



# UNCMD-PhD Newsletter

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## The Medical Scientist Training Program (MSTP): A Brief History and UNC's Recent MSTP Renewal

Both the NIH and its accompanying expansion of federal funding for biomedical research began to grow dramatically in the 1950s. These changes led medical schools to expand the size of their faculties, primarily by identifying and then recruiting investigators who would be able to compete for the federal research grants that were becoming increasingly available at that time. As the medical schools sought these new recruits, it soon became apparent that many of the best and most attractive candidates were individuals who had been trained as both clinicians and scientists. Based on this observation, medical schools began to implement combined-degree (MD-PhD) training programs that would help to turn out more of these "Physician-Scientists." In developing such MD-PhD Programs, however, their goals were not simply to increase the number of Physician-Scientists, but also to employ these programs to attract to their schools of medicine the best and most talented students, particularly those who were interested in and committed to academic, research-oriented careers. The initial support for these programs came largely from institutional funds. However, the NIH soon recognized the importance and long-term benefit of the graduates from these programs and therefore developed what came to be referred to as the Medical Scientist Training Program (MSTP). The purpose

of the MSTP Training Grants (T32 awards) was to provide to the schools that successfully competed for these grants, the funds necessary to support their combined-degree trainees.

This year (i.e., 2014) represents the fiftieth year since the NIH first began to fund the MSTP grants. From the inception of the MSTP program, these awards have always come from the National Institute of General Medical Sciences (NIGMS). In 1964, NIGMS made MSTP awards to the first 3 institutions (Albert Einstein, NYU, and Northwestern), and today NIGMS supports a total of 903 students located at the 45 current MSTP institutions. There are also roughly an additional 75 medical schools that do offer opportunities for MD-PhD training, but are not presently supported by an MSTP training grant from NIGMS. This summer, the NIGMS is celebrating the fiftieth anniversary of the Medical Scientist Training Program. Here at UNC, we are delighted that Jeff Federspiel, one of our students who in 2013 completed his PhD in the School of Public Health and is now a third year medical student, has been invited to give a plenary presentation at the MSTP anniversary celebration. Jeff's presentation is entitled:

*(Continued on page 2)*

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*"Methodological and Applied Questions in Outcomes Research: An MSTP Journey."* Obviously, we are all extremely proud of Jeff who is one of only two MSTP students from throughout the country who have been invited to make plenary presentations at the anniversary

celebration of the Medical Scientist Training Program.

At UNC, the primary goal of our MD-PhD Program is to identify, recruit, and then train talented men and women who aspire to become physician-scientists, all fully capable of bridging the gap between basic science and clinical medicine. It is our expectation that these individuals would subsequently go on to become the next generation of leaders in biomedical science, thereby making significant contributions to and improvements in human health. At the same time, we expect that our trainees will also become teachers and scholars not only at many of the best medical schools, but also at major research institutes and leading organizations in the biomedical and pharmaceutical industry. We achieve our goal by focusing on UNC candidates from diverse backgrounds who bring with them a great variety of academic and research interests. Once here, these students find not only a strong education in clinical medicine, but also one that is well integrated with a wide variety of superb research opportunities.

UNC's initial MSTP grant was awarded in 1999, and was subsequently renewed in 2004, 2009, and most recently in 2014. In this latest renewal, the reviewers were extremely enthusiastic about our application. They awarded us an exceptional Impact/Priority Score of 20, and they identified a number of major strengths in our program. A few exam-

ples of these strengths included the following: 1) a well-written and well-organized application from a very strong program; 2) the faculty are excellent; they are well funded and there is a good mix of junior and senior faculty; 3) the two co-directors have well defined responsibilities and they are a major strength of the program; and 4) the students are outstanding; they have good publications, they have excellent outcomes, and they have a large number of funded F30 fellowships. In summary, the reviewers concluded that ours was an extremely strong application, one that came from an excellent program.

