The sixth annual MSTP retreat took place this year on August 11th at the Mount Washington Conference Center. As the unofficial start of a new academic year, the MSTP retreat has grown to be one of the most highly anticipated events in our program each year. This year’s retreat proved to be no exception. In addition to providing an opportunity for students from every stage of the program to gather and interact, the retreat offered a unique glimpse of both where the program has come from and where it is headed.

The morning session began with Dr. Donnenberg and Dr. Keegan introducing the twelve new members of the MSTP. They acknowledged some of the accolades of this incoming MSI class, the program’s largest and most impressive to date. They also highlighted some of the exciting new changes to the program, including our collaborations that allow interested students to complete their PhDs through the Graduate Partnership Program at the NIH or through the Fischell Department of Bioengineering at University of Maryland, College Park. The directors also announced some changes made to help streamline the PhD portion of the program, part of a national trend towards shortening the average completion time for MD/PhD training. Dr. Neda Frayha also gave a brief talk about her role as a liaison between the MSTP and the Office of Student Affairs in the School of Medicine.

Following Dr. Frayha’s talk, Dr. Ramin Parsey gave an engaging keynote address. Dr. Parsey is a 1994 graduate from the Maryland MD/PhD program, and one of several alumni from that era who were present at the retreat. Dr. Parsey told the story of his career path, how he was influenced to pursue a dual degree by Dr. Stephen Max, why he chose psychiatry as a specialty, what led him to go into imaging research, and finally, how he ended up at his current position as chair of the psychiatry department at Stony Brook University Medical Center. Consistent throughout Dr. Parsey’s talk was the idea that whenever opportunities present themselves, “the answer is always yes.” He also expressed his belief that the unique skill set acquired through the MD/PhD training means that there will always be a role for MD/PhDs, especially in the modern landscape of large, multi-person collaborative studies. Dr. Parsey also highlighted some of his groundbreaking research on depression and the identification of biomarkers.

(continued on page 8)
DIRECTOR’S DECREE

There’s a lot on my mind right now, so this issue’s column lacks a coherent theme. So be it.

I must start by welcoming, one last time, Michael Kessler, MS I to the mstp Director family. Carolyn Rosinsky, GS I and Ilia Baskakov, PhD, have been working diligently to update it, and have resolved to start over. In the meantime, we have made some quick changes. This is an issue that vexes all programs. This is an issue that vexes all programs.

I have lately been thinking about how to keep our MS and MS4 students more engaged in the program without adding to or compromising their busy schedules. This is an issue that vexes all programs. This is an issue that vexes all programs.

With Best Wishes,
Michael

DATES & REMINDERS

October 20, 2014 @ 12 PM
[HSFl Rm 341]
Translational Medicine: Topics with Carolyn Rosinsky, GS I

October 23, 2014 @ 12 PM
[HSFl Rm 341]
Molecules to Medicines with Michael Kessler, MS I

October 23, 2014 @ 5 PM
[HSFl Rm 341]
Clinical Case Studies with Gary Plotnick, MD

October 27, 2014
NII Site Visit

October 30, 2014 @ 12 PM
[SMP Rm 221]
Molecules to Medicine with Ilia Baskakov, PhD

November 4, 2014 @ 1 PM
[Hippodrome Theater]
White Coat Ceremony

COUNCILCORNER

The Student Council met shortly after the annual retreat and the external advisory committee’s site visit to kick off the academic year and to discuss issues that were brought up by committee members Dr. Joseph Barbieri, Dr. Terence Demodry, and Ms. Leslie Harrington.

Here are some discussion points and goals:

PROGRAM-SPECIFIC MEETINGS

Students will be grouped according to their programs (or potential programs) and have meetings to address students’ needs, i.e. qualifying exams, program graduation requirements, and paperwork items for each program. Especially at various transition stages. We also hope to establish program-specific liaisons for MSNs and MSs who are considering different programs.

IDPs

A survey will be created to receive feedback on the IDP form after all students have completed their first round of meetings with the directors.

CLINICAL LONGITUDINALS

There is thought among the students that the current clinical longitudinal rotation criteria are too stringent and not flexible enough. This was a topic of discussion for the incoming year, and the Council hopes to send out a survey to receive feedback from students soon.

MS I NEW MEMBER

The first year class elected their new MISTP representative—Michael Lee—so please feel free to contact him if you have any issues that you would like the Student Council to address.

WEBSITE

A video of our program will be posted on the MISTP website.

SOCIALS

Please let any one of your Student Council representatives know if there is anything you would like to do with the MISTP family. Other than Jess Shi’s favorite happy hours, we would like to have activities that engage all students in the MISTP.

