients.

I remember a patient who was dying when I was an intern. When I remarked at how well she seemed to be handling this devastating news, she pointed out into the busy hallway at the nurses' station and said: "All those people out there are walking around dying. Every one of them. I just happen to know it and know that it will be a bit sooner for me than I'd bargained for. And that knowledge has been a blessing". In the clinic you will be privileged to regularly witness astonishing examples of bravery and inspiration. And in the lab you'll regularly fail in the face of nature's complexity. But while a life in medicine and research can lead to despair and callousness, it doesn't have to – it also has great power to inspire and to focus your appreciation of life. I'm confident, having had the great privilege of coming to know many of you that it will lead you to a life full of the beautiful and piercing knowledge that we are all temporary organisms, that our knowledge is limited and thus that life should be cherished all the more. My confident wish for

you is that Medicine will empower you to lead the fullest and richest lives imaginable.

Graduation Poem for MD-PhDs

By Jim Evans

You now have your MDs - and your PhDs

It's a bit pathetic the way we overachieve

Your moms and your dads are all very proud

For its doctor/doctor that you'll be known now

But why did you do it? What brought you here?

It wasn't for money, that much is clear

Probably for the sex. No...wait...that might not explain

The hard work, the long hours, the toil, the pain

Part of it was vanity – it is pretty cool

To have, following your name, that “doctor-doctor” duo

And part of it was practical – it'll help you get grants

Your research career it will surely enhance

For some it was expectations – you felt like you had

To live up to your illustrious mother or dad

They're proud of you now - that I guarantee

(Or if they're not, it's a psychiatrist they should see)

So your reasons are varied, individual, and unique

But there's a commonality too - and that's what I seek

For there's something that binds you together, each to each

And to those who taught you and to those whom you'll teach



*It's a wonder deep down – for it gives you a chill
When you understand something new; it gives you a thrill
To piece together the world one subtle clue at a time
With your most formidable weapon, a finely honed mind*

*Science is our light and it offers us a means
To explain deep mysteries more elusive than dreams
Those insights are their own reward. They'll compel you
to drive
To understand our world and you'll feel a bit more alive*

*But it's not just your own delight and satisfaction
That will drive you along and give your life traction
For what you've done, the knowledge you've gathered
Can actually help others – and in the end, that's what
matters*

*Their lives will be beset by traumas and disease
All the ills flesh is heir to from cancer to COPD
Pathologies of the genome, the heart, mind, the tissues
A thousand ways to suffer, from their lives will issue*

*And now you have the tools to contribute, make a differ-
ence*

*(And that contribution may be small, in spite of your bril-
liance)*

*For most of us don't get to be Pastuers, Smithies, Semmel-
weises*

Vanquishing diseases, winning Nobel Prizes

*But Newton was only half right. Yes we stand on the shoulders
Of giants in science - but there were plenty of foot soldiers
Who nobly paved the way and made great things possible
And their works too, are as critical as they are laudable*

*So embark now with optimism, excitement and joy
To discover medicine's secrets and to nobly employ
The tools you've gathered, be intellectually daring
But don't ever forget that your most important job is caring*



Jim Evans, MD, PhD

<i>Total # Applicants:</i>	398
<i>Total # brought to committee:</i>	170
<i># of Applicants Interviewed:</i>	45
<i>Average MCAT (all applicants):</i>	34
<i>Average MCAT (interviewed applicants):</i>	36
<i>Average GPA (all applicants):</i>	3.73
<i>Average GPA (interviewed applicants):</i>	3.86

 **Meet the MS1 Class**

Halei Benefield
Duke University, 2013

Major: Biomedical Engineering

Research Interests: BME and Regenerative Medicine

Favorite Taylor Swift Song: You Belong With Me

Interesting Fact: I have never been outside North America.



Nick Brazeau
Harvard College, 2013

Major: Human Evolutionary Biology

Research Interests: Epidemiology, Evolutionary Biology, and Infectious Diseases

Favorite Taylor Swift Song: How can one have a “favorite?”

Interesting Fact: My empacko (nickname) from western Uganda was “loud puppy.”