Finally, it is worth noting that of the 71 individuals who have graduated from our program since it was first funded as an MSTP in 1999, 27 are currently residents in training, 15 are post-doctoral fellows, 26 are faculty members at many of the best institutions all across the country, and only 3 are in private practice. Based on these outcomes, and on the impressive accomplishments all of you continue to make (many of the recent ones are detailed throughout this newsletter), it is clear that we are succeeding in our goals, and we are therefore extremely proud of our students and their representation of physician-scientist training at UNC.

**Eugene Orringer, MD  
Professor of Medicine  
Director, UNC MD-PhD  
Program**



**Marcus Basiri**  
*Boston College,*  
*2010*

*Major:* Biochemistry

*Research Interests:*  
Cell biology and evolution. I find centrosomes and cilia pretty interesting.



*Favorite Kesha song:* Blow

*Interesting Fact:* My father is from Iran, my mother is from Puerto Rico, and I was born in Minnesota.

**Elizabeth (Izzy) Brassfield**

*Washington and Lee University,*  
*2013*

*Major:* Biology and Philosophy

*Research Interests:* I plan to pursue my PhD in philosophy, and I'm interested the roles of patient and physician autonomy in bioethical issues.

*Favorite Kesha Song:* Gold Trams Am

*Interesting Fact:* I am a certified elephant trainer.



**Sherry (Hui Xiao) Chao**

*National Taiwan Univ & MIT,*  
*2012*

*Major:* Physics

*Research Interests:*  
Evolutionary systems biology



*Favorite Kesha Song:* Last Goodbye

*Interesting Fact:* I've been an Arizona state resident for more than 20 years, but have lived there no more than two months.

**Alex Gertner**

*Princeton University,*  
*2010*

*Major:* Anthropology & Global Health Policy

*Research Interests:* Social determinants of health, human rights, global health, mental health, and health systems.

*Favorite Kesha Song:* Grow a Pear

*Interesting Fact:* My family moved to the US from Brazil when I was eleven years old. The most exciting consequence for me was discovering that I had suddenly gone from being one of the worst soccer players in my school in Brazil to a local sports star.





# The MS1 class

**Anna Kahkoska**  
*Syracuse University, 2013*

*Major:* Biochemistry  
(Anthro minor)

*Research Interests:*  
Molecular pharmaceuticals and toxicology



*Favorite Kesha song:* Thinking of You

*Interesting Fact:* I have a twin sister who just graduated from Northwestern University and moved to NYC to pursue a career in musical theater.

**Prateek Katti**

*University of Massachusetts Amherst, 2012*

*Major:* Chemical Engineering, Biochemistry, and Molecular Biology



*Research Interests:* Medical applications of chemical engineering: transport & tissue engineering.

*Favorite Kesha Song:* Your Love is My Drug

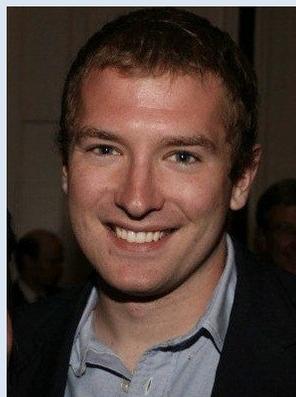
*Interesting Fact:* Nigiri & sashimi are some of my favorite things to eat, but I can't tolerate fried, grilled, or broiled.

**Shan McDonell**

*Rice University, 2012*

*Major:* Biochemistry and Cell Biology

*Research Interests:*  
The impact of nutrition in disease



*Favorite Kesha Song:* We R Who We R

*Interesting Fact:* I grew up in a small town with the world's greatest water-park, worked there, and totally hated it.

**Christof Smith**

*U. Michigan—Ann Arbor, 2013*

*Major:* Chemistry

*Research Interests:*  
Drug delivery, nanotechnology, and cancer biology



*Favorite Kesha Song:* Dinosaur

*Interesting Fact:* I am a proud owner of a chinchilla.



