



MSTP NEWLETTER 2020-21

The official newsletter of
PiTT - CMU MTSP program

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DIRECTOR'S NOTE

As we top 100 students in our MSTP for the first time this June, I think of the tremendous power of such a cadre of outstanding minds--not only when everybody finishes training and gifts a world lucky to have them, but as a unique corps of thinkers and doers right now. We can all take pride in the academic accomplishments arising from students in this program where every person has nourished an environment of learning, comraderie and discourse.

I know that each student harbors the seeds for joy in discovery, and am equally amazed by the zeal with which students teach each other and frame academic, program-specific and outside initiatives to improve the world and the living of lives in their orbit. In this context, our program must continue to evolve and be the best possible on behalf our students and their potential.



Richard Steinman, MD, PhD



Every application essay speaks of the goal of enriching one's research from clinical observations and improving clinical care through one's research. While this is a great goal and compelling statement, in practice it is a rare fruit of serendipity. How can the MSTP proactively build the competencies necessary to make this happen?

Several new MSTP initiatives may facilitate this:

1. Incorporating case-based and team-based training exercises in MSTP classes that connect patient scenarios, health needs and research findings;
2. Planning MSTP rotation options at the Innovation Institute to deepen exposure to translation, and at a CTSI Implementation hub that moves translating research into practice at UPMC and public health settings;
3. Integrating foundational big data handling into our MSTP PD2 class;
4. Building off of the Clinical Reasoning Conferences that are now part of the LCC3 with partnered Investigative Reasoning Conferences that outline the most rigorous and promising path forward for basic and translational investigations;
5. Requiring every MSTP thesis to contain a section relating the thesis work to health and disease.

These are baby steps and we look forward to input from a new MSTP faculty student Strategic Planning Committee and a Curriculum Development and Evaluation Committee, as well as suggestions from any of our students and associated faculty.



We want our students to persist and flourish as physician scientists in the long-term. The biomedical environment that our trainees will confront is unclear but will favor individuals who are equipped to demonstrate “research plasticity”, including team science and collaborative skills. Building these skills may rely on a curriculum and initiatives such as those described above. But it also depends on learning in an environment that values wellness and that supports students to build a future aligned with their passion.

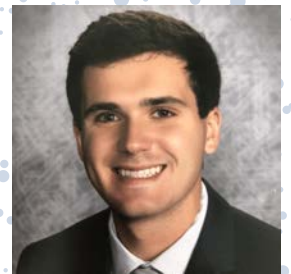
We are eager to support students in being resilient and adaptable, in managing time well and in setting strategic and personalized goals. The MSTP is continuing to build its investment in professional career coaching sessions for students; in addition to offering sessions to all G2 and MS4 students, we can consider student requests for coaching at other times as needed (contact the MSTP office for a request form).

The past year has been extraordinarily challenging. Both the pandemic and racial justice needs underscore that we live at a time that calls out for all of the brains, heart, and commitment so manifest in you and your colleagues. I am excited to see you move toward meeting these challenges.



CLASS OF 2020

Welcome!



We are delighted to have 15 new matriculants next month who will be introduced in the next newsletter!

Isabel Bleimeister

Nathalie Chen

Maria Chroneos

Jacob Gillis

Anna Kirillova

Brandon Lehrich

Michael Leone

Anna Li

Jack Little

Varun Mandi

Rumana Rashid

Ankit Sharma

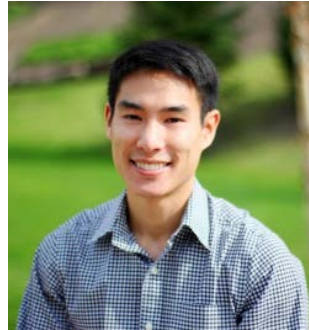
Sean Sweat



MSTP Graduating Class of 2021



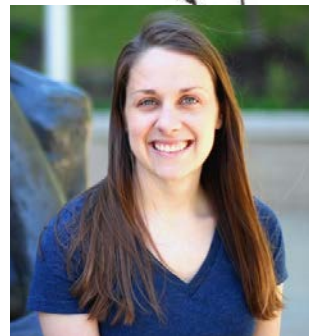
Patricia Castillo dela Cruz
PEDIATRICS
University of Washington
Affiliated Hospitals
(Research Track)



Michael Chiang
PHYSICAL MEDICINE AND
REHABILITATION
Harvard Spaulding
Rehabilitation Hospital

