Student Engagement in the Age of COVID-19

Community engagement enjoys a long history at the College of Medicine. During the COVID-19 pandemic, however, the poignancy and extent of student outreach rose to new levels. From mentoring underserved teens and connecting with isolated seniors to providing food for peers, students are identifying and helping those most in need.

UUH Outreach Program

Drexel has had a long relationship with Unitarian Universalist House Outreach (UUH Outreach), a nonprofit with deep roots in the Germantown area. “We all benefit from the strengths that older adults have and the value they bring to the larger community,” says Sara Popkin, MSW, LSW, executive director of UUH Outreach. Their mission is to help older adults maintain their independence and dignity while remaining in their own homes. Indeed, the heart of the program “is visiting and supporting older adults at home,” according to Popkin. That mission was put to the test during the COVID-19 pandemic.

Drexel students work with UUH Outreach through Bridging the Gaps in the summer and the Mentor project during the academic year.

Bridging the Gaps is an eight-week summer program for two Drexel students. According to Roberta Balsam, MS, UUH Outreach’s social services supervisor, “The summer students have been absolutely amazing. They’re an extension of us and our program.” Popkin concurs that the Bridging the Gap students “have done things that truly added value and impact to our program.”

This was no more evident than during the COVID-wracked summer of 2020. Students created and ran eight supportive phone and Zoom groups. Discussing a variety of topics kept isolated seniors connected and engaged when it wasn’t safe to venture out in person. “We’re finding, just like everyone, that loneliness and isolation is a killer,” Balsam says. “It’s having an effect on people, and especially people that already have some isolation issues.” She goes on to describe the student-led phone groups as “amazing.”

In UUH Outreach’s Mentor project, two medical students are matched with a client. In a normal year, they visit the client in their own home twice a month for six months. While the approach changed this year, the goal is the same. According to Balsam, medical students “get an understanding of the challenges and obstacles that aging at home can

• continued on page 4
Dean’s Desk

This spring was an exciting time for our College of Medicine. In March, the MD class of 2021 learned where they are headed in the next phase of their medical education. I am proud to report that the match rate for this class was over 95%, compared to the national average of 92.8%. These programs can clearly see what we have always known: Drexel MD program graduates are bright, talented, well-educated, resilient and adaptable for what the future holds. Spring also brought Explore & Serve Day, an opportunity for graduate students in the Division of Pre-medical & Pre-health Programs to share their research and community service endeavors with their classmates and faculty. The research and community service requirements of these programs are not only supportive of the College’s commitment to making a difference in our communities, they are also important in developing these students into the well-rounded health professionals they will become.

Spring is also a time for graduation and celebration. Fifteen master’s and PhD students from biomedical graduate programs successfully defended their theses this spring, capping off years of hard work, academic and scientific rigor, and thoughtful collaboration. You can read more about their efforts on page 8.

Most notably, the College of Medicine celebrated Commencement on Tuesday, May 18, at an in-person ceremony at The Mann Center for the Performing Arts in Philadelphia. It was thrilling to send the class of 2021 off to the next phase of their training and careers in the same place after more than a year of not being able to gather together. Of course, there were attendance caps and COVID safety protocols in place. We are grateful for everyone’s understanding and careful compliance with these restrictions, which allowed this event to happen safely.

It was also a privilege to bestow Drew Weissman, MD, PhD, with an honorary doctorate, and to hear his wise words to the graduating students. Dr. Weissman’s groundbreaking work on mRNA vaccines laid the foundation upon which two of the current COVID-19 vaccines were built. It was lost on no one that we were honoring someone whose dedication to excellence and innovation was the very reason we were able to gather at all.

As we say goodbye to the class of 2021, we are thrilled to be welcoming new students soon. The incoming MD program class of 2025 is an impressive and talented one. It is also the largest, including 40 students who will be the first to complete their preclinical years at our new West Reading Campus. The Graduate School of Biomedical Sciences & Professional Studies will also soon welcome an accomplished new crop of master’s and PhD students. We cannot wait to see who you all become and what you can achieve during your time with us.

A warm thank you to everyone who has helped guide our community through an unpredictable and difficult year. Your leadership, dedication and support are humbling.

Charles B. Cairns, MD
Walter H. and Leonore Annenberg Dean
Senior Vice President of Medical Affairs
Taking Pride in Serving Women and LGBTQ+ Patients

Drexel University College of Medicine has long been a champion for the cause of women’s health and leadership. The predecessors to the College of Medicine were founded in part to provide access to a medical education for those who previously were barred from obtaining one, including women. Drexel’s Institute for Women’s Health and Leadership and the Executive Leadership in Academic Medicine program continue this legacy. The Women’s Health Education Program (WHEP) has also carried on that tradition by advocating for women’s health and preparing future physicians for excellence by understanding the unique health issues that women face. Our hope is for students to appreciate that women’s health is comprehensive and includes more than reproductive care. Every physician, regardless of specialty, should be proficient in delivering compassionate, culturally competent, inclusive health care to women.