Sarah Brnich

Dickinson College, 2011

*Major: Biochemistry-
Molecular Biology and
Spanish*

*Research Interests:
Cancer Genomics*

*Favorite Taylor Swift Song: Shake It
Off*

*Interesting Fact: I once held a baby
tiger in Argentina.*



Rashmi Kumar

*Univ. of Pittsburgh,
2014*

*Major: Molecular Biol-
ogy and English Lit.*

*Research Interests:
Immunotherapy*

*Favorite Taylor Swift Song: Throw-
back: Our Song is just too good.*

*Interesting Fact: My dad's first name
is my last name.*



Stephen Kovacs

*Johns Hopkins Univ.
2012*

*Major: Molecular and
Cellular Biology*

*Research interests:
Immunology and Infectious Diseases*

*Favorite Taylor Swift Song: No com-
ment.*

*Interesting Fact: I have been teaching
myself to sketch since medical school.*



Cesar Lopez

Rice University, 2014

*Major: Philosophy and
Biochemistry– Cell Biol-
ogy*

*Research Interests:
Microbiology and Infectious Diseases*

*Favorite Taylor Swift Song: Anaconda
by Nicky Minaj*

*Interesting Fact: I once played the
Sax on the Great Wall of China*





The MS1 class

Connor Puett
*UNC– Chapel Hill ,
2013*

Major:

Biomedical Engineering

Research interests:

Medical Imaging and Robotics

*Favorite Taylor Swift Song: I Knew
You Were Trouble*

*Interesting Fact: My 15 yr old sister
regularly beats me in Super Smash
Bros, Volleyball, and eating contests.*



William Weir
Duke Univ. , 2013

Major:

Physics

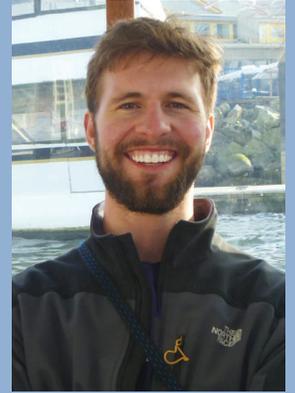
Research interests:

*Bioinformatics and
Comp. Biology*

*Favorite Taylor Swift Song: I Knew
You Were Trouble feat. Nicholas
Cage*

Interesting Fact:

*Favorite hobbies of mine include run-
ning and other forms of exercise such
as basketball and swimming; skiing/
snowboarding especially in the Rock-
ies; enjoying the beauty of nature,
hunting deer and duck, fishing, and
backpacking; reading mostly nonfic-
tion and science fiction pieces and
picking apart the inconsistencies in
bad scifi movies; programming com-
puters and playing with photoshop;
traveling; spending time on the lake
with my family.*



Randall Ung
*UNC–
Chapel Hill ,
2010*

Major:

Mathematics and Biology

Research interests: Neuroscience

*Favorite Taylor Swift Song: All of
them, but you can't go wrong with
Love Story*

*Interesting Fact: My hobby is finding
new hobbies.*





On May 3rd, 2014 we held the first Southeast Symposium for MD-PhD Women in Science, and it was an incredible success!! We cannot thank the Burroughs Wellcome Fund enough for their support, the amazing career development materials, and financial backing. We had 32 students attend the conference from 6 institutions (UNC, Duke, Wake Forest, UVA, VCU, and MUSC). Our goal for the event was to provide career development workshops and materials that allowed the attendees to walk away empowered with functional concepts and tools they could immediately employ in their career.

To achieve this goal, we held career development workshops addressing interests selected by attendees: Work-Life Harmony, Successful Negotiating, and Residency Options for MD-PhD Students. The Symposium also featured a Keynote Address from an incredible role model, and one of the fourteen female medical school deans in the country, Dr. Etta Pisano. Her talk addressed the disparities that women face in society and how she has dealt with conflicts at different points in her career. The address was inspiring and motivational. The day then completed with a poster session, a networking activity, and an attendee dinner.

Physical career development tools that we were able to provide the attendees included a professional padfolio for future conferences or interviews, personalized business cards to aid in networking, and the incredible set of Burroughs Wellcome Fund books on academic career skills.

Feedback from attendees and our program directors was overwhelmingly positive, with students stating that the Symposium was the “best conference [they] have ever attended” and “[they] learned so much that they plan to apply right away.”

During the symposium closing remarks, we encouraged students from other schools to start equivalent Advocates for MD-PhD Women in Science group at their institutions and offered our assistance in getting their groups started. With enough institutions involved, we hope this Symposium can be a yearly event that can rotate through host universities. Since the symposium last year, we have assisted The Medical University of South Carolina (MUSC), Virginia Commonwealth University (VCU), and Duke University in starting their own advocacy groups. Further, we partnered with the Duke Advocates for MD-PhD Women in Science (AMPWIS) to write and receive a Kenan-Biddle Partnership grant that will fund our events in the 2015 calendar year.