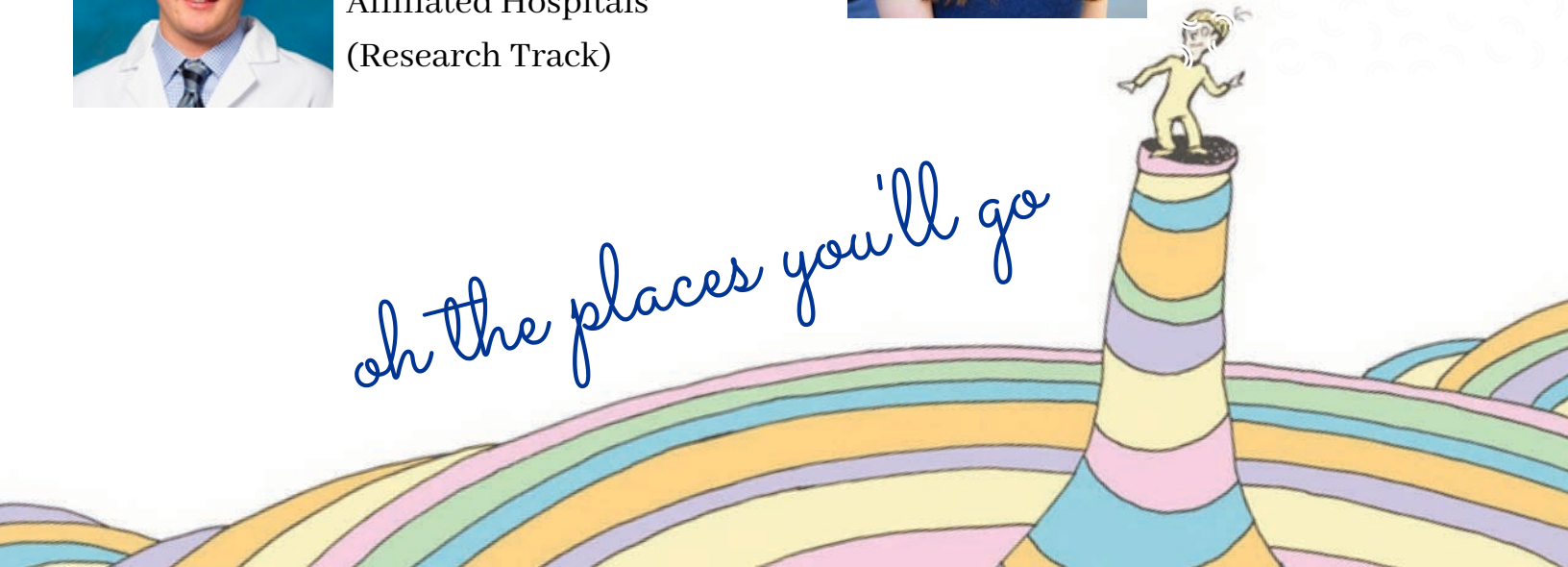


Elliot Collins
PSYCHIATRY
University of Washington
Affiliated Hospitals
(Research Track)



Colleen Judge-Golden
OBSTETRICS &
GYNECOLOGY
Duke University Medical
Center

oh the places you'll go





Sonnet homage to the MSTP Graduating Class of 2021

Richard Steinman, Director



When hippopotami butt heads the sound
is soft compared to the acclaim that you
deserve, explosive birthing of astound—
you may not hear (too humble) but it's true.

Consider this: your volumetric learn
these past eight years. The smarts to pull
shy knowledge to your stride, the grit to burn
long hours. In order to discover. You'll
use heart and sinew smarts to build your voice.

When Colleen judged our reproductive care
to undermine the agency of choice
she leashed fierce methodology to share
the unheard voices data could unleash.

A champion. A mom. Brings Duke her speech.





II

It's not just speed of foot, but thought takes shape
as Michael climbs the branched IPBN
one foot to learn, the other to escape.

Banks of the Charles next for this phenom.

A master teacher, Elliot returns
to Washington, Seattle Psych to grace.

He's shown how what we see we sort and learn.

Perceives and calms his patients' inner space.

Patricia soars in her research pathway:

She penned a belly tale: a crossing guard

keeps bugs in guts from spilling DNA

so livers live. Wash Peds says she's their star.

We'll miss your character, your verve. Your team.

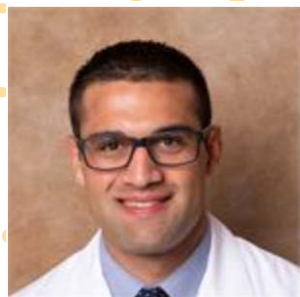
Each one of you gave MSTP steam.