WHEP has continued to evolve. While maintaining its historical roots in the promotion of cisgender women’s health, it has expanded to recognize and celebrate gender diversity. Our focus has broadened to be more inclusive of comprehensive sex and gender medicine. LGBTQ+ people of all genders have unique health care issues and deserve high-quality care. However, they continue to experience health care discrimination. WHEP believes that providing inclusive, culturally competent care requires addressing this long history of health disparities. Further, these disparities do not happen in isolation; there are many overlapping layers of inequity that occur in our society. Exploring the intersection of race, ethnicity, socioeconomic status, and other social determinants of health with sex and gender identities is crucial to honoring all aspects of a person’s identity and caring for patients.

The LGBTQ+ community experiences ongoing discrimination, including within health care, particularly for trans and nonbinary people. Many physicians still reflexively ask questions in heteronormative or gender binary-reinforcing ways, requiring their patients to either hide part of their identity or make an awkward correction, which inhibits trust-building between provider and patient. Other physicians openly discriminate against their LGBTQ+ patients by refusing to use correct pronouns and names, or refusing to care for them at all. On a broader scale, state laws in places like Arkansas are being enacted that ban gender-affirming medical treatments for patients under 18 years old. This removes decisions around the care of trans youth from the only people who should have a voice in the matter: the patient and their physician.

Improving the lives of all marginalized people by providing quality, accessible health care begins in medical school. The next generation of doctors must do better than our predecessors. Medicine cannot be practiced in a vacuum. A person’s gender identity and sexual orientation are a critical part of their health, which means that honoring those identities is a critical part of health care. While our WHEP Scholar students have chosen to specifically focus on either women’s health and sex and gender medicine or health equity issues during their medical education, all Drexel medical students are tasked with learning the importance of caring for the patient in front of them in a compassionate, inclusive way.

Our future physicians must learn to recognize and acknowledge their own biases and assumptions and avoid falling into those traps when caring for patients. To know and care for our patients, we must truly see them and the intersection of their identities and experiences. This is a delicate balance — we must be aware of the specific health issues cisgender women and LGBTQ+ people face, but also not see them only as that identity, just as we must not reduce people of color to just their race and ethnicity. Humans are wonderfully complex; no group of people is a monolith. Providing holistic, patient-centered care by treating the patient in front of you within the context of their

Kristen Ryczak, MD, Director, Women’s Health Education Program; Assistant Professor, Family, Community & Preventive Medicine

• continued on page 5
cause, and so have a greater understanding of the issues when they became physicians. They wouldn’t be seeing ‘the poor, little, gray-haired person’ sitting in front of them. They’d also understand this is a fully formed human being.”

In addition to talking and getting to know one another, students might help a client organize belongings or accompany them on a doctor visit. Balsam says these tasks may not be glamorous, “but they’re things people really need.” Typically, the program culminates with the student presenting a life story project to the client.

First-year medical student Kelsey Whitus participated this year. Although community involvement is a requirement of the College’s Health Advocacy Practicum, Whitus "wanted to help someone personally in the best way I could." She says her weekly talks with her mentor, where she got to know the older woman and learn her perspectives, “have really been awesome.”

Due to this year’s social restrictions, Whitus says her mentor became a real source of information and knowledge about Philadelphia, particularly since students haven’t met all their classmates yet. “We always talked about Philly — what she’s enjoyed most and how she’s made her life here. She showed me the ropes and made me comfortable when I moved here. Just to have someone to talk to, and talk about my transition to this city, was nice.”

Natalie Correa, another first-year medical student, was likewise drawn to the Mentor project. "I think the work UUH does for older adults is truly important, but there was something necessary about connecting with older individuals, at a time when everybody’s been so socially isolated. I thought about my own grandma and how I haven’t seen her in so long. The idea of being able to give someone an extra level of companionship seemed like a really nice thing to do.”

“When I moved to Philly,” Correa explains, “I was here alone and isolated in my apartment.” She thought the program would be about “making sure an older adult had a social connection,” yet she discovered it was extremely beneficial for her as well. Talking with her mentor “was something I looked forward to,” she says.

**Queen Lane Food Pantry**

As stay-at-home orders, flattening the curve and quarantining became routine, it surfaced in a class of 2024 group chat that some were having difficulty obtaining food. Whether due to affordability or transportation issues, the problem resonated.

Students reached out to connect those in need of transportation with those who could offer rides. While this was an effective short-term solution, Tretner began working with Caitlin Curcio, director of student affairs, to create a food pantry on the Queen Lane Campus.

By spring of 2021, this idea was a reality. The student-run Queen Lane Food Pantry stocks a variety of shelf-stable items. One accesses the pantry with an ID swipe, but the ID log is merely a way to measure student need and the pantry’s usefulness. Student privacy is a priority. The goal, according to Tretner, is to “feed students in need while reducing the stigma around food insecurity.”

During this process, Tretner began talking with Mario’s Market, a food pantry serving the Drexel community on the University City Campus, about organization and fundraising. She’s also collaborated with students in the College of Nursing and Health Professions regarding sharing nutritional information about the items stocked.

“I think this is such a wonderful, collaborative community, and that’s fostered through academics and student activities,” Tretner says. “We’re definitely encouraged to help each other, and it’s been a pleasure to find a need that can be met and to facilitate that.”

**Drexel MedMentors**

In the late winter and spring of 2020, as students supported one another following the deaths of Ahmaud Arbery, Breonna Taylor and George Floyd, a group also wanted to address what they identified as systemic problems. Their response evolved into the Drexel MedMentors program.