This Kenan-Biddle funding will support the Second Annual Southeast Symposium for MD-PhD Women in Science to be held on May 16th, 2015 at Duke University. This year the career development workshops will focus on crafting your personal brand, building a professional network both through online presence and in person pitches, and effectively communicating and leading. In addition to skill building through workshops, attendees will also participate in a Research Poster Session, and receive a Keynote Address from Sallie Permar, MD, PhD.





Southeast Symposium for MD-PhD Women in Science

Below is the list of workshop coaches for this year's Symposium.

Building High Valued Relationship - Kristin Murphy, PhD

Effective Networking: Nailing your elevator pitch - Audrey Verde, PhD

Women in Leadership - Kimberly Jenkins, PhD & Anthony Galanos, MD

We hope that through this Symposium students will learn functional skills, expand their peer network, and continue to understand the importance of advocating for equality in academia and beyond. This symposium is open to MD-PhD Students from UNC, Duke, Wake Forest, MUSC, UVA, VCU, and Johns Hopkins. We hope to see many of you there.

More information and the link to register for the Symposium can be found on our website: <https://uncadvocatesformdphdwomeninscience.web.unc.edu/event/second-southeast-symposium-for-md-phd-women-in-science/>



Audrey, Kate, and Dr. Orringer with Dr. Pisano at last year's symposium



AMPWIS Undergraduate Mentoring

During the 2014-2015 academic year, UNC Advocates for MD-PhD Women in Science (AMPWIS) has been focusing on a new initiative, the Undergraduate Mentoring Program. The goal of the Undergraduate Mentoring Program is to spread awareness among undergraduates of MD-PhD programs and the career of a physician-scientist. AMPWIS hopes that the program will provide encouragement and mentorship to all genders but especially to women, with the ultimate goal of equalizing the current gender imbalance in MD-PhD program enrollment across the country.

The Undergraduate Mentoring Program consists of a semiannual information session, during which we present a general Powerpoint on MD-PhD programs followed by a panel-style Q&A with current students. Excitingly, these sessions have been very well-received by the undergraduates in attendance. Announcements about these sessions have also generated interest in the other component of the program – one-on-one mentoring with current students. Nearly half of the current students in our program have volunteered to be listed on our website as available mentors! Undergraduates are encouraged to contact a mentor whose clinical and/or research interests are similar to their own to establish a mentoring relationship that consists of email correspondence, Skype sessions, coffee chats, or all of the above.

Furthermore, first-year students Nick Brazeau, Connor Puett, and William Weir have established “Office Hours” on Thursdays from 4:00 – 5:00 pm in Bondurant 3076, where undergraduate students interested in science and medicine may stop by for a less formal mentoring experience. Nick, Connor, and William are available to discuss undergraduate research opportunities at UNC, talk about the application processes for medical school and MD-PhD programs, and share their own experiences along their path to the UNC MD-PhD program.

Finally, a big thank you to those of you who signed up to be mentors, and keep an eye out for a story on the Undergraduate Mentoring Program in an upcoming Vital Signs!

Tell us about your research.

I work in the laboratory of Victor Garcia-Martinez, and one of our research goals is to find a cure for HIV (human immunodeficiency virus). Using an advanced humanized mouse model, we conduct systemic in vivo studies of HIV infection, suppression, and cure intervention; and I'm evaluating the effects of putative reagents for virus eradication. I first heard about this cutting-edge translational research from Dr. Garcia at one of my first Monday Night Seminars, and I was immediately hooked. UNC has been an amazing place to perform infectious disease/HIV research: we have a huge number of experts working on basic, clinical, and epidemiological aspects of infectious disease, and there are endless opportunities to learn and collaborate.

What kind of medicine are you interested in?

I am considering internal medicine and/or psychiatry, followed by an infectious disease fellowship, toward a career as an infectious disease/HIV spe-

cialist. Ever since I started learning about sex and realizing my own identity as a gay man, I have been fascinated by sexuality and by lesbian, gay, bisexual, transgender (LGBT) topics. It was in medical school that I found a passion and niche for myself by funneling these obsessions toward sexual health and LGBT health. In parallel, my interests in virology and immunology drew me into translational HIV research as a graduate student. I hope that these aspects of my personality and my training can provide me a compassion for patients, a comfort with sexuality, and a command of the science I will need to be a future leader in HIV care and research.

What else are you involved in?