SENIOR DINNER

We normally do a senior recognition at the Carnegie Museum (during second look), but due to COVID we were unable to. In its place, the director and co-directors took the graduating seniors out to dinner and read them their sonnet. We wish the seniors the best of luck in their residency training!



F30 AWARD RECIPIENTS



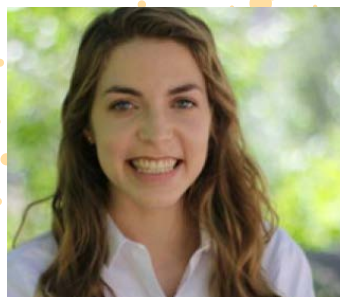
Neil Carleton



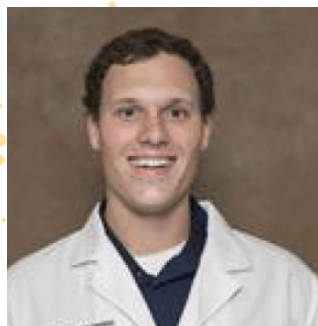
Phillip Mannes



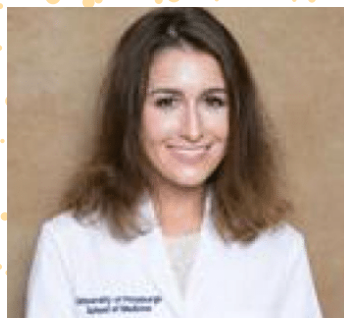
BaiDoi Phan



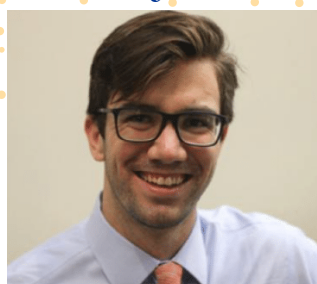
Amy Sentis



Wesley Brown



Megan Yates



Paolo Vignali



Rodger Tieu



Joshua Tashman



Laura Molina



Ruby Holland



NRSA Individual Predoctoral MD/PhD or Other Dual-Degree Fellowships for Students at Institutions With NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (F30). These fellowships, which generally provide up to 3 years of support, promote fundamental, interdisciplinary and innovative research training and career development leading to independent scientists who are well prepared to address the nation's biomedical research needs.

OTHER STUDENT AWARDS

**Wes
Brown**

Andrew W. Mellon Predoctoral Fellowship

**Maria
Chroneos**

Social Medicine Fellows Program - a new initiative that trains medical students for careers as leaders who bridge academic medical institutions and traditionally under-served communities.

**Varun
Mandi**

**Cristopher
Cover**

Bevier Award

**Samuel
Dienel**

CNUP Research Excellence Award

**Atinuke
Dosunmu-
Ogunbi**

American Society of Hematology
Minority Graduate Award

**Gaelen
Dwyer**

First place in AAI Young
Investigators TRCCC



OTHER STUDENT AWARDS

**Jenna
Gale**

Live Like Lou Foundation Fellowship

**Michael
Granovetter**

APF Graduate Student Scholarship, Graduate and Professional Student Government Leadership and Service award, Elsevier/Vision Research Travel Award, Curing the Epilepsies Junior Investigator Travel Award, CMU Conference Funding Award, SFN Trainee Professional Development Award, McClelland Prize and Nu Rho Psi

**Adriana
Johnson**

Hattie Becich Best Teaching Assistant Award, DBMI 2019-2020

**Laura
Molina**

Experimental Pathologist in Graduate Training award, the most prestigious honor a graduate student can receive from ASIP, in 2020

**Anna
Li**

Pitt Challenge Healthcare Hackathon --
1st Place (Team Leader)

OTHER STUDENT AWARDS

**Phillip
Mannes**

2020 Medical Student Research Grant: Discovering Molecular Imaging funded through the Society of Nuclear Medicine and Molecular Imaging

**Rahilla
Tarfa**

Gold Humanism Honor Society 2020, 1st Place Poster “Implant Failure and Osteomyelitis in the Setting of Selective Serotonin Reuptake Inhibitor Usage: A Case Report & Review of the Literature.” – PAO-HNS, Virtual Conference, 2020, Dean’s Year Off Research Fellowship Award 2020 – 2021, Top 10 Finalist, AMA Global Health Essay & Video Challenge – Team: Stap(l)es of Health 2020

**Maxwell
Wang**

Prestigious Hertz Fellowship and Top 10 Abstracts at the 2020 American Society for Stereotactic and Functional Neurosurgery annual meeting for my work with Prof. Ghuman and Richardson on deep brain stimulation



SECOND LOOK

To give our accepted applicants a little “taste” of Pittsburgh, the Second Look committee sent a swag bag that included a Pitt thermos, local coffee, paint by numbers, MSTP white coat ice pack and key fob.