According to second-year medical student Brett Mitchell, the group wanted to “engage with the community, especially the minority population.” Sola Aderonmu, also a second-year medical student, says they created a mentoring program for “disadvantaged students in Philadelphia, to show them [graduate work] is possible.” MedMentors would cultivate “the idea that it’s not impossible to like science or do something in it.” They began working with Elissa Goldberg, MSS, CSW, program director in the Office of Community Engagement, to make this a reality.

At the same time this initiative was progressing, Ashley Opalka, a second-year PhD student in the Neuroscience program, was coming to similar conclusions. She and other graduate students formed Neuroscience Graduate Students for Diversity (NGSD), a group that now welcomes students...
and faculty across disciplines to increase diversity and foster a safe, welcoming environment. Through their outreach efforts, members of NGSD connected with MedMentors.

The goal of MedMentors is to “spread awareness about opportunities and provide resources,” Opalka explains. “When I was growing up, I didn’t know opportunities were available. I knew I was interested in science, but I thought I had to become a medical doctor. I’m a first-generation college student, so when I got to college, I heard about PhD programs for the first time.”

Once a month, Drexel students present a science-related topic to high schoolers from the Kensington Health Science Academy. The presentation is followed by a panel discussion and Q&A from the students. Different graduate students participate in each session to expose the high schoolers to a diversity of perspectives and journeys to higher education. Because of the pandemic, meetings have been conducted over Zoom.

“At first we thought it would be us talking and them listening, like a seminar,” Aderonmu explains. “But they ask a lot of questions we don’t know the answer to, and we end up all learning together.” Topics have included the path to graduate school, vaccinations, why science changes, and substance abuse disorder. Each session has seen increasing numbers of participants, including teachers and parents, from the high school community.

“It’s important to reach out to those who maybe don’t have all the resources to get into professions that typically are underrepresented by that demographic,” Mitchell states. “From my own experience, I didn’t have that much exposure to somebody in medical school who looks like me. That was an important motivator.”

Opalka shares this motivation, but has another one as well. For two years, she worked in a Drexel lab before entering the PhD program. In that time, she had no real interaction with the medical students. She hopes MedMentors “might promote collaboration within our school, and also teach young students how collaboration is important for the next generation of medicine and science. For us to make people better, we need to understand how things work.”

In the midst of all the work of medical school, Aderonmu says MedMentors “is one of the things that keeps me going. This is the part that reminds me that what I’m doing is a lot bigger than me.”

Being the Change
Whether it’s mentoring high schoolers interested in medical or science careers, serving an older adult population, or meeting peer needs, students in the College of Medicine have risen to the occasion during a particularly challenging year. At a phase of life when it’s considered acceptable, or even good, to bury one’s head in a textbook, these students have looked outward to their community. As Balsam observes, “They can make a huge difference in somebody’s quality of life.” Reflecting on her conversations with high schoolers, Aderonmu says when she was that age, she wished someone could tell her a career in medicine was possible. Today, she says, “I am the mentor I needed at 15 or 16 years old.”

— Catherine McCorkle

Destination Excellence

• continued from page 3

individual experiences and needs is the foundation of inclusive, compassionate health care delivery.

What can we do as members of the College of Medicine community to ensure progress in the care of those who historically have not had access to it? Whether you are a future physician, allied health professional or researcher, a current educator of those future professionals, a professional staff member or an alum, the answer is “a lot.” The U.S. health care system is designed for white, English-speaking, cisgender people who are living without a disability. Start by looking for the ways we’re leaving others out, and then see how you can take specific corrective action. If you notice that a health system you interact with — as a professional or a patient — doesn’t have inclusive language on their intake forms, speak up. Similarly, does that hospital system have easy access to translation services and materials in multiple languages? Regularly check yourself about whether you made assumptions about someone’s sexual orientation or gender identity. Mentally correct yourself when you do. Get comfortable with saying your pronouns when introducing yourself; others may then feel comfortable doing the same. Examine other unconscious or implicit biases (or overt biases or prejudices) you may have, and seek out opportunities to challenge your ideas and educate yourself.

Every group of people is so much more than the struggles they endure. In June, we celebrate LGBTQ+ Pride Month. June was chosen to remember the Stonewall Riots of June 29, 1969, which began in response to a police raid on the Stonewall Inn. Pride events have been held ever since (only being recognized for the first time by the federal government in 1999) in commemoration of the countless contributions of LGBTQ+ people and in joyful celebration of the richness they bring to our communities. While there is work to be done, and there always will be, I am proud of our College of Medicine community and specifically WHEP and the Office of Diversity, Equity and Inclusion for their dedication to addressing these issues, and playing a meaningful part in making the world a better place for all our patients.

Happy Pride Month!

— Kristen Ryczak, MD
Jeri Lynne Johnson Honored With Woman One Award

The Institute for Women’s Health and Leadership presented the Woman One Award to Jeri Lynne Johnson, founder and artistic director of the Black Pearl Chamber Orchestra, on April 26, 2021, in a livestreamed webcast from the Kimmel Center for the Performing Arts. The Woman One program honors an outstanding woman for her leadership in the Philadelphia community and raises scholarship funds for talented, underrepresented women in medicine who are studying at the College of Medicine.