DIRECTOR’S DECREE

Autumn 2014

 effect of MISTP designation can be best seen at the level of recruitment: In 2009, prior to receiving MISTP designation, 90 students applied to the program. In 2014, the applicant pool increased to 21 students. Thus, with this grant application, our program aims to maintain our MISTP status as well as increase the number of funded research positions.

In advance of the site visit, Jane Bacon, our wonderful program coordinator, has requested that we remind you to not ignore her emails and turn in your NIH Biographies. In addition, please remember to update your Development Plans as Word Documents (thank you to those of you who have already done this). (continued on page 9)

Nicolás Dorsey, MS IV, was one of two students in the nation chosen to speak at the National Institute of General Medical Sciences MISTP 50th Anniversary Symposium at the National Institutes of Health on July 17, 2014. This was a Symposium to celebrate the 50th anniversary of the creation of the MISTP. Nicolás was chosen to give a talk based on her dissertation research. “I was truly shocked and honored. I have found scientific research to be a very enriching and humbling field that has taught me to find personal satisfaction in what I do. Accolades like this invitation for me to speak at such an integral event are rare and never expected, but always truly appreciated,” she explained, about being selected. For Nicolás, this event was one of the biggest talks she has given besides her thesis defense. She prepared by talking to Dr. Keegan, giving practice talks, and reviewing her thesis. Nicolás especially wanted to make sure she connected with the broad audience from various backgrounds. In addition, she wanted to represent MISTP students in a positive light. “I felt a lot of pressure to represent MISTP students in the best possible way because of the recent questions being raised by NIH about whether the creation of the MISTP had been a success and if it should be continued,” she said. Nicolás received great feedback from the attendees, including several MISTP directors and scientists. The experience was also a great source of motivation for Nicolás as she finished up her third year of medical school and prepared for residency applications. “It helped me to really think about the future steps I need to take to establish myself as a successful physician scientist.”

DORSEY SELECTED AS FEATURED SPEAKER AT NATIONAL SYMPOSIUM

Kristi Chakrabarti, GS II

 Nicolás Dorsey

SARAH ARBISSEON, MS I

JACKLINE LASOLA, MS I

The University of Maryland MD/PhD program is in the process of renewing its NIH T32 Medical Scientist Training Program grant. Thanks to everyone’s efforts, we have submitted the grant application and completed an external site visit. The final stage of the grant renewal process will be the NIH site visit on Monday, October 27th. The visit will be in the form of a teleconference and will take place from 9 am to 4 pm in the Bressler Building. The MISTP program has been renewed to the program, and renewal of our MISTP grant is a high priority for us as it signifies the quality of our program, staff, and students. The positive
During our progress through the MSTP, we may come to face daunting tasks that make the immediate future seem bleak. In these times, it's helpful to look to peers mentors or alumni who have gone through similar adversity and have come through on the other side. For this edition of “Alumni Spotlight”, I had the pleasure of interviewing Dr. James P. Nataro, Dr. Nataro was the first combined MD/ PhD student at Maryland, and was an integral part of the program's development under the guidance of the late Dr. Steven Max, Dr. Nataro is currently the Chair of Pediatrics at the University of Virginia School of Medicine (UVA), and the Physician in Chief at UVA Children's Hospital, and has held both positions since 2010. 

Congratulations on holding two top leadership positions at a great school! Could you talk a bit more about your role and/or responsibilities?

Thank you! As Chair of Pediatrics, I oversee over 100 faculty members, all of whom belong to either the general pediatrics or pediatric subspecialties, and approximately 500 non-physician personnel. I oversee more faculty, including both medical and surgical members, as Chief of the Children's hospital.

Yet, my administrative responsibilities are only a part of my duties. I still run an active lab and translational research program, and am fortunate to spend some time at home working on those goals. In addition, I see patients on the general pediatrics inpatient service and pediatrics infectious disease consult service.

Another big part of my role here is contributing to medical student development. I try to report daily and teach medical students on the wards once a week. Though there are many facets of my job here, I try my best to remain active in all areas, and try to be the best leader I can be.

Wow, that sounds like quite a lot. It's very encouraging to hear that alumni of our program have moved on to do really cool things. Could you tell me a little bit more about how you ascended the ranks after graduating from Maryland MD/PhD?