# Advocates for MD-PhD Women in Science

*There's a problem with a gender mismatch and it's not going away by itself. So Audrey Verde and Kate Hacker have taken it upon themselves to help solve the problem—women's groups. Actually for men and women. Here, we ask them a bit about it.*

## When did you become passionate about this topic?

**AUDREY:** In fourth grade my teacher held me and all of the other soccer players back at lunch. She announced to everyone that I was no longer allowed to play soccer at lunch with them because I was a girl. She continued to say that the correct place for girls was on the sideline cheering the boys on, not to be on the field playing with the boys. I was horrified and shocked, and all of my fellow soccer players protested. So I knew that they felt how wrong the situation was just as much as I did. My teacher threatened me with after school detention if she saw me playing soccer again and dismissed us all to lunch. Naturally, I immediately went out and played soccer. I was given after school detention but ignored it and went home instead. I told my parents that evening what had happened at school and they were outraged. They immediately went to the school to meet with the teacher, and by the end of the school year, the teacher was fired. From that day forward it was clear to me that there were people out there that would tell me that I could not do something because I was female. Luckily I have parents who always told me that I can do anything I want so long as I work for it, and not to listen to those who tell me otherwise.

I also took a course in undergrad called Psychology of Gender which is where I first became aware of gendered language and how it is everywhere in our vocabulary and how it can shape the minds of our children. How gender roles in children books, toys, movies, TV ads can all indirectly tell children what future careers are available to them and which ones are not. This was revisited in med-

ical school with safe zone training, when I again was made aware of how gendered language can make one feel alienated. And the final call to action was when Dr. Belger gave her talk at the retreat last year. I had always known that women were paid less and that there were fewer women faculty, but I had no idea that the difference was so large. Hearing the statistics she quoted was the final straw for me. You can be outraged by disparities, but nothing will change without action. So, it is time that these differences are addressed and changed.

**KATE:** I actually became passionate about this issue very recently. Having grown up with four sisters and no brothers, I was never told that I couldn't do anything simply because I was female. Furthermore, my first exposure to research in college was through Dartmouth's Women in Science Project, whose mission is to "create a learning environment where women can thrive in science, engineering, and mathematics." Despite the fact that WISP was started to address under-representation of women in scientific fields, I didn't fully realize the magnitude of these inequalities; I was simply happy to have a paid research position as a freshman undergraduate. As I progressed through undergraduate and graduate school, I constantly heard people talking about inequalities that exist between sexes in academia. As a result, when I was approached last year by an MD/PhD student from John Hopkins asking if we had a women's group within our program, I became intrigued by the idea. Finally, the appalling statistics that Dr. Belger presented at the retreat last year were the last straw that prompted me to delve further into the issue: the sur-

prise and outrage that Audrey and I felt after researching the matter led us to start this group to bring light to these issues and try to help provide women with the tools for a successful career in academia.

## In your minds, what would be the ideal result(s) to come from your group?

We will consider this group a success if we bring attention to this issue, kindle discussion, and enable women to challenge the current situation. There are many people out there who think that a difference in treatment does not exist, that discrimination doesn't happen, and that this concern is a thing of the past. We aim to educate our peers on the facts and enlighten them to the fact that this discrimination exists in many ways and hinders women in all types of careers. Awareness of the situation stimulates thought, thought will elicit discussion, and through discussion we will hopefully discover solutions.

## Do other MD/PhD programs have a similar group?

Yes. The idea for creating our group actually began last year when an MD/PhD student at Johns Hopkins University contacted Kate asking if our program had a women's group. In addition to JHU, U. Penn, U Pitt, Minnesota all have established groups. Furthermore, Cornell, Rockefeller and Sloan-Kettering have a joint group and Harvard/MIT has a less formal group. Additional groups may exist as well, but we have not yet found them.

## You're both getting closer to returning to medical school—do you expect to encounter similar problems on the wards?

Yes, gender bias permeates through all aspects of our society.