“We are very proud to honor Jeri Lynne Johnson for her unique talent, leadership contributions and example that contribute to our quality of life,” says Lynn Yeakel, director of the Institute for Women’s Health and Leadership.

Johnson established the Black Pearl Chamber Orchestra in 2008. Her concert performances have won critical acclaim and earned numerous grants from the National Endowment for the Arts. Johnson’s innovative community engagement programs have made the Black Pearl the only organization in the nation ever to win three prestigious Knight Foundation Arts Challenge grants.

“I am delighted and honored to have my work recognized alongside the accomplishments of such illustrious past honorees, and I salute the talented and dedicated women whose work is supported through the Woman One program,” says Johnson. “The examples of their leadership, passion for service and skill in healing are needed now more than ever.”

Over 17 years, the Woman One program has raised more than $3 million, providing scholarships for 32 MD students at the College of Medicine. Scholars are selected for their academic achievements, leadership qualities and community service. They receive $100,000 in tuition support over four years.

For the first time this year, the Institute for Women’s Health and Leadership will present a $100,000 D. Walter Cohen Shared Leadership Scholarship, which benefits a talented underrepresented man who is entering Drexel University College of Medicine. Named for D. Walter Cohen, DDS, chancellor emeritus of the College of Medicine, the scholarship honors the importance of shared leadership among women and men, while addressing the serious problem of declining medical school applications from underrepresented men in medicine.

Explore & Serve Day

On April 1, the Division of Pre-medical and Pre-health Programs hosted its fourth annual Explore & Serve Day, and the second to be held virtually due to the pandemic. The event allows the students within the division to highlight their research and community service efforts, which are a critical part of their training as future health professionals. In her welcome message, Monika Jost, PhD, director of the division, said, “We are eager to learn how your research and community service experiences transformed and enriched your perspectives as you hone your critical thinking skills or reflect on the needs of the communities with which you work.”

The day included nine oral presentations and 21 research and community service posters. Dean Charles B. Cairns, MD, gave the keynote speech, “Health Disparities in the Age of COVID.” In keeping with the Division of Pre-medical and Pre-health Programs’ commitment to community service, the Graduate Student Association organized donation efforts for two organizations: Morris Home, a residential recovery program for the transgender community, and Bebashi, which provides access to high-quality, culturally sensitive health care, health education and social services.

Woman One scholars Jacqueline Koomson, MD ’21, Elizabeth Centurion, MD ’22, and Dominique Jones, MD ’21, with Leon McCrea II, MD, MPH, senior associate dean of diversity, equity and inclusion.

Woman One honoree Jeri Lynne Johnson and Lynn Yeakel, MSM, director, Institute for Women’s Health and Leadership.
Honor Society Inductees

The College of Medicine proudly congratulates our faculty, residents, alumni and students who were inducted into the Alpha Omega Alpha and Gold Humanism Honor Societies via a virtual ceremony on April 13, 2021.

**ALPHA OMEGA ALPHA HONOR MEDICAL SOCIETY**

This year, 64 members of the College of Medicine community were inducted into Alpha Omega Alpha (AOA) Honor Medical Society’s Delta Zeta chapter. Election to AOA is an honor signifying a lasting commitment to professionalism, leadership, scholarship, research and community service. A lifelong honor, membership in the society confers recognition for a physician’s dedication to the profession and art of healing.

The 2020-2021 alumni inductees were Donna Antonucci, MD, MCP ‘84; Kenny Banh, MD ‘04; and Africa Stewart, MD, MCPHU ’00.

The faculty inductees for 2021 were Maya Bass, MD, MA, Family, Community & Preventive Medicine; Alison J. Carey, MD, Pediatrics; Annette Gadegbeku, MD, Family, Community & Preventive Medicine; Michele Kutzler, PhD, Medicine and Microbiology & Immunology; and Mark B. Woodland, MS, MD, Obstetrics & Gynecology.

The resident inductees for 2021 were Jonathan Buerger, MD, Obstetrics & Gynecology, Tower Health – Reading Hospital; Aswathy Cheriyan, MD, MPH, Pathology & Laboratory Medicine, Allegheny General Hospital; Sonia Randhawa, MD, Obstetrics & Gynecology, Tower Health – Reading Hospital; and Adib Rushdan, MD, MPH, MLS, Family Medicine, Drexel.


**GOLD HUMANISM HONOR SOCIETY**

The Gold Humanism Honor Society recognizes students and faculty who are exemplars of compassionate patient care and who serve as role models, mentors and leaders in medicine. Fourth-year students are nominated for induction by their peers; faculty members are chosen by a committee of faculty and administration.

The faculty inductees were Thomas Cresante, DO, Kaiser Permanente – Bay Area; Anthony Donato, MD, Tower Health – Reading Hospital; Sarah Luber, DO, Tower Health – Reading Hospital; and Chantal Morrison, DO, Kaiser Permanente – Bay Area.

The resident inductee was Jennifer Nhan, MD, Pediatrics, St. Christopher’s Hospital for Children.

Recent Thesis Defenses

We congratulate the following master’s and PhD students from the Graduate School of Biomedical Sciences and Professional Studies on the successful defense of their theses.