To start, I sang a cappella (without instruments) both in college and afterwards, so I was excited to start a medical student a cappella group with classmate Brittany Johnson when I was a first-year. We call ourselves the MedUNCedoos

(after the medical school domain "med.unc.edu"), and we perform for medical school events, at private functions, and in the hospitals. I have directed the group for six years, and we have featured the voices of many MD/PhD students.

Next, I have had the opportunity to develop myself as a sexual health provider/educator by participating in and co-directing the national American Medical Student Association (AMSA) Sexual Health Scholars Program, by providing HIV testing and counseling at the Student Health Action Coalition clinic, by writing a sexuality column for the Daily Tar Heel newspaper, and by giving sexuality lectures at the School of Medicine and other local schools. I have been able to advocate for LGBT issues during my time as a co-leader in the Queer Straight Alliance and as a coordinator and chair in AMSA's national Gender & Sexuality Action Committee.

Finally, AMSA has provided me real-world experience in or-



Student Spotlight: Perry Tsai

ganzation governance and management as I enter my second year as Vice President for Programming Development on the Board of Trustees. It has been an inspirational experience to work with medical student leaders across the country and to be able to tackle issues in medical education and healthcare with the power of a national membership organization like AMSA.

What's your favorite thing about UNC?

I just love the people here at UNC. My first impression still holds true that the students, faculty, and staff here are happy to be here and happy for you to be here. This stems from a friendly culture, a gorgeous campus, and (mostly) amazing weather; and it is manifested in the staff who are so supportive and responsive,

the researchers who want to collaborate, the faculty who love to teach and mentor, and the students who get together to hang out and explore common interests. The people at UNC have made it a great place to live, to work, and to learn. I feel lucky to be here.

Recent F30 Awards

(There are currently 23 funded F30s in the program, and 9 pending)

Catherine Fahey	GS3	The Effect of Cancer-associated SETD-2 Mutations on Transcription and Chromatin Organization	NCI
Morgan Goheen	GS3	Iron Deficiency Anemia and the Pathogenesis of Falciparum Malaria	NIAID
Andrew Morgan	GS3	Effects of Advanced Paternal Age on Germline Genome Stability	NIMH
Ayumi Nakamura	GS3	Identification of a Novel Apoptotic Pathway in the Developing Mammalian Embryo	NICHD
Patrick Lang	GS2	ATR: a novel therapeutic target for medulloblastoma identified by its role in cerebellar development	NCI

Congrats to recent PhD defenses!!!

James Byrne	Local Iontophoretic Administration of Cytotoxic Agents for the Treatment of Solid Tumors	Pharmaceutical Sciences
Rushina Cholera	HIV and depression in a primary care clinic in Johannesburg, South Africa	Epidemiology
Julia Geddings	The role of tumor microparticles in cancer-associated thrombosis	Pathology & Laboratory Medicine
Kate Hacker	Investigating the role of SETD2 mutations and H3K36me3 loss in clear cell renal cell carcinoma	Genetics & Molecular Biology
Katharine Liang	Intravitreal AAV-mediated expression of Nrf2 promotes retinal recovery after light-induced retinal damage in mice	Neurobiology
Chris O'Conor	TRP4-mediated Mechanotransduction in Articular Cartilage Function and Disease	Biomedical Engineering
Doug Ornoff	Development of a cellular analysis platform with microengineered permeable microwells	Pharmacology
Elliott Robinson	A better buzz? Bidirectional effects of the OPRM1 A118G polymorphism on opioid and alcohol reward	Neurobiology
Sarah Rutstein	Optimizing HIV Therapy: Outcomes, Challenges and Opportunities	Health Policy & Management
Nick Taylor	Balancing Pro- and Anti-Inflammatory Signals for Effective Immunotherapy in the Post-Hematopoietic Stem Cell Transplant and Solid Tumor Settings	Microbiology & Immunology
Audrey Verde	Structural Abnormalities within the episodic prospection and decision making circuitry in cigarette smokers: a DTI and sMRI analysis	Neurobiology
Michael Iglesia	A Genomic Approach to the Identity, Clonal Diversity, and Clinical Import of Tumor-Infiltrating Lymphocytes in Human Cancers	Genetics and Microbiology