### Where do you see yourselves in ten years from now?

**AUDREY:** I see myself working at a research hospital similar to UNC, where there is a medical school and a graduate school. Administratively I would like to be involved in creating a program, if one does not already exist, that makes it easier for MDs and PhDs at the same institution in the same field to be aware of each other's research and to help form collaborations when research interests align in the lab and the clinic. Research wise, I would like to continue to investigate how neuroimaging techniques can be used to characterize disease, predict treatment outcomes, and analyze treatment response. Clinically, I am trying to decide between Neurology and Neuroradiology. I think 3<sup>rd</sup> year will help shed light on which specialty will fit best for me.

**KATE:** Having seen so many of my colleagues change their minds during third year of medical school, it's really hard for me to definitively answer this question having not done my clinical rotations yet! Currently, I'm interested in pursuing training in pediatric hematology-oncology at a research institution and continuing investigating how genetic alterations can be targeted to more effectively treat cancer.

### Advice other women in our program, or for those thinking about joining an MD/PhD program?

We encourage everyone in our program and otherwise, to educate yourself on this issue. Please read the articles we have posted on our webpage. Pay attention to the use of gendered language and gendered expectations. Speak up when you feel something is handled

inappropriately. Come to our events, be a part of the discussion, and take the discussion back home to your friends and family. We have waited for generations for sexism to "die out" and that has not worked. Changing the status quo will mean reframing institutions and societal expectations. So let's start now to find a solution, so our children will not have to deal with the bias and discrimination we and past generations have had to live with.

### Other thoughts?

Our website can be located here: <http://uncadvocatesformdphdwomenin-science.web.unc.edu>

On our website you can find a list of our events during the past year and our upcoming events. Unfortunately, although we remind each other before each event to take pictures, we have not done so effectively as we are both involved in running each event. Hopefully we can designate someone as a photographer for the upcoming events.

## Upcoming Events

- **April 2014:** Business meeting
- **May 3, 2014:** Southeast Symposium for MD/PhD Women in Science
- **June 2014:** Alumni Panel

## Book clubs:

- **April 2014:** *Unbowed: A Memoir* by Wangari Maathai and *Seeds of Change* by Jen Cullerton Johnson
- **July 2014:** *Cantor's Dilemma* by Carl Djerassi



*Audrey and Kate with Chancellor Carol Folt and their recent University Award for the Advancement of Women*

## Match results 2014

<b>Isaac Chan</b>	<i>Internal Medicine</i>	<b>Boston University</b>
<b>George Chao</b>	<i>Radiation Oncology</i>	<b>University of Pennsylvania</b>
<b>Jason Goldsmith</b>	<i>Internal medicine</i>	<b>University of Michigan</b>
<b>Katy Liu</b>	<i>Preliminary Year</i>	<b>Eastern Carolina University</b>
<b>Katy Liu</b>	<i>Ophthalmology</i>	<b>Duke University</b>
<b>Justin Low</b>	<i>Neurology</i>	<b>University of Washington</b>
<b>Alex Raines</b>	<i>Med/Peds</i>	<b>Brown University</b>

## Recent F30 Awards

(There are currently 24 funded F30s in the program)

<b>Julia Geddings</b>	GS3	Microparticle Docking in Pancreatic Cancer Induced VTE	NHLBI
<b>Michael Iglesia</b>	GS3	The Role and Clonal Diversity of Tumor-infiltrating Lymphocytes in Breast Cancer	NCI
<b>Klara Klein</b>	GS3	Decoy Receptors in Lymphangiogenesis	NHLBI
<b>Nick Taylor</b>	GS4	Immunotherapy of the Basal-like and Claudin-Low Intrinsic Breast Cancer Subtypes	NCI
<b>Perry Tsai</b>	GS3	Investigating graft-versus-host clearance of HIV-infected cells in vivo	NIAID