Ilse Pamela Alonso  
Neuroscience PhD Program  
**Title:** Impact of Sleep on Incubation of Cocaine Craving and Dopamine Terminal Adaptations Following Abstinence  
**Advisor:** Rodrigo A. España, PhD

Sara Blaziejewski  
Neuroscience PhD Program  
**Title:** Dissecting Cellular Mechanisms of Neurite Formation in the Developing Cortex  
**Advisor:** Kazuhiro Tsyoka, PhD

Anthony DiNatale  
Pharmacology and Physiology PhD Program (MD/PhD Student)  
**Title:** Newly Identified Mediators and Mechanisms Promoting Metastatic Prostate Cancer  
**Advisor:** Alessandro Fatatis, MD, PhD

Rita Aurora Esposito  
Microbiology and Immunology MS Program  
**Title:** The Effect of Nonthermal Plasma on Herpes Simplex Virus Type 1 Infectivity  
**Advisor:** Fred Krebs, PhD, and Vandana Miller, MD

Katherine A. Innamorati  
Molecular & Cell Biology & Genetics PhD Program  
**Title:** Comparative Genomics of the Keystone Mucosal Pathogens Porphyromonas gingivalis and Gardnerella vaginalis Reveal Associations Between Virulence Phenotypes and Phylogenetic Structure  
**Advisor:** Garth Ehrlich, PhD

Shawn Joshi  
Biomedical Engineering PhD Program (MD/PhD Student)  
**Title:** Cognitive Workload Assessment During Complex Coordinated Motor Tasks in Real-World Environments With Both Healthy and Clinical Populations  
**Advisor:** Hasan Ayaz, PhD

Brett LaBier  
Microbiology and Immunology MS Program  
**Title:** Novel Insights Into TLR4:TLR3 Crosstalk in Response to TLR4 Specific Ultrapure Lipopolysaccharide (LPS) From Highly Pathogenic Escherichia coli O111:B4 in Murine Microglia  
**Advisor:** Sonia Navas-Martín, PhD

Stacia Irene Lewandowski  
Pharmacology & Physiology PhD Program  
**Title:** In Vivo Studies of the ERK1/2 Phosphatase, MKP3 in Dopaminergic Neurons on Cocaine-Associated Behaviors, Dopamine Signaling and Gene Expression  
**Advisor:** Ole Valente Mortensen, PhD

Ronak Loonawat  
Microbiology and Immunology PhD Program  
**Title:** Interplay of Hepatitis B Virus Infection and Hepatocyte Metabolism: A Virus-Induced Warburg-Like Effect Stimulates Hepatitis B Virus Replication  
**Advisor:** Michael J. Bouchard, PhD

Kiran Kumar Madugula  
Microbiology and Immunology PhD Program  
**Title:** Over Representation of Myocyte Enhancer Factor (MEF-2) in HTLV-1-Induced Adult T-cell Leukemia/Lymphoma Contributes to Acute Disease by Facilitating the Activity of Antisense Promoter and HBZ via JunD  
**Advisor:** Pooja Jain, PhD

Haley Morgan Majer  
Microbiology and Immunology PhD Program  
**Title:** Natural Product Discovery of Thiopeptide Producers and Functional Characterization of Adenyllylation-Domains in Thiostrepton and Siomycin Biosynthesis  
**Advisor:** Joris Beld, PhD

Margo Randelman  
Neuroscience PhD Program  
**Title:** Hypercapnia Respiratory Training to Enhance Plasticity After Cervical Spinal Cord Injury  
**Advisor:** Michael A. Lane, PhD

Daniel Slusaw  
Molecular & Cell Biology & Genetics MS Program  
**Title:** HOTAIR Domains Can Independently Regulate Gene Expression in Breast Cancer  
**Advisor:** Srinivas Somarowthu, PhD

Matthew Stout  
Pharmacology & Physiology PhD Program  
**Title:** Investigating the Interaction Between K-Ras and HuR in Pancreatic Cancer  
**Advisor:** Paul Campbell, PhD

Philip Langdon Yates  
Neuroscience PhD Program (MD/PhD Student)  
**Title:** A Cellular Approach to Understanding and Treating Gulf War Illness  
**Advisor:** Peter W. Baas, PhD
MD Class of 2021 Meet Their Match

At noon on Friday, March 19, fourth-year MD program students learned where they will complete their residency training. Students celebrated their good news virtually with champagne toasts and showers of confetti.

Around a third of the College of Medicine’s class of 2021 will train as physicians in Pennsylvania. The next most popular states for the class’s residency matches are New York with 41 students and California with 19. The specialties that the graduates are pursuing the most are internal medicine, with 57 students, emergency medicine with 27, and family medicine with 26.

The 2021 Match Day ceremony was broadcast live to allow fourth-year MD students to gather virtually and share the special day with loved ones and supporters near and far. The event is archived on the College’s YouTube channel, youtube.com/drexelmedicine.
Golden Apple Awards
The annual Golden Apple Awards recognize outstanding service and teaching by Drexel University College of Medicine faculty and professional staff. Each class of medical students nominates faculty and professional staff for the honor and votes to determine the award winners.

