

MSTP NEWSLETTER

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MSTP Directors' Note

Along with our current and prior secretaries of the OSU Medical Scientist Student Organization--Gayathri Dileepan (M2) and Rachel Dreher (G2), the MSTP leadership team is delighted to invite you to peruse the latest issue of the OSU MSTP newsletter. You will surely enjoy learning about our newest MSTP students who comprise an amazing and diverse group!

Dr. Gur leads our recruitment effort and we were thrilled with our most recent classes of students. You will learn about our two new MSTP Associate Directors who were recruited nearly a year ago to focus on specific areas of physician scientist education and training. Dr. Gowdy is an NIH funded scientist and an experienced educator who serves on the graduate studies committee of several graduate programs. As a member of the MSTP leadership team, she focuses on MSTP medical and graduate curricular integration and innovation. Dr. Alinari is an NIH funded physician scientist, experienced educator and is the first graduate of the OSU PSTP. His focus is to enhance the clinical preceptorship experience and strengthen the transition from graduate education to the M3 year.

All of us are working together as a team to provide valuable professional development programming for our students. Look out for an invite to join one of our OSU MSTP seminar's professional development sessions! If you have news to share or suggestions please feel free to reach out to us. Finally, we are delighted to share the wonderful news that Ashley Bertran was recently recognized at a lovely event and received the inaugural Dean's Excellence Professional Staff of the Year Award!

Sincerely,

Ginny Bumgardner, MD, PhD

Rama Mallampalli, MD



Introducing Our New Associate Directors: Dr. Gowdy

Kymerly Gowdy, PhD

I started out my scientific training wanting to be a veterinarian. I grew up in Connecticut and worked as a veterinary assistant during high school where I quickly learned that my love veterinary medicine was largely based on wanting to understand the pathologies associated with diseases. Additionally, the vet I worked for always told me that I asked too many questions which was very indicative of my inquisitive nature. I went to Virginia Tech (VT) for my undergraduate education and got my bachelor's in science in Animal Science and Chemistry. While at VT, I had an amazing undergraduate mentor, Dr. Paul Siegel, who I did research with on understanding how the genetics of poultry could influence their antibody production, which is where I first discovered immunology. After undergraduate, I obtained an MS and PhD in Immunology and Toxicology at North Carolina State University. Following my PhD, I did a postdoc at Duke University and NIEHS where both of my mentors were physician scientists and really opened my eyes to the translational impact of my research. I then transitioned to a faculty position at East Carolina University for 5 years before joining Ohio State University in 2020.



My research program is focused on understanding the mechanisms of how air pollution can impact infectious and inflammatory lung diseases. I have been very fortunate to mentor MD fellows, postdocs, and graduate students throughout my career, and all have stayed in the biomedical sciences. Outside of work, I enjoy spending time with my husband Alex, my son Aiden (who occasionally attends MSTP events), and our two dogs Moose and June. I love reading, any outdoor sport, hiking, working out, volunteering, and cheering on my favorite college football team.....VT Hokies!

I am delighted to have been selected to be a member of the MSTP leadership team. I have already learned so much from Drs. Bumgardner, Gur, and Mallampalli. My vision for the MSTP program is to provide a seamless transition between medical school and graduate school for our students, create/identify curricular content to enhance the MSTP program, and to provide a transparent and supportive atmosphere that allows our students to flourish. Looking forward to working with everyone for many years to come!



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Introducing Our New Associate Directors: Dr. Alinari

Lapo Alinari, MD, PhD

I have been a member of the OSU medical and research community for over 18 years. I first arrived as a visiting scholar in the lab of my mentor Dr. Robert Baiocchi. Even though I was a practicing hematologist in Italy, during my time at OSU as a visiting scholar, I decided to pursue a career path merging basic, innovative science with translational medicine. I went on to complete a PhD in experimental hematology and was the first at OSU to successfully graduate from the Physician Scientist Training Program (PSTP) for combined internal medicine residency and hematology fellowship training.



Since joining faculty in 2016, I run a successful laboratory program focused on lymphoma biology and translational therapeutics. I consider it an honor and privilege to mentor trainees in the lab and watch them grow and develop as scientists. When on clinical duties primarily focusing on the care of lymphoma patients, I lead a multidisciplinary team which includes students, physician trainees, and advanced practice providers and strive to create an open and positive learning environment that fosters discussion and questions regarding patient care.