<b>Meagan Deming (Bolles)</b>	Evaluations of Severe Acute Respiratory Syndrome Coronavirus Therapeutics and a Viral Capacity for Plasticity and Escape	Microbiology & Immunology
<b>Dustin Bosch</b> <b>Chris Dibble</b>	Elucidating G protein signaling in <i>Entamoeba histolytica</i> Defining the Cerebral Cavernous Malformation signaling network in endothelial cells	Pharmacology Pharmacology
<b>Michael Durando</b>	Novel Mechanisms through which translesion synthesis protects genome integrity	Pathology
<b>James Green</b>	Organization and Function of Molecular Domains in Myelinated Neurons	Cell Biology & Physiology
<b>Tom Jarrett</b>	Role of Rodent Vocalizations in Cocaine-Induced Maternal Neglect	Neuroscience Curriculum
<b>Will Jeck</b>	An Investigation of Circular RNAs on a Genome-Wide Scale	Genetics & Molecular Biology
<b>Patricia Lenhart</b>	A Novel Receptor/ Modifying Protein Interaction and its Role in Sex Differences in Cardiovascular Disease	Cell Biology & Physiology
<b>Ryan Phillips</b>	Development of a Novel Assay of Protein Tyrosine Phosphatase Activity in Single Cells Using Capillary Electrophoresis	Pharmacology
<b>Reid Roberts</b>	Programming Immunity with Biocompatible Devices to Treat Human Disease	Microbiology & Immunology
<b>Anne Starling</b>	Perfluoroalkyl substances in pregnancy and the risk of preeclampsia	Epidemiology
<b>Erin Steinbach</b>	Macrophage Phosphoinositide 3-kinase p110 $\delta$ Regulates Intestinal Homeostasis by Directing Adaptive Immunity and Enhancing Microbial Clearance	Microbiology & Immunology
<b>Kate Hacker</b>	Investigating the role of SETD2 mutations and H3K36me3 loss in clear cell renal cell carcinoma	Genetics & Molecular Biology

## Congrats to recent PhD defenses!!!



## Other Awards

- Perry Tsai was awarded the James Slayton National Award for Leadership Excellence from the American Medical Student Association (March 2013).
- Perry Tsai was elected to the Board of Trustees of the American Medical Student Association as Vice President for Program Development (March 2014).
- Chris O'Connor won the Young Investigator Award, 2013 Osteoarthritis Research Society International World Congress, Philadelphia, PA. (April 2013)
- Chris O'Connor won 2nd Place in the PhD Student Paper Competition, Cell Mechanics and Tissue Engineering, 2013 ASME Summer Bioengineering Conference, Sunriver, OR. (June 2013)
- Christian Parobek was awarded the Ben Kean Travel Award from the American Society of Tropical Medicine and Hygiene (Sept 2013).
- Julie Geddings was awarded Katherine Pryzwansky Young Investigator Award through the Department of Pathology (January 2014).
- Casey Rimland received a Gates Foundation Award (January 2014)
- Audrey Verde received the student University Award for the Advancement of Women (March 2014)
- Audrey Verde won the Abstract Travel Award for the 2014 Organization of Human Brain Mapping (OHBM) Annual Meeting in Hamburg, Germany (June 2014).
- Kate Hacker & Nick Taylor both received travel awards to the 2014 ASCI/AAP/APSA Annual Meeting to be held April 25-27, 2014 in Chicago, Illinois.
- Erin Steinbach was awarded the P.E.O. (Philanthropic Education Organization) Scholar Award, 2013.
- Jeff Federspiel was inducted into AOA and was also selected to talk at the upcoming 50th Anniversary celebration of MSTP training at the NIH (July 2014)
- Morgan Goheen was awarded the UNC Institute for Global Health and Infectious Diseases Explorations in Global Health grant to fund a project in The Gambia.
- Christopher Giardina (GS2) along with his PI, Doug Fitzpatrick, and clinical advisor, Oliver Adunka, won one of four SOM Center for Innovation's \$50K Innovation Pilot Awards
- Klara Klein (GS3) won the Scott Neil Schwirk Fellowship Award at Student Research Day in January
- Andrew Morgan (GS2) won the Harold Pillsbury Student Research Award for Best Basic Science Oral Presentation at Student Research Day in January
- Alex Gertner (MS1) won the Michiko Kuno award for recognition of excellence in research at Student Research Day in January
- James Byrne won a \$2,500 Seed Grant from the American Medical Association (2013)
- Kate Hacker and Audrey Verde won the Gertrude Elion Mentored Medical Student Research Award, 2013
- Patricia Lenhart, Reid Roberts, and James Byrne were Graduate Education Advancement Board IMPACT Award winners for 2013
- The UNC Advocates for MD-PhD Women in Science were awarded a \$5,000 grant from the Burroughs Wellcome Fund for their Southeast Regional Symposium.