CLASS OF 2024
Foundations of Basic Science – Year 1
• Bradford Jameson, PhD, Biochemistry & Molecular Biology
• Francis Sessler, PhD, Neurobiology & Anatomy
• Janet Smith, PhD, Neurobiology & Anatomy
Frontiers – Year 1
• Edward Gracely, PhD, Family, Community & Preventive Medicine

CLASS OF 2023
Foundations of Basic Science – Year 1
• Haviva Goldman, PhD, Neurobiology & Anatomy
• Kirsten Larson, PhD, Microbiology & Immunology
Foundations of Patient Care – Year 1
• Maya Bass, MD, Family, Community & Preventive Medicine
Frontiers – Year 1
• Esther Chernak, MD, MPH, Environmental & Public Health

Case-Based Learning – Year 1
• Tod Strochlic, VMD, PhD, Biochemistry & Molecular Biology
Health Advocacy Practicum – Year 1
• Steven Rosenzweig, MD, Emergency Medicine

CLASS OF 2022
Attending Physician
• Lorraine Cummings, MD, OB/GYN, WellSpan York Hospital
• Matt Diffley, MD, Pediatrics, Kaiser Permanente – Bay Area
• Julian Diaz Fraga, MD, Internal Medicine, Tower Health – Reading Hospital
• Allan Philp, MD, Surgery, Allegheny General Hospital
• Tracey Roessing, MD, Family Internal Medicine, Abington Health
Resident Physician
• Mais Arwani, MD, Internal Medicine, Allegheny General Hospital
• Marshall Bahr, MD, Internal Medicine, Allegheny General Hospital
• Kriti Taneja, MD, Internal Medicine, UPMC Pinnacle
• Pooja Shah, MD, Internal Medicine, Reading Hospital – Tower Health

Case-Based Learning – Year 2
• Sara Schultz, MD, Medicine
Foundations of Patient Care – Year 2
• Michael Spear, MD, Pediatrics

CLASS OF 2021
Attending Physician
• Tariq Cheema, MD, Internal Medicine, Allegheny General Hospital
• Subbarao Elapavalaru, MD, Cardiothoracic Surgery, Allegheny General Hospital
• Emil Fernando, MD, Surgery, Allegheny General Hospital
• Angela Keleher, MD, Surgery, Allegheny General Hospital
• Sunil Verma, MD, Psychiatry, Tower Health – Brandywine
Resident Physician
• Vinay Edlukudige Keshava, MD, Internal Medicine, Mercy Fitzgerald Hospital
• Maryam Tetlay, MD, Internal Medicine, Allegheny General Hospital

Student Government Association Awards
• Dior Boyer-Smith, Custodial Staff
• Patrick Emile, Custodial Staff
• Maria Escobar, Custodial Staff
• David Gizinski, Custodial Staff
• Dally Gonzalez, Custodial Staff
• Gladys Jimenez, Custodial Staff
• Joyce Johns, Custodial Staff
• Steve Levandoski, Technology in Medical Education (TIME) Staff
• Richard Ludwig, Custodial Staff
• Liliana Mazuera, Custodial Staff
• Carmen Mendez, Custodial Staff
• Lori O’Connell, Technology in Medical Education (TIME) Staff

Student Body Awards
• De’Shea Bentley, Public Safety
• Caitlin Curcio, Student Affairs
• Dennis DePace, PhD, Neurobiology & Anatomy
• Leon McCrea II, MD, MPH, Family, Community & Preventive Medicine
Acclaimed Soccer Coach Jill Ellis on Leadership

On March 18, the Executive Leadership in Academic Medicine program hosted “A Conversation on Leadership” with Jill Ellis, the soccer coach who led the U.S. Women’s National Soccer Team to historic back-to-back FIFA World Cup titles. She was interviewed by Cathie Siders, PhD, a member of the ELAM executive coaching team.

Ellis ended the informative and inspiring conversation with one of her favorite pieces of wisdom: “To enjoy the beauty of the ocean, one must appreciate both the crest and the trough of the wave.” She continued, “As I look back over my journey, I’m not going to remember the trophies or the scores. I’m going to remember the moments that made me feel truly alive. And some of those moments were really hard, and some of them were absolute elation. As women, as we face a hardship, we are so critical of ourselves. Just know, that moment that is hard is going to help shape you and pay dividends down the line.”

Nancy Spector, MD, executive director of the ELAM program, notes, “It was an honor to host this event and have a chance to hear Jill Ellis share her thoughts on leadership. It was a welcome opportunity for our ELAM community to hear perspectives that are outside of community health care.” The event was attended by more than 300 people, including ELAM alumnae, and College of Medicine faculty, professional staff, students and alumni.

In Memoriam

Arnold Goldman, MD, a staff psychiatrist at Hahnemann University Hospital for many years, died on January 24, 2021. He earned his medical degree from Hahnemann Medical College and completed a psychiatry residency at Hahnemann University Hospital. Goldman received the Outstanding Teacher of the Year Award for Voluntary Faculty from the Robert Wood Johnson Medical School and was named a Top Doctor in Philadelphia magazine. He was married for 63 years to his wife, Lynn, and they had four children, Audrey, Shari, Daniel and Rachel. He is survived by Lynn, the children and their spouses, and ten grandchildren.