I joined the OSU MSTP leadership as one of the new Associate Directors in April 2023 as teaching, supporting, mentoring, and training the next generation of physician scientists are some of my career goals. Within the MSTP, I primarily focus on professional development, particularly on the delicate transitions from graduate years to medical school and from medical school to residency. I am thrilled to be part of such an amazing family which includes our MSTP students and the rest of the leadership team.

I would never have guessed that I would call Columbus home, but my wife and I have been happily living here for over 18 years. We have three children that were born here and are proud Buckeyes! I enjoy all sort of outdoor activities with soccer being my favorite.



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Meet the Entering Class of 2023

Autumn Brostek

Hi everyone! My name is Autumn and I'm from Cleveland, OH. I graduated from the College of Wooster in 2019 and then spent 3.5 years working in a kidney physiology lab at CWRU. I'm currently interested in heme/onc and dermatology. Some of my hobbies include brewing coffee, hiking, houseplants, and traveling!



Joys Annika David

Hello, MSTP community! I'm Joys Annika David, deeply grateful for the warm welcome and am enthused to be part of this vibrant MSTP collective! Before attending OSU, I majored in biology and creative writing at Pepperdine University, graduating in 2020.

After, I made the coast-to-coast leap to research age-related macular degeneration at the NIH. Now, I tackle my school workload at various cafés, unwind with scenic nature walks, and indulge in all things cheesy!

Over the next 8 years, I'm eager to explore more opportunities to work with patients who have intellectual and developmental disabilities, venture through every nook and cranny of Columbus's restaurant scene with friends, and learn to gracefully navigate the med/grad-school-life juggle. Looking forward to continuing the journey and meeting everyone!



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Tasfia Haque

My name is Tasfia Haque, and I am from the Bronx, New York. I am currently an M1 in Ohio State's MSTP program. Before joining this program, I conducted research on the programmable knockdown of target genes in polycistronic mRNA using de novo-designed sRNA.

I am currently interested in conducting cancer biology research and how the clinical applications of this research can be used to improve the outcomes of patients. In my spare time, I enjoy reading and spending time with my family and friends.



Ryan Juncker

I grew up in San Jose, California before attending UCLA as a psychology major. I graduated from UCLA in 2021 and spent my gap years continuing my research there on orthopedic infections. I am now interested in shifting my research focus towards neuroscience and will likely study traumatic brain or spinal cord injuries for my PhD.

In the future, I hope to be a surgeon-scientist with a lab at an academic institution. In my free time, I enjoy spending time with family and friends, watching or playing sports, and exercising.



Kamellia Karimpour

My name is Kamellia Karimpour, and I am a first year MD PhD student interested in a future career as a surgeon scientist. I grew up in Raleigh, North Carolina and graduated from the University of North Carolina at Chapel Hill with a major in Biomedical Engineering and minors in Chemistry and French. For my PhD in Biomedical Engineering,

I am interested in cardiac cell excitability, and one day I hope to apply the knowledge gained from this joint program to a career as a cardiothoracic surgeon and researcher. In my free time I enjoy reading, playing piano and listening to music, and spending time with friends.



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Casey Leimbach

Hi everyone! My name is Casey Leimbach, and I'm originally from Wantagh, New York, better described as Long Island. I graduated from Notre Dame in 2022 with a double major in Biology and Theology. I spent last year working in otolaryngology research at Johns Hopkins, which was a super random field to end up in for my gap year cause my primary research interest is in cancer immunology and immunotherapy. I hope to continue researching in the cancer field and pursue a career as a clinical oncologist as well. Outside the classroom and the lab, I love exploring the city, especially the coffee shops, watching the Bachelor, and, as of the new year, reading actual, non-textbook books for fun (would love some good recs!) I'm thrilled to be here in the OSU MSTP and feel very lucky to have been welcomed into this great community.



Mirage Modi

I am a current MSTP student, originally from Chicago! Coming to Columbus, I had to forego my favorite deep-dish-pizza-eating hobby and develop new ones. I have really loved exploring new restaurants in the area. I have also become an avid rock climber (I love bouldering).