Well, after graduation, I completed my residency in Pediatrics at the Children's Hospital of Philadelphia (CHOP), and then my fellowship in Infectious Diseases at Johns Hopkins Hospital. Upon completion, I was hired to join the world-class Center for Vaccine Development at the University of Maryland School of Medicine in 1991, and I stayed there for 19 years. I was promoted to Full Professor in 1999, and Jay Pernam, who was the Chair of Pediatrics at the time, invited me to be Associate Chair for Pediatric Research. This was my first administrative appointment, and I decided to take it for two reasons: I wanted a chance to lead in an area that actually mattered to me, and also because I had the opportunity to work with someone I truly admired. Learning is done best from another human being, not by books or the internet. Wisdom + knowledge + experience, and the greatest opportunity in life is to work with someone who is truly wise. In Dr. Pernam, I saw someone with a love for, and skill in leadership, and someone who I wanted to emulate. Then, in 2001, feeling under-educated in the business of medicine, I decided to pursue an MBA. It took me 7 years to complete because I was only taking a couple of classes per semester, but I really loved it. Plus, I had the chance to sit down and do homework with my kids. I had a really cool job at the time. After I finished my MBA in 2008, I was offered the position of Vice Chair of Pediatrics by Dr. Steve Czinn, who had replaced Dr. Pernam as Chair. Soon after, I was offered my current job at UVA and have been here ever since. Charlottesville is one of the best places to live in the country. It is a large combined undergraduate and graduate campus that has a legendary feel to it. It is probably one of the best for clinical medicine, at least the essence of the discipline and how to think like a physician. In any case, when you are immersed in either the PhD or the MD portions of your training, always be fully present.

I think the knowledge you have for this question already, but if you had to do the MD/PhD again, would you?

Absolutely. In fact, if given the opportunity, I might repeat every single decision the same way during my career. I have to fight, however, very carefully choosing my residency and fellowship institutions. I now know that before you choose an institution, it’s very important to determine how you’re going to choose the institution (i.e. what characteristics you are looking for and how to assess them). Be realistic, be honest, and ask people you trust for advice.

The first time I applied this lesson to my career was when I had to choose between accepting a faculty position at Hopkins or Maryland when I finished my fellowship. Maryland made the right decision to come to Maryland. I was obviously attracted to the prestige of Hopkins, just as I was to the opportunity to be a faculty member at Hopkins for fellowship. So I called Paul Offit, who was my mentor at CHOP, for advice. He asked me “at which of the two institutions will your research be more productive?” The answer was Maryland, hands down, because of the opportunity to work at the Center for Vaccine Development, headed by Dr. Myron (Mike) Levine. The CVD, a realization of Dr. Levine’s vision, pioneered the nexus of clinical, translational, and basic science research, long before it became fashionable to do so. Plus, I had done my PhD there and I knew the disciplines they were interested in. I knew most of the faculty members. I felt it was altogether a much better fit for me.

If you have a personal life, make sure it’s supportive of your drive.

My wife is also a pediatric infectious disease specialist, and has been my biggest support and advocate at every step. You’ve got to make sure that you don’t abuse that privilege and make sure that it goes both ways (support your partner!). My wife has developed a yoga medicine curriculum at UVA that is now growing to the national level, and I’m very fortunate that we align so well together. I think my support of her passion for her work, and for the patients and families she serves.

I also have two daughters and two sons. My older three are into music, both at the high school and in high school and she’s very active in everything (opera, politics, field hockey, on and on...).

Well, Dr. Nataro, that’s all the questions I have for you today. On behalf of the MSTP, I want to thank you for taking your time with us, and it was a real pleasure having this chat with you!

Thank you too. I’m honored that you have deemed me worthy of being interviewed. Good luck!
ERIC KLONTZ: THE SUPERSTAR SWIMMER

Erik is great at juggling, both tennis balls and talents. He is an athlete, an academic, and a traveler, in addition to being able to juggle up to five tennis balls simultaneously. Erik is interested in studying antibiotic resistance and how it is affecting the current practice of medicine. We were lucky to attract him here with UMB’s strong infectious disease program. With the demands of medical school and graduate school, Erik’s juggling skills will undoubtedly be put to work here.

Originally from Bethesda, MD, Erik traveled all the way to Northfield, MN to attend Carleton College for his undergraduate studies. He was a chemistry major, with a focus in biochemistry. He was also a successful swimmer in college, earning All-American status. Fortunately for us, the cold winds of Minnesota helped push him back to his home state of Maryland. After graduating college, Erik had the opportunity to travel to Australia. During that trip, he traveled all 700 miles from Sydney to Brisbane... by bicycle. Erik stopped at the beautiful automer, MS. Erik helped push him back to his home state of Maryland. He was born in Silver Spring, MD, and is raised in Mt. Airy, MD. For undergrad, Tony travelled all the way to the University of Central Florida, where he studied in the department of Molecular and Microbiology. He was recruited through the National Merit Scholarship program, and while there, he was a member of the Burnett Honors College. We are lucky to have him back to his home state for his postgraduate training.