# Kim's Sabbatical

*Kim updates us on her adventures in Switzerland*

Grüezi! Ciao! Bonjour!

Greetings from Basel, Switzerland! We are settling in here, or as the elevator in our apartment building wishes us: “having a successful integration” (which seems a little like the assimilation into the Borg, but we’re going with it...). I am happy to report we are doing well. But what else could we expect? We are now official residents of the city (in a process that took passport, birth certificate, marriage certificate, proof of employment, proof of address, and an in person interview in the city office). Basel is a tremendously global city, owing to the presence of several large pharmaceutical companies (Novartis, Roche, Bayer, Syngenta) and other major corporations (Nestlé, etc), as well as proximity to France and Germany. From our apartment we can walk into either country in under 15 minutes. I’m working on my German, but everyone here speaks English, and French, and Italian...

Since my daughter’s school started off with “Ski Break”, our first week was all holiday, getting to see the many parades of Fasnacht, scoot-

ering our way down a local mountain, and a trip skiing at Zermatt-under the Matterhorn. Our apartment is convenient to the Friedrich Miescher Institute (<http://www.fmi.ch>), where I’ve found a bunch of interesting labs to work with, and they host a weekly seminar series I can attend. Although I knew they were here in Basel, I had no idea where and found the institute one of the first days just walking in search of a grocery store! To find some quiet places to work besides my apartment, I found and joined the Allgemeine Lesegesellschaft (<http://www lesegesellschaft-basel.ch>). This ancient “Reading Society” has been a part of Basel academic culture for hundreds of years, and has a cool old building stuffed with books (but also good WIFI signal) overlooking the banks of the Rhine. You can picture me there, trying to make sense of genomic datasets. There is also a great coffee culture here, so I am in good hands, and also found a terrific coffee shop with free WIFI. So, I’m still online and available most of the time, so don’t hesitate to contact me. And

if you are in Europe this summer, let me know!

We’re having a fantastic time, and I miss all of you in the Program! I’m enjoying this much quieter life, but looking forward to picking up a little more action in the fall, with new students, a new curriculum, and catching up with all of you!

Tschüss,

Kim



*Top: Scooter down from Wasserfallen in Reisgoldswill. Middle: Fasnacht parade. Bottom: Skiing at the Matterhorn.*



# UNC-Duke Tobacco Road Symposium

By: Patrick Taus and Chris Dibble

On November 4<sup>th</sup> 2013 the UNC and Duke Medical Scientist Training Programs got together for the Tobacco Road Medical Research Symposium on the campus of UNC-Chapel Hill. The day featured poster and oral presentations from



events and afterwards at a reception at the Top of the Hill Restaurant's Backbar.

This event was made possible with the generous support of the UNC and Duke MD-PhD programs and the Kenan-Biddle Partnership, a

students of both programs and was headlined by a keynote talk from Dr. Robert Lefkowitz, Nobel Laureate and Duke Professor of Medicine. Dr.



grant provided through the two universities. The grant also provided the opportunity to have for two joint night time seminars with the Duke MSTP

Lefkowitz's talk featured important career advice to students, as well as a fascinating inside look at an event we all hope to attend one day, the Nobel Prize Award Ceremony. Most importantly, students in the two programs made numerous professional and personal connections during the day's



students earlier in the year. We are hoping for this UNC-Duke collaboration to continue and are looking for students to take over leadership our side of the joint-partnership. Email Chris, Patrick, or Brooke if you are interested or have any questions.