Professionally, I plan to pursue AI-driven gene therapy for bleeding disorders to optimize therapeutic delivery. Ideally, I would like to lead a industry startup focused on this goal, while also leading a lab. I hope to apply my research to my clinic as a Hematologist/Oncologist.



Andrew Nielsen

Hi, my name is Andrew, and I am an M1 in the MSTP program at OSU! I was born in Everett, WA, a town approximately thirty minutes outside of Seattle. For college, I attended Pepperdine University where I majored in Chemistry. After graduating, I moved to Chicago where I worked as a research associate for a startup biotechnology company. In the future, I hope to join a lab that investigates and employs RNA therapeutics as a clinical intervention to disease. A few of my hobbies include playing the piano, writing, camping, and exploring the various breweries around town. Since moving to Columbus, I also adopted two kittens that have been a joy to take care of, Rufus and Cricket.



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Sam Speaks

My name is Sam Speaks and I'm a new M1 from Columbus, OH. I grew up right next to OSU's campus in Grandview Heights where I completed high school. I spent the next four years in the Biomedical Sciences major here at OSU where I graduated in May, and now I will continue my education at OSU as part of the Medical Scientist Training Program. Outside of school, I love to stay active around Columbus by making day trips to surrounding areas to hike, bike, and rock climb. I also love to explore the food scene in Columbus, as new restaurants are always coming into town. I am super excited to spend the next eight years with a great group of people and make lifelong friends/mentors in the program!



Ella Troy

My name is Ella Troy, and I'm from Pittsburgh, PA. My hobbies are mainly running (I've done 2 marathons and a few halves) and my dog James. My less exciting hobbies include my crock pot, retail therapy after block exams, and my plants.

I also used to play ice hockey, and I was an ice girl for the Columbus Blue Jackets. My future plans are to adopt a second dog, learn how to keep my plants alive, and hopefully become a doctor. My research interest is cancer immunology and the tumor microenvironment. Other things I enjoy include skiing, grocery store sushi, sunny weather, cappuccinos, and Thanksgiving dinner.



Altan Turkoglu

My name is Altan Turkoglu, and I'm currently an M1 in the MSTP at OSU this year. Originally from Dublin, OH, I completed my undergrad here at OSU, majoring in Astrophysics, Physics, and German. Following that, I pursued my master's in electrical & computer engineering through the BS/MS program. My research interests lie in the fields of bioinformatics, machine learning, drug development, and cancer biology. Although I'm still exploring options for residency, I'm leaning towards specializing in either heme- or rad-onc.

In my free time, I enjoy hanging out with friends, learning new languages, and taking care of my two cats, Peanut and Roman. I also like to play video games, which includes competing in local tournaments for my favorite game, Super Smash Bros. Melee.



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Amy Zhang

Hi, I'm Amy! I'm from the suburbs of Chicago. I play as much pickleball as our schedule allows, and I love trying different restaurants around Columbus. I am interested in immunology/oncology research. I will be joining Dr. Bethany Mundy-Bosse's lab in 2025! These are my cousin's dogs, but I can't wait to get one (or more) of my own!



Haley Klimaszewski (G1)

I was born and raised in Indiana and attended Indiana University for my undergraduate studies. It was there that my dedication to cancer research began as I studied ETS transcription factors in cancer. Subsequently, I spent a year at the NCI studying myelodysplastic syndrome and its progression to AML. Upon enrolling at OSUCOM I joined the Baiocchi lab where I completed an MDSR project and a research year before deciding to pursue my PhD.

This summer I transferred to the MSTP, where I continue my work on Epstein-Barr virus-driven malignancies under the mentorship of Dr. Baiocchi and Dr. Bumgardner. My future plans include pursuing a PSTP for residency, specializing in hematology oncology, and establishing my own lab. Outside of school, I enjoy reading, cooking, painting, embroidery, computer games, biking, travel, and spending time with my cat and my partner.



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Meet the Entering Class of 2022

Gayathri Dileepan

I was born in Sri Lanka and grew up in St. Paul, Minnesota. I double majored in Genetics and Microbiology at the University of Minnesota. Currently, I'm interested in T-cell differentiation and immune tolerance research and aim to become a pediatric rheumatologist leading a basic science lab.