→ 13

→ 13 A

FILM NEGATIVE

FILM NEGATIVE



→ 14

→ 14 A

FILM NEGATIVE





During the second day of our virtual second look, we had some social breakout options.

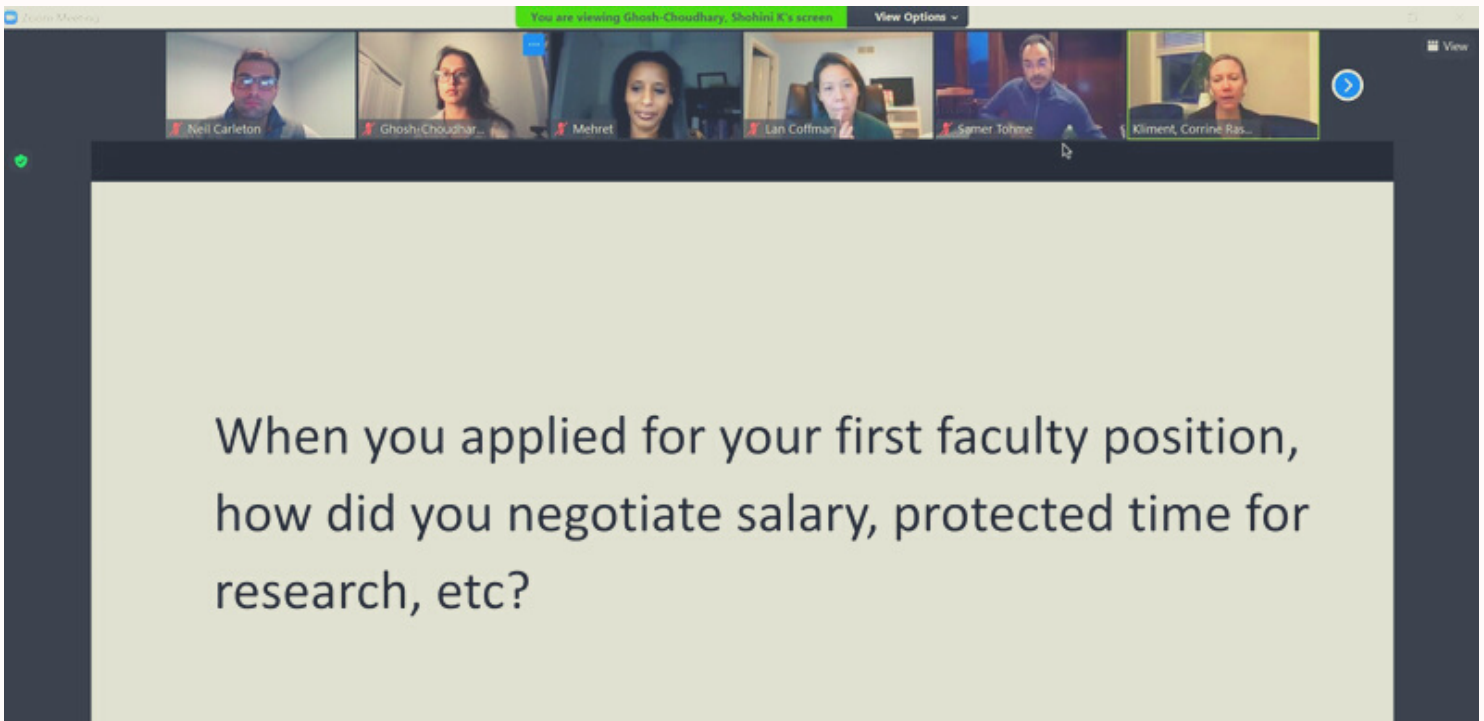


One of the options was baking with a current student. Accepted applicants tried to “out bake” our MSTP Baker extraordinaire, MS1 student Brandon Lehrich. Everything turned out delicious!

Another option during our social portion of virtual second Look was mocktails and cocktails. Current students and accepted applicants got to craft creative drinks together.