Match results 2015

Dustin Bosch	<i>Pathology</i>	Univ. of Washington
Meagan Deming	<i>Internal Med</i>	Univ. of Maryland
Chris Dibble	<i>Neurosurgery</i>	Barnes Jewish Hospital
Michael Durando	<i>Internal Med</i>	Emory
	<i>Research Track</i>	
Jeff Federspiel	<i>OB-GYN</i>	Johns Hopkins
Tom Jarrett	<i>Emergency Medicine</i>	Case Western
Will Jeck	<i>Pathology</i>	Mass General Hospital
Tricia Lenhart	<i>Pediatrics</i>	Univ. of Colorado Denver
Ryan Phillips	<i>Radiation-Oncology</i>	Johns Hopkins
Reid Roberts	<i>Emergency Medicine</i>	Maine Medical Center
Naman Shah	<i>Family Medicine</i>	Contra Costa Regional
		Medical Center
Erin Steinbach	<i>Internal Medicine</i>	UNC Hospitals

 Engagements/Weddings/Babies

- Morgan Goheen is getting married to Mikael Klingeborn on June 20th 2015 in Montana.
- Andrew Morgan is getting married in June to Katie Jordan, MD
- James Byrne is getting married to Maggie McGinn on June 20th, 2015 at the Notre Dame Basilica
- Elliott Robinson and his wife Katherine are expecting a baby boy on May 10.



Other Awards

- Sarah Rutstein received the AIDS 2014 IAS/ANRS Young Investigator Award (July 2014).
- Audrey Verde was elected for a Travel Award to the National Institute of Neurologic Disorders and Stroke (NINDS) Research Career Day at the NIH on April 24th, 2015.
- Audrey Verde and Sarah Rutstein received the P.E.O. Scholar Award.
- Morgan Goheen received the 2014 Benjamin H. Kean Travel Fellowship in Tropical Medicine from the American Society of Tropical Medicine and Hygiene.
- Bryna Harrington was named an Infectious Disease Society of America (IDSA) Education and Research Foundation 2015 Medical Scholar.
- Anna Kahkoska, Alex Gertner, Izzy Brassfield, Nick Brazeau, and Dustin Bosch received the Alexander MD/PhD Scholarship for Fall 2014.
- Alex Gertner received the Kerr L. White and Edward H. Wagner Scholarship in Health Care Research.
- Elliott Robinson was elected for a Travel Award to the National Institute of Neurologic Disorders and Stroke (NINDS) Research Career Day at the NIH on April 24th, 2015.
- James Byrne and Elliott Robinson were elected to AOA this year.
- Kevin Mangum was awarded Best Poster at the UNC Annual Pathology Symposium, received the 2015 Katherine Pryzwansky Young Investigator Award, and received a Travel Award to Arteriosclerosis, Thrombosis, and Vascular Biology Conference 2015 in San Francisco, CA
- Julia Geddings was awarded the Gertrude Elion Mentored Medical Student Research Award in Spring 2014.
- Klara Klein was awarded the Gertrude Elion Mentored Medical Student Research Award in Spring 2014.
- Ayumi Nakamura has been selected to give one out of only two student oral presentations at the upcoming ASCI/APSA meeting in Chicago at the end of April. She also received a travel award to attend.
- Chris Giardina received a 2015 Graduate Education Advancement Board IMPACT Award for research benefitting the State of North Carolina.
- Patrick Lang received a 2015 Graduate Education Advancement Board IMPACT Award for research benefitting the State of North Carolina.
- Student Research Day 2015 awards: Chris Giardina (Scott Neil Schwirk Fellowship); Marybeth Anderson (Best Basic Science Poster); Ayumi Nakamura (Best Basic Science Oral Presentation); Chris Giardina (Best Clinical Science Oral Presentation); Nick Brazeau (Best Public Health Oral Presentation).



AAAS Roundtable

By: Will Jeck

In February, Jeff Federspiel and William Jeck joined Dr. Kim Rathmell and Dr. Terry Magnuson, Vice Dean for Research at UNC, in attending a roundtable discussion hosted by Duke University and the American Academy of Arts & Sciences on the topic of *Restoring the Foundation*. The discussion centered on creative approaches to combating the rising difficulties in biomedical research careers, particularly in light of the current funding environment. The meeting of roughly thirty participants was attended by Dr. Harold Varmus, then director of the NCI, Dr. Nancy Andrews, Dean of the Duke University School of Medicine, Dr. Sally Kornbluth, Provost at Duke University, and Mark Fishman, President of Novartis Institutes for Biomedical Research, in addition to several faculty, postdoctoral students and graduate students from sites around the country. Participants from different levels of training and careers discussed the history and causes of the current funding crunch and spoke to possible solutions. Of particular interest was the discussion on how to make a fixed level of funding go farther. This included increased commitment from clinical departments, more support for core-director track faculty, and more focus on sustainable funding to smaller labs. There was also pointed discussion on whether the current training pipeline is simply too large for the number of available careers. Throughout there was widespread agreement that substantial changes will be needed to adapt to a stagnant or slow growing funding pool if current trends continue, but with decided optimism that the scientific questions now before us are more exciting than ever and that it is essential to maintain a strong pipeline of young scientists entering careers in the life sciences.