Outside of school, I'm MSSO Secretary and involved with mentorship programs, Immunology Interest Group, Intermediate Ultrasound, and free clinics. In my free time, I enjoy learning movie soundtracks on the piano, performing and teaching Bharatanatyam (an Indian classical dance, I competed on OSU's undergrad team in M1!), painting, and collecting funky earrings and trinkets for my memory bookshelf.



Madeline Howarth

I'm from Cleveland, Ohio and went to NYU-Abu Dhabi for undergrad, where I played soccer. My research interests are in neuroimmunity and nervous system dysfunction, and I am planning to complete my PhD with Dr. Phillip Popovich as part of the NGP.



Haoran Huang

My hometown is Beijing, China. My family immigrated to the US when I was 20 years old. I spent my first two years of college at Peking University Health Science Center in Beijing and transferred to the University of Michigan where I completed my bachelor's degree. During my undergraduate and gap years, I worked on the pathophysiology of spinocerebellar ataxias, a group of rare neurodegenerative disorders that causes motor impairment. I decided to pursue a career as a physician-scientist because I want to contribute to discovering new therapies for currently untreatable diseases. Outside of school, I enjoy working out, playing with my cats, and watching K-dramas. Currently I am self-learning Korean in my free time.



Alvin Liu

I'm Alvin (not named after the chipmunk) and I'm originally from New Jersey. My research interests are in cancer biology, particularly biologic therapeutics like immunotherapies and cell-based therapies. I majored in molecular biology and history at the University of Pittsburgh for undergrad. Outside of school and lab, I enjoy rock climbing, exploring the outdoors, video games, and growing carnivorous plants. My collection currently has somewhere around 200 different species!



Jeremy Mahr

I grew up in New Jersey, graduated from Rutgers University, and spent a few years at the NIH and FDA near Washington, D.C. until OSU drew me to the Midwest as an MD-PhD student. Working at the NIH alongside a physician-scientist mentor deepened my interest in both translational and immunology research. In the future, I would like to become either a cardiologist or gastroenterologist while running my own lab, and maybe even commercialize research in the private sector. In my free time, I like to visit nearby parks, try different coffee shops, as well as watch anime such as *Gundam* and *Fullmetal Alchemist* with friends. I also enjoy traveling— some places on my bucket list include Chaco Culture National Historical Park, New Mexico; Petra, Jordan; Bukhara, Uzbekistan; and Cordoba, Spain.



Noriyuki Shinagawa

My name is Noriyuki, and I am from Tokyo, Japan. I received my Bachelors of Science in Biomedical Engineering at the Georgia Institute of Technology. My dream is to become a Director of Genomic Medicine at an academic hospital. Currently, I am researching the mechanism behind somatic mosaic mutations that cause malformations of cortical development and epilepsy. Part of my project involves developing a gene therapy for a novel mouse genetic epilepsy model. Outside of the clinic and lab, I enjoy playing violin and piano and listening to music, reading, gardening, playing chess, making different kinds of coffee and tea drinks, drawing, running, weight training, dressing up, cooking, and eating.



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Jazmin Urrutia

I was born and raised in Houston, Texas. I attended the University of Texas at Austin (UT) where I earned a Bachelor of Science in Human Biology with a Forensic Science certificate. During my time at UT, I worked in two different labs – one researching the mechanism behind Rem-mediated activation-induced cytidine deaminase (AID) proteasomal degradation, the other looking at breast cancer mutagenesis in hyperglycemic mouse models.

After graduation, I worked as a scribe and clinical assistant. My interests are in cancer biology and translational research. I want to be a physician-scientist so that I can combine the best of medicine and science to create tomorrow's therapeutics.

Outside of school I love to cook, window-shop, learn Italian, collect vinyl records/cassettes, and keep my plants alive!



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A Look into MSTP Dungeons and Dragons

A Conversation with Daniela Jimenez-Harrison and Steven Sher

Why did we start playing D&D?

Daniela: Steven was the one who came up with the idea to start playing. You reached out to me, and several other members of our cohort (and one significant other). I know I was 100% in, and I assume everyone else was too because it happened! What made you decide to start DMing for our group Steven?

Steven: I was a player in another campaign, and I wanted to explore more in the creativity of creating a campaign and expand a new hobby. I wanted to share this with other people as nerdy as I am and who would enjoy this activity as much as I do.