WORKSHOPS



Through our monthly MSTP workshops, we seek to broaden our physician-scientist training to cover topics not sufficiently or regularly included in medical and graduate education but are nonetheless vital to our career development. In addition to this, the Workshop Committee's goal this year was to ensure we provide opportunities for our MSTP students to engage with their peers in discussion. Although the new virtual Zoom format due to the COVID-19 pandemic has left us all missing our regular, in-person MSTP gatherings, we've successfully implemented workshops with considerable time devoted to small discussion groups this past fall that have been well-received by students.

TOPICS LIST:

09/16/2020:

The Logistics of
Policy and
Advocacy

09/30/2020:

How to Be a Good
Mentor

11/09/2020:

Physician-Scientist
Diversity

We've covered topics including policy advocacy, how to become a good mentor, implicit bias training, and the history of racism and injustice against people of color in medicine and biomedical research.

These topics have been timely given the national conversation about the pervasive racism and social injustices that continue to exist in our society, medicine, and academia. Our students have left each workshop with specific and actionable knowledge that we believe will make them better advocates for their patients, for their science, and for their community.

**12/09/2020:
Medical Apartheid
Book Discussion**

**01/27/2021:
Careers in Industry**

**02/18/2021:
Careers in
Accademia**

**03/31/2021:
Disability,
Accessibility, and
Chronic Illness in
Medicine and
Research**

**04/21/2021:
Residency Match
Panel**



FEATURED MENTOR

Susanne E Ahmari, MD, PhD



She also takes time to mentor her students outside of purely academic pursuits, supporting and providing advice to her students on how those in biomedical fields can contribute their perspectives and knowledge to social issues through advocacy. She has proactively reached out to current students during the events re-igniting the Black Lives Matter movement regarding mental health resources and promotes methods to increase diversity and representation in medical research.

Despite a heavy research and clinical workload, Prof. Ahmari has a track record of prioritizing the intellectual development of her trainees, particularly in guiding students to connect scientific endeavors to potential clinical innovations. Her students report that her dedication and passion for doing important work is contagious and an inspiration to their careers as physician scientists.

Prof. Ahmari has also adapted flexibly to the COVID-19 situation, coming up with creative methods to keep the lab linked together, both scientifically and emotionally in these troubling times. She puts forth considerable effort to ensure both the physical and mental health of those in her lab.



ALUMNI PROFILE

Dr. Shinjini Kundu

Dr. Kundu graduated from the MSTP in 2018. She is a resident physician in radiology and computer scientist at the Johns Hopkins Hospital.

Her research focuses on developing novel artificial intelligence techniques to detect latent signs of disease from medical images that were previously imperceptible to the human eye.



Accomplishments:

- Gave talks at World Business Dialogue and TEDxGateway
- Named Forbes 30 under 30
- Named MIT Technology Review 35 under 35
- Before COVID, traveled to 9 countries for fun

Selected Publications:

Kundu, Shinjini, et al. "Enabling early detection of osteoarthritis from presymptomatic cartilage texture maps via transport-based learning." *Proceedings of the National Academy of Sciences* 117.40 (2020): 24709-24719.

Cuttillo, Christine M., et al. "Machine intelligence in healthcare—perspectives on trustworthiness, explainability, usability, and transparency." *NPJ Digital Medicine* 3.1 (2020): 1-5.

Kundu, S., et al. "Assessing postconcussive reaction time using transport-based morphometry of diffusion tensor images." *American Journal of Neuroradiology* 40.7 (2019): 1117-1123.

Kundu, Shinjini, et al. "How Might AI and Chest Imaging Help Unravel COVID-19's Mysteries?." (2020): e200053.



FEATURED STUDENT

Michael Chiang MD/PhD



Michael recently received his MD/PhD and is currently a postdoctoral associate.

I am very excited to be returning to the lab to investigate how molecularly distinct neural populations in the brainstem interact with different neural networks to contribute to pain. Dr. Sarah E. Ross. has been an influential mentor, and I am lucky to have such a phenomenal role model to look up"

In 2014, Michael co-founded MusiCare, a student-led music group within the School of Medicine that provides live, musical performances for severely ill patients and have has worked to continue its mission amid the pandemic. He is also a Schweitzer Fellowship alumnus and has been working with the Pittsburgh Chapter as a mentor for current Fellows in the program.