# 2014 Medical Student Research Day

By: James Byrne

The 2014 UNC Medical Student Research Day was a great one for the School of Medicine and the MD-PhD program. More than 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. Three of our very own MD-PhD students were given awards during the day: Andrew Morgan – the Pillsbury award for the top basic science oral presentation, Alex Gertner – the Kuno award for the best overall public health presentation, and Klara Klein – the Scott Neil Schwirck fellowship for medical student research.

We were also very fortunate to have Dr. Victoria Fraser, the Adolphus Busch Professor and Chair of the Department of Medicine at the Washington University School of Medicine in St. Louis, deliver this year's Landes-Merrimon Lecturer as a part of the day. She gave an inspirational talk that focused upon preventing and controlling nosocomial infections, adverse events, and medical errors (her work was recently published in the *New England Journal of Medicine*). The MD-PhD program hosted Dr. Fraser for a wonderful lunch, where students were able to discuss their research projects with Dr. Fraser and ask questions about her career trajectory and success in research and medicine. Throughout the rest of the day, she continued to reiterate how impressed she was with our MD-PhD students and their research endeavors. Congrats to all who participated in Medical Student Research Day!



## IRIS

By: Lee Hong

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](http://med.unc.edu/iris) - you'll be glad you did!

## Doug's Ironman

This past October (10-26-13), Doug successfully completed the PPD Beach 2 Battleship Ironman Triathlon. He competed while raising funds for the Boomer Esiason Foundation, a cystic fibrosis support organization that promotes the power of exercise in managing CF. In finishing the race, he became the first person with a severe form of CF to ever complete an Ironman without having a lung transplant, and is now one of only four people with CF world-wide who have ever finished the 140.6-mile race. In the process, he also raised nearly \$30,000 for the BEF, and wishes to extend his deepest thanks to all those in the MSTP that contributed or supported his efforts.

## Engagements/Weddings

- Casey Rimland got engaged to Aaron Cohen in June 2013.
- Ayumi Nakamura got engaged to Vijay Swahari in July 2013
- Christian Parobek married Bisset Lee on September 22, 2013
- Meagan Bolles married Damon Deming on Oct 22, 2013.
- Kelly Gewain is getting married to Ryan Orgel in May 2014.
- Michael Clark is getting married to Stephanie Glass in July 2014.
- George Chao will marry Katie Eckert in November 2014.
- Ejiolor Ezekwe got married to Nicole Robinson on November 8<sup>th</sup>, 2013.

## Babies

- Alex Raines welcomed Elenora Landreth Raines on May 27th, 2013.
- Jason Goldsmith welcomed Logan Rosenbaum Goldsmith on 10/31/2013.
- Rushina Cholera welcomed Kian Shaan Delera on February 11, 2014

## 2014 Applicant Pool

<i>Total # Applicants:</i> .....	<b>337</b>
<i>Total # brought to committee:</i> .....	<b>180</b>
<i># of Applicants Interviewed:</i> .....	<b>50</b>
<i>Average MCAT (all applicants):</i> .....	<b>34</b>
<i>Average MCAT (interviewed applicants):</i> .....	<b>36</b>
<i>Average GPA (all applicants):</i> .....	<b>3.75</b>
<i>Average GPA (interviewed applicants):</i> .....	<b>3.81</b>



## (recent) References

- Taylor SM, **Parobek CM**, Aragam N, Ngasala BE, Mårtensson A, Meshnick SR, Juliano JJ. Pooled deep sequencing of *Plasmodium falciparum* isolates: an efficient and scalable tool to quantify prevailing malaria drug-resistance genotypes. *J Infect Dis*. 2013 Dec 15;208(12):1998-2006.
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