Faith Midwood, MD, a longtime faculty member at Hahnemann University and Drexel, died on January 24, 2021. She also completed her psychiatry residency at Hahnemann Medical College after obtaining her MD from Temple University. Midwood was a devoted teacher of psychiatry residents throughout her career, while also volunteering at a number of organizations including Planned Parenthood and The Athenaeum of Philadelphia. After her retirement, she continued practicing psychiatry at the Community Volunteers in Medicine Clinic in West Chester, Pennsylvania. She is survived by her husband, Oz; daughter and son, Christina and Nicholas; five sisters; and numerous in-laws, nieces, nephews, grandnieces and grandnephews. A memorial service was held on April 23 in Jenkintown, Pennsylvania. Donations to a memorial fund started in Lewyckyj’s name can be made at drexelmed.edu/inmemory.

Spinal Cord Research Recognized With NIH Training Grant

Drexel University College of Medicine has received a T32 National Institutes of Health training grant for Neuroscience graduate students to pursue study in spinal cord injury research. Peter Baas, PhD, professor, Department of Neurobiology & Anatomy, is director of the program, and Michael Lane, PhD, associate professor, Department of Neurobiology & Anatomy, is co-director.

Spinal cord research is an internationally renowned strength in the Department of Neurobiology & Anatomy’s Marion Murray Spinal Cord Research Center, forged by Drs. Marion Murray and Michael Goldberger. This prestigious award is a testament to the success of the MMSCRC. It affords support to further build on these strengths, providing an unparalleled experience for trainees. Learn more about the program at drexel.edu/medicine/SCITP.

Neighborhood Vaccine Clinic

Drexel hosted a community COVID-19 vaccination clinic on Thursday, May 27, at the Dornsife Center for Neighborhood Partnerships. The clinic was run in partnership with Sunray Drugs. Annette Gadegbeku, MD, assistant dean of community health in the College of Medicine’s Office of Diversity, Equity & Inclusion, spearheaded the effort with support from the College of Medicine Office of Community and External Affairs, College of Nursing and Health Professions Community Wellness HUB, and Dornsife School of Public Health Center for Nonviolence and Social Justice.

Gadegbeku notes, “With COVID-19 vaccination rates still low in some parts of Philadelphia — despite the city’s increase in distribution efforts — we are so proud to be able to provide vaccination opportunities to community members within our surrounding neighborhoods.” This was the first in a series of clinics providing vaccines to Drexel’s neighbors from Mantua, Powelton Village, Mill Creek and surrounding areas.
Any parent of young children knows all too well the misery of middle ear infections — many of which are recurrent and some of which can tolerate antibiotic treatment. But what if there were a way to predict such outcomes based on bacterial analysis? Better still, what if there were drugs specifically designed to help target these tough cases?

Joshua Chang Mell, PhD, assistant professor in the Department of Microbiology & Immunology, is tackling these questions in his study “Detecting and Disrupting Biofilms in Recurrent Ear Infections,” for which he was awarded a 2020 Hartwell Foundation Grant.

For some time, Mell has been intrigued by the human bacterial pathogen nontypeable Haemophilus influenzae (or NTHi), which causes ear infections (otitis media) in children, and lung infections for those with chronic respiratory illness. Mell has been particularly interested in a process called “natural transformation,” in which cells actively transport environmental DNA through their cell membranes where homologous molecules can be incorporated into chromosomes. This allows NTHi and other “naturally competent bacteria” to acquire genes from their relatives, which can spread antibiotic resistance genes and other pathogenesis traits.

Most recently, he embarked on genome-wide association studies to connect natural genetic variation in NTHi bacteria with the risk of pediatric middle ear infections. This involves collaboration with PIs in Drexel’s Center for Advanced Microbial Processing (CAMP), including Garth D. Ehrlich, PhD, professor, Departments of Microbiology & Immunology, and Otolaryngology-Head & Neck Surgery, and Joris Beld, PhD, assistant professor, Department of Microbiology & Immunology, along with Michael Pichichero, MD, director of the Rochester General Hospital Research Institute, which holds a vast archive of tens of thousands of bacteria specimens, dating back more than 15 years, from healthy children’s nasal passages and from the middle ears of children with otitis media.

“By sequencing and then comparing the highly diverse genomes of more than 200 NTHi isolates collected from healthy and disease states, we identified several bacterial genes whose presence or absence predicted isolation from health or disease,” Mell says. “These were nearly all involved in pH homeostasis and nitrogen metabolism. This turned out to be quite interesting clinically, since it’s recently been shown that the fluid from infected middle ears is often alkaline (high pH), and we found bacterial genes whose products modify extracellular pH.”

Mell was surprised by the results, which found less evidence for virulence genes, but rather evidence for the opposite.

“We had really set out to find genes whose presence in the bacterium contributes to pathogenesis during middle ear disease. Instead, out of six candidate genes, five of the ‘hits’ were associations between disease and gene absence,” he says. “On the one hand, this offers much less obvious routes toward translational research. A bona fide virulence gene could become the target for a new drug or therapy, but it’s hard to design a drug against something that isn’t there. On the other hand, the literature shows us many instances of bacteria that normally don’t cause disease that can become pathogenic upon losing gene functions.”

These findings were the basis for intended follow-up mechanistic studies with candidate genes and the team’s proposal to the Hartwell Foundation.