It is clear that Tony is truly a scientist at heart. Since a very young age, he has had a curiosity and passion for understanding how things work. It is clearly genetic, since there are multiple engineers in Tony’s family. While in college, he spent three years studying Schwann cells and myelination-related motility in a neuroscience laboratory. Tony is looking forward to trying to bridge the gap between patient care and research findings in his career as an MD/PhD. Tony has a wide range of hobbies, and he is always looking to take on new ones. He especially enjoys outdoor activities, like biking, fishing, and archery. Like many good scientists, he also experiments with homebrewing. We are looking forward to seeing what he cooks up next (both in his brewery and his career!)
that are able to predict both risk of depression and the likelihood that a patient will respond to treatment.

Also speaking in the morning session was Dr. Calvin Williams. A more recent graduate of the Maryland MSTP, Dr. Williams completed his internal medicine residency at Christiana Care Health System in Delaware and has since returned to Maryland to complete an Infectious Disease fellowship. He was able to provide a more recent perspective when addressing students’ questions on choosing a residency and fellowship. He also gave insight into how you can stay involved in research during your postgraduate clinical training. The remainder of the morning was comprised of student presentations by two of our own GSHI students, Grace Maldarelli and Haiwen Chen. Grace discussed her work in Dr. Donnenberg’s lab studying the structure and composition of the Clostridium difficile type 4 pilus. Haiwen gave an enthusiastic presentation on her work in Dr. Blanpied’s lab looking at differences between constitutive or stimulus-dependent neurotransmitter release.

Following lunch, students split up to attend several interactive break-out sessions. These sessions covered the full range of the MD/PhD experience, from an introduction to MSI all the way through residency planning. Of special note this year was a highly attended session led by Dr. Frayha that covered the M3 and M4 years, with a special focus how experience training during a time when the idea that you could be a clinical scientist. Their overarching advice was that it is important in your PhD to learn the tools that will help you succeed later, instead of trying to learn one specific trade to make a career. The retreat concluded with students, faculty, and alumni discussing the unanswerable number of questions about making career choices and how to decide which path is right for you. They also discussed the unpredictable nature of a career as a physician scientist. Their overarching advice was that it is important in your PhD to learn the tools that will help you succeed later, instead of trying to learn one specific trade to make a career. The retreat concluded with students, faculty, and alumni discussing the unanswerable number of questions about making career choices and how to decide which path is right for you. They also discussed the unpredictable nature of a career as a physician scientist. Their overarching advice was that it is important in your PhD to learn the tools that will help you succeed later, instead of trying to learn one specific trade to make a career. The retreat concluded with students, faculty, and alumni discussing the unanswerable number of questions about making career choices and how to decide which path is right for you. They also discussed the unpredictable nature of a career as a physician scientist. Their overarching advice was that it is important in your PhD to learn the tools that will help you succeed later, instead of trying to learn one specific trade to make a career. The retreat concluded with students, faculty, and alumni discussing the unanswerable number of questions about making career choices and how to decide which path is right for you. They also discussed the unpredictable nature of a career as a physician scientist. Their overarching advice was that it is important in your PhD to learn the tools that will help you succeed later, instead of trying to learn one specific trade to make a career. The retreat concluded with students, faculty, and alumni discussing the unanswerable number of questions about making career choices and how to decide which path is right for you. They also discussed the unpredictable nature of a career as a physician science.
CONGRATS!

DOCTORAL DISSERTATIONS

HEATHER WEID
NEUROSCIENCE
“The Orbitofrontal Cortex and Inferred Value: Neural Correlates and the Effects of Cocaine”

PATRICK KERNS
MOLECULAR MICROBIOLOGY & IMMUNOLOGY
“Development and Testing of Five-Subunit Biofilm Vaccine for the Prevention of Pulmonary Tuberculosis”

GRANT AWARD

GRADE MALDARELLI, GS III
received an F30

GPILS PHD SCHOLAR AWARD

GRADE MALDARELLI, GS III

MEDICAL STUDENT RESEARCH DAY

ORAL PRESENTATION
Natalie Hesselgrave, MS II - First Prize

POSTER PRESENTATION
Michael Lee, MS I - First Prize
Philip Smith, MS I - First Prize

PERSONALS

LATEY BRADFORD had a baby!
Everton Josell Bradford was born on June 6, 2014.

PUBLICATIONS


CONFERENCES


Kyle Wilson attended the 13th International Symposium on Dendritic Cells organized by the DC Vaccine Society in Tours, France and presented his abstract, “IKDC depletion enhances the rejection of established melanoma by TAA-specific CD4+ T cells” on September 14-18, 2014.

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