Chiang spoke about the transition to MS3 which has always been challenging for most MSTP students – most have forgotten their clinical skills, remember little of their clinical knowledge, and have had little exposure to the dynamics of the hospital setting. For him, the challenge was picking these skillsets back up while working to publish his graduate work, including giving a talk at Society for Neuroscience in the middle of clerkships and finishing up experiments. He found the LCC3 to be very helpful in orienting him to the clinical workplace so that he knew where to put his efforts into improving prior to beginning clerkships



MSTP Houses

Our House system strives to strengthen bonds among our MSTP community and provide peer to peer connection across the program years. Each student remains in one of our 3 houses throughout the duration of their years in the program. Building upon the early foundation from previous years, this year we've expanded the initiative to include all Pitt-CMU MSTP students.

Students also officially named their house in honor of a physician-scientist they felt was underrepresented in history through a student-led nomination process, and we're proud to now be the MSTP that is home to House Fuller, House Menten, and House Caroline (see below for more details!). Although the

COVID-19 pandemic has provided some challenges for our traditional House gatherings, our MSTP House leadership has stepped up to the challenge to host events this past fall that are both safe and fun, including outdoor events like socially-distanced and masked picnics and hikes, and virtual events like Zoom game nights. We're working hard to find ways to make sure our MSTP students can still feel the support of their peers during these difficult and distanced times.

Fuller House



Solomon Carter Fuller, M.D.

Dr. Solomon Carter Fuller (1872-1953) was a pioneer in Alzheimer's research starting from his early days in medical school and the first Black psychiatrist in the U.S. He contributed to much of the early research and neuropathology work in Alois Alzheimer's lab, but received almost no credit for his instrumental role. Dr. Fuller worked as a practicing psychiatrist, a physician-scientist studying the neuropathology of dementia, and a professor at Westborough State Hospital and later Boston University Medical School. In addition to his research contributions to neurodegenerative disorders, he helped establish medical care for Black veterans and a program to train Black psychiatrists in the U.S. South under a climate of extreme segregation practices and unchallenged, overt racism. (Sources: Kaplan & Henderson 2000, J Hist Neuro; Wikipedia)

2020-2021 Fuller House Leadership:

Students: Deepa Issar (G1), Grace Conway (G1), Olivia Parks (G1), Kevin Dowling (M2)

Faculty/Resident: Dr. David Levinthal, Dr. Melanie Grubisha

Menten House



Maud Menten, M.D. Ph.D.

Dr. Maud Menten became one of the first women in Canada to qualify as a medical doctor. She began working with Leonor Michaelis and the two started working on enzyme kinetics. Menten and Michaelis developed an equation to model and predict the rates of an enzyme-driven reaction. She went to the US in 1916 to get her PhD and established her career at the University of Pittsburgh! She became a pathologist at Children's Hospital in Pittsburgh. She co-authored about 100 research papers. She is credited for having conducted some of the first separation of proteins by electrophoresis. Even though she is most well known for her development of the Michaelis-Menten equation, she also developed a staining method using azo dyes that is still used today." (Source: Royal Society of Chemistry 2020)

2020-2021 Menten House Leadership:

Students: BaDoi Phan (G2), Shohini Ghosh-Choudhary (G1), Shruti Nanivadekar (G1)

Faculty/Resident: Dr. Ken Urish, Dr. Elizabeth Oczypok

Caroline House

Houses



Nancy Caroline, M.D.

Dr. Nancy Caroline (1944-2002) was a Pittsburgh physician who modernized Emergency Medical Services in the US. She received her medical degree from Case Western Reserve University and completed a fellowship in critical care medicine at the University of Pittsburgh before joining as full-time faculty. In the 1970s, Dr. Caroline served as medical director of Freedom House, the first EMS program staffed by paramedics that provided ambulance services to predominantly African-American neighborhoods in Pittsburgh. Under her leadership, Freedom House raised the standard of emergency medical services in historically neglected neighborhoods. Dr. Caroline improved emergency medical care worldwide as a physician and as an educator. During her tenure in Pittsburgh, she was a fervent advocate for improving access to high-quality medical education for African-Americans. (Sources: Baskett and Safar 2003, Resuscitation)

2020-2021 Menten House Leadership:

Students: Alex Layden (G3), Wes Brown (G3)

Faculty/Resident: Dr. Anna Zemke, Dr. Amir Farajii

Pizza Fun!



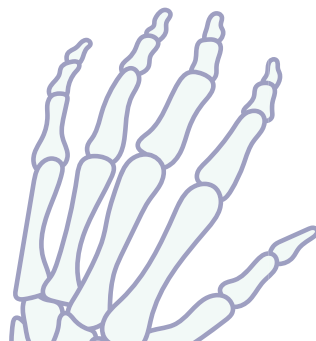
Menten house pizza making night! The House leadership sent pizza making supplies to interested members then got together to make pizza together!