TEC Curriculum

By: Alison Regan

Beginning in the fall of 2014, the “*Transitional Education at Carolina (TEC)*” curriculum was implemented by the UNC School of Medicine. The TEC curriculum was designed to transform the way medical students learn the art and science of medicine through integrated basic science and clinical skills blocks, longitudinal patient care experiences, and flexible clinical experiences that give them opportunities in specialty fields well before they apply to residency programs. In the TEC curriculum, students will transition through three main phases: (1) The Foundation Phase which is a 16-month period of foundational blocks that will integrate the teaching of normal and abnormal human conditions through case studies, clinical experiences and small group learning activities; (2) The Application Phase which is a 13-month intensive period of hands-on longitudinal clinical experiences; and (3) The Individualization Phase which is a 14-month or more period of clinical electives and career advising which should help students make a more informed decision, at an earlier time point, in choosing their future specialty. Our current first year MD-PhD students are the first to enter the TEC curriculum at the Foundation Phase. We are excited about the opportunity this new curriculum offers our students to complete the first 16-week block of longitudinal clinical training prior to entering the PhD phase.



2015 Medical Student Research Day

The 2015 UNC Medical Student Research Day was a great one for the School of Medicine and the MD-PhD program. Nearly 100 students from the UNC School of Medicine participated in Medical Student Research Day this winter; each of them was inducted into the John B. Graham Medical Student Research Society, which was established in 1987 to recognize and promote the research efforts of the student body at the UNC School of Medicine. Four of our very own MD-PhD students were given awards during the day: Marybeth Anderson – the Pillsbury award for the top basic science poster, Ayumi Nakamura – the Pillsbury award for the top basic science oral presentation, Nicholas Brazeau – the Pillsbury award for best public health oral presentation, and Christopher Giardina – the Pillsbury award for best clinical science oral presentation as well as the Scott Neil Schwirck fellowship, MD/PhD category, for overall medical student research.

We were also very fortunate to have Dr. Peter Agre, the Bloomberg Distinguished Professor at Johns Hopkins University, deliver this year's Landes-Merrimon Lecture as part of the day. Dr. Agre was awarded the 2003 Nobel Prize in Chemistry for his discovery of aquaporins. The MD-PhD program hosted Dr. Agre for a wonderful lunch, where students were able to discuss their research projects with him and ask questions about his career trajectory and success in research and medicine. Throughout the rest of the day, he continued to reiterate how impressed he was with our MD-PhD students and their research endeavors. Congrats to all who participated in Medical Student Research Day!



Iris

By: Lee Hong & Rashmi Kumar

Lee : Starting (or in my case, re-starting) an organization is certainly not an easy feat, given that we are all busy medical students. Despite this, the faculty and administration have been incredibly supportive of my vision to bring back IRIS, the literary and creative arts journal at UNC SOM. IRIS got started in the mid-90s by two medical students, who received submissions from students, faculty, and even patients reflecting on their experiences in medicine. We decided, for many reasons, to convert our journal to an online format and additionally accepted multimedia submissions. Our first edition had over 40 submissions from UNC SOM students, faculty, and staff ranging from poetry to photography, essays to paintings. This year, we've expanded our presence on campus by hosting two workshops, a painting class and a poetry/spoken word event at Linda's Bar and Grill on Franklin Street. As I've watched IRIS continue to grow, I couldn't be prouder of the hard work my fellow medical students and I have invested in bringing back a forum for celebrating medical humanities at UNC. Check out our website at med.unc.edu/iris - you'll be glad you did!

Rashmi: Being a part of IRIS has been a way for me to use the English Lit degree that I was sure would collect dust once I got to med school. Thankfully, having an incredible arts and literary journal such as IRIS at UNC really enables me to not only use those skills but to tap into my humanities side in general. As an artist, it's been great to introduce events like Wine and Design night or Poetry Slam lunches to med students because it's a creative outlet for expression. As a medical student, it's wonderful and humbling to see the vast amount of talent our school brings whether its in the arts or the sciences. IRIS is not just a literary magazine, it's an ode to all the emotions, the great memories, evocative questions, and artistic aspects of medicine.



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