Daniela: After your campaign, I don't think any of us wanted our hangouts to end, but planning a campaign from scratch is a lot of work, and we didn't want to put that on you again. I had DM'd a little bit in the past, but I wanted to give it another try and my partner has always wanted to as well. My partner and I pitched that we wanted to try co-DMing a campaign and thankfully everyone was open to it. It was a really fun creative endeavor, as I'd never made my own campaign before. Unfortunately, we've moved to a hiatus as we're all defending this semester, but I hope we'll get back into it at some point.

Steven: Also, we started playing in 2020 and we hadn't been able to bond as a group in a while, and the members had all expressed an interest in the past. This gave us a way to interact and hangout (virtually to start of course!) that we weren't able to otherwise.

What did we get out of it?

Steven: I think it brought us closer and we had a lot of fun stories. We do a lot of game nights now even while we're on hiatus. It really helped to give me some release and balance in my life. A lot of times I'd be in lab at the bench but also writing the campaign with the D&D books open because it brought me a lot of joy.

Daniela: It was great being able to let loose and jump into a new character's shoes, it gave me a lot of low stakes creative freedom that I don't really get to do in my day to day science. I also really liked collaborating and building a world/story with my friends and partner. It was something I looked forward to being a part of during the harder times and I think I learned a lot about myself in the process.



Awards, Honors, Milestones...

MSTP Leadership and Academic Achievement Awardees

- Autumn Brostek
- Helen Chen
- Olga Golubeva
- Haoran Huang
- Ryan Juncker
- Samuel Speaks
- Ren Yin
- Amy Zhang

Impact Factor Award (MSTP peer nominated award for compassion and service to other students/the community)

- Delaney Villareal

PhD Graduates – Spring 2024

- Ariunaa Bayanjargal, BSGP, PhD Advisor: Dr. Emily Theisen
- Geoffrey Carney-Knisely, Public Health, PhD Advisors: Dr. Amy Ferketich and Dr. Parvati Singh
- Jerry Cui, BSGP, PhD Advisor: Dr. Kou-San Ju
- Rebecca Glowinski, BSGP, PhD Advisor: Dr. Mark Peebles
- Ilse Hernandez-Aguirre, BSGP, PhD Advisor: Dr. Kevin Cassady
- Dmitry Malyshka, BSGP, PhD Advisor: Dr. Jeff Kuret
- Lauren Otto, BSGP, PhD Advisor: Dr. Leah Pyter
- Shane Scott, BSGP, PhD Advisor: Dr. Sakima Smith
- Jasmine Tuazon, BSGP, PhD Advisor: Dr. Ken Oestreich
- Danielle Tyson, Public Health, PhD Advisors: Dr. Deena Chisolm and Dr. Maria Gallo
- Akila Venkataramany, BSGP, PhD Advisors: Dr. Timothy Cripe and Dr. Dawn Chandler

Outstanding Clinical Graduate Student for the Abigail Wexner Research Institute at Nationwide Children's Hospital

- Danielle Tyson

CCTS Predoctoral T32 Trainees

- Aliyah Bennett
- Kyle Gordon

The Ohio State University Graduate School Presidential Fellowship

- Sabrina Mackey-Alfonso

NCH MSTP Scholarship

Please join us in recognizing and celebrating our newest NCH MSTP Pediatric Physician Scientist Scholars!

- Rebecca Glowinski, Rising Med 3
- Daniela Jimenez-Harrison, PhD, Rising Med 4



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Publications

Daily KP, Badr A, Eltobgy M, Estfanous S, Whitham O, Tan MH, Carafice C, Krause K, McNamara A, Hamilton K, Houle S, Gupta S, Gupta GA, Madhu S, Fitzgerald J, Saadey AA, Laster B, Yan P, Webb A, Zhang X, Pietrzak M, Kokiko-Cochran ON, Ghoneim HE, Amer AO. DNA hypomethylation promotes the expression of CASPASE-4 which exacerbates inflammation and amyloid- β deposition in Alzheimer's disease. *Alzheimers Res Ther.* 2024 Feb 8;16(1):29. doi: 10.1186/s13195-024-01390-2. PMID: 38326859; PMCID: PMC10851453.

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