Spooky Halloween!



The Menten house got together on zoom to celebrate Halloween with costumes and fun games.



STUDENT COMMITTEES

Updates on the successes of our accomplished student committees



The Hosting Committee

The Hosting Committee communicates with the applicants before, during, and after their interview. We answer any questions applicants have before their interview via email. During their interview, we have a virtual social hour where applicants have the opportunity to ask current students questions about their experience in the program and life in Pittsburgh. After their interview, the hosting committee pairs accepted students with current students in the program based on similar interests. While we are disappointed that applicants aren't able to visit campus due to COVID-19 this year, the Hosting Committee is still trying to give applicants realistic exposure to the Pitt-CMU MSTP during their interview.

STUDENT COMMITTEES

Updates on the successes of our accomplished student committees

Welcome Committee



The Welcoming Committee is a group led by second-year students that is dedicated to introducing incoming MSTP students to one another and to Pittsburgh. We aim to foster bonding among incoming students through group events and activities during their first summer here, and to aid in their transition by providing them with resources, knowledge, and advice.

'This summer, we welcomed the incoming MSTP class of 2020 with virtual activities including a book club, virtual game nights, and Zoom happy hours, as well as a socially-distanced picnic towards the end of the summer.

Despite the many unique challenges that this summer presented, the students had the opportunity to meet each other and older students in the program as they began their transition to Pitt Med.



STUDENT COMMITTEES

Updates on the successes of our accomplished student committees

WSMA Committee

Dr. Castiel is the Health Commissioner of Worcester, Massachusetts (the second largest city in New England!). Dr. Castiel immigrated to the United States from Cuba during Operation Peter Pan and has always held a personal and professional mission to work with the underserved.

She is a founder and medical director of the Latin American Health Alliance (LAHA), a nonprofit organization in Worcester dedicated to combating homelessness and drug addiction. LAHA's programs consist of the Hector Reyes House, a substance abuse treatment facility, Casa Reyes, a transitional house, and Café Reyes, an innovative jobs training program for the residents at Hector Reyes House and Casa Reyes.



Dr. Castiel's work with medically underserved communities has made her an innovative leader in the COVID-19 pandemic, fighting for equitable testing, treatment, and vaccine distribution. We're so excited to host Dr. Castiel!



STUDENT COMMITTEES

Updates on the successes of our accomplished student committees

Interviewing Committee

The Interviewing Committee has had a great start to the year in spite of the challenges posed by the move to online interviews.

Applicants received “best practice” guidelines prior to the interview and student interviewers have received virtual interview-specific orientations. Together, these steps have contributed to creating a positive and informative experience for both parties! In fact, one applicant stated that these combined efforts have “made the transition from a traditional in-person interview day to an online one feel seamless and almost identical.”

New this year, we have implemented an implicit bias training component to our orientation for student interviewers. We continue to discuss this important issue and plan to continue these trainings in future years. The Interview Committee is continually impressed by the applicants we’ve had the pleasure of interacting with so far, looks forward to the rest of the interview season, and is excited to meet our future colleagues next year!



STUDENT COMMITTEES

Updates on the successes of our accomplished student committees

Alumni Committee

The Alumni Committee is committed to connecting current MSTP students with MSTP alumni. One direction under development has been reaching out to all MSTP alumni to see where they are at in their ongoing careers. My hope is to work with MSTP administration to organize this information and have it made readily available to current trainees. I want to highlight that many career paths can be taken after graduation, and also provide current trainees with relevant alumni information. Thus, current trainees can have the possibility of reaching out to alumni to seek advice and mentorship. The idea is that a relationship, whether it be in-person or virtual, will be beneficial to both parties. Given that the current pandemic has illustrated the utility of virtual networking, it is my objective to make sure that virtual communication can be a possibility between trainees and alumni. Another direction is to also provide alumni contacts to other MSTP Committees to assist with their ongoing projects. If there are other directions in which you would want to see Alumni Committee take, please feel free to reach out to me! Roger Tieu (rot35@pitt.edu)



STUDENT COMMITTEES

Updates on the successes of our accomplished student committees

Curriculum Committee

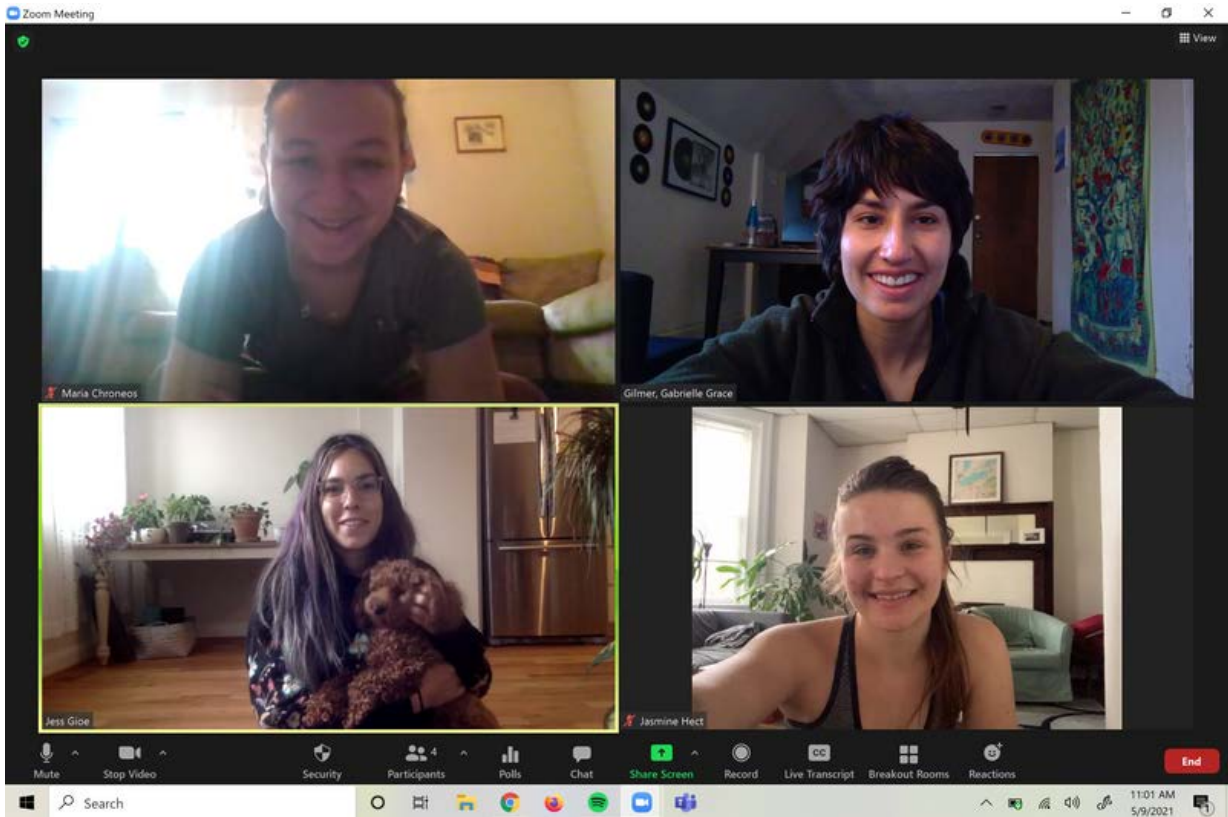
The MSTP Curriculum Committee has continued to represent the MSTP on the medical school curriculum committee and advocate for MSTP students. We presented our biannual report to the SOM CC last summer, at which time we provided information on the training timeline for MSTP students and the implications that curriculum reform might have on this timeline.

We've reviewed details/survey data on and provided updates on recent changes to the MSTP curriculum including: revision of the professional development courses, addition of the new longitudinal clinical clerkship, diversity initiatives and outcomes, peer mentorship, academic coaching, and the MSTP's response to the COVID pandemic.



WELLNESS INITIATIVES

Updates on the successes of our accomplished student committees



After a successful pilot program, we will now be offering weekly MSTP Yoga Classes on Sunday's from 10-11 AM eastern! The classes will alternate between a beginner-focused flow and all levels flow class. These classes will be led by Jess Gioe, who is a certified yoga instructor with 350+ hours of training and 3+ years of teaching experience.

Please come to flow, move, and breathe!



UNIVERSITY OF PITTSBURGH,
MSTP M246 SCAIFE HALL
3550 TERRACE STREET
PITTSBURGH, PA 15261

(412) 648-2324

MSTP@MEDSCHOOL.PITT.EDU

[HTTP://WWW.MDPH.D.PITT.EDU/](http://www.mdpd.pitt.edu/)