“Our main hypothesis is that bacteria that are more likely to form biofilms in the middle ear environment are also more likely to cause recurrent ear infections, a major health problem for many young children,” he says. “We are now working to examine the relationship between pH changes and biofilm formation, a trait that allows bacteria to persist within infection, in spite of antibiotic treatment. Notably, the machinery in NTHi required for biofilms is also required for natural competence. Our preliminary data suggest that different strains are highly variable in their biofilm formation and in the environmental conditions that trigger it.”

The first part of this study involves testing new designer biofilm inhibitor compounds developed by recent Drexel graduate Donald J. Hall, PhD chemistry ‘20, CAMP lab
manager Jaroslaw Krol, PhD, and Ehrlich, along with Frank Ji, PhD, professor, Department of Chemistry in Drexel’s College of Arts and Sciences, on diverse bacteria strains in diverse conditions. Mell says that these drugs may synergize with antibiotics to eliminate persistent bacteria that reseed infections.

“We’re taking advantage of the fact that we know a lot about how diverse these bacteria are, how they have these incredibly large genetic differences between them. And we know that some genes that we’ve identified are involved in the process of infection. So, we have some hints about how to conduct these efforts and how to study these bacteria in test tubes to see how the drugs work.”

The second piece of the research consists of measuring global gene expression in the samples, using RNA sequencing across diverse strains and conditions, to design a new diagnostic for use on specimens that have been taken from children with middle ear infections. Here, Mell’s team is searching for signatures that indicate whether the infection is likely to be a recurring one — in particular, a pattern of genes whose expression presages biofilm formation.

“With this new diagnostic, we will directly test clinical specimens from children with sporadic or recurrent ear infections to see whether signatures of biofilm formation predict recurrent disease,” he says. “This could act as a new diagnostic to identify children at high risk for repeated infections because of the bacteria they host.”

The diagnostic, specifically designed to assess NTHi, could be used in other NTHi-related conditions, such as chronic obstructive pulmonary disease (COPD) in elderly patients. The methodology and pipeline used to develop NTHi diagnostics could readily be applied to other bacterial pathogens, Mell says.

The ramifications of this research — the idea that the evolutionary genomics can tell us more about how to diagnose and treat illness in the future — are exciting to Mell, who was trained as a basic researcher in genetics.

“Before, my work was very indirectly applicable to anything translational. But now, I work at a medical school on a biomedically relevant bacterial pathogen. It wasn’t until this transition that I’d really thought much or learned much about bacterial pathogenesis at all,” he says. “I’m trying to let the bacteria tell us what matters to them with minimal preconceptions. By watching how bacteria adapt on their hosts during recurring or chronic infections, we can hopefully find new ways to undermine them that people hadn’t thought about.”

The biofilm research represents the interdisciplinary approach to biology that Mell and others are taking at CAMP. Aided by advances in nucleic acid sequencing technology and metabolite profiling, researchers are mining microbial genomes, metagenomes and hologenomes in the search for better target molecules and new antimicrobial compounds.

“Projects that would’ve cost millions of dollars just 10 to 15 years ago can now be done by a regular microbiology lab that has a little bit of computational skillset. Much of biology has become split between experimentalists with a lot of biology domain knowledge and computational biologists/bioinformaticists who can handle heavy data analysis and statistics but don’t know a lot of biology. There are real barriers to communication between these people because of training, even if they work in the same lab,” Mell says. “So, at CAMP we try to cross-train ourselves, and our staff members and students, to act at the interface between wet-lab experiments and dry-lab analysis. We also not only acknowledge the profound genetic diversity within organisms — both host and pathogen — but also accommodate and use this diversity in our experimental design.”

For example, he says, MD/PhD student E. Ari Gordon is developing a novel analysis framework for looking at bacterial gene expression measurements that don’t rely on a single “reference” strain, whose genomes may greatly differ from others. Far more sensitive and accurate than typical methods, it’s being used to look at the commonalities between diverse NTHi biofilms.

Mell and his team will likely be submitting results from the initial studies by summer, and he anticipates completing the phenotypic assays around the diverse strains and conditions within a year, the gene expression analysis within two years, and the testing on clinical specimens relatively soon after that.

“I’d like to think that we are at least on the cutting edge, if not outright innovative in our work,” Mell says. “It’s an exciting time to be a microbiologist, and especially to be a microbial geneticist/genomicist.”

NTHi biofilms grown in neutral pH. Live cells are green, while dead ones are red. The double-mutation of potE and speF caused more robust growth (right) than the wild type (left).
WHAT WE’RE DOING

Seena K. Ajit, PhD, associate professor, Department of Pharmacology & Physiology, was invited to participate in the University of Pittsburgh Center for Pain Research’s seminar series. The title of her talk was “Exosome Mediated Intercellular Communication in Pain.”

Peter Baas, PhD, professor, Department of Neurobiology & Anatomy, was awarded a two-year, $302,750 Department of Defense grant in March 2021, titled “Novel Microtubule-Based Hypothesis for Frontotemporal Dementia Leading to Therapy for Military Personnel and Veterans.” Baas also received a two-year NIH R21 grant from the National Institute on Aging in the amount of $416,438 in April 2021 for “Role of Tau in Microtubule Stability in Adult Neurons.” In January 2021, Baas delivered a virtual seminar, “Hereditary Spastic Paraplegia: Understanding What’s Wrong So That We Can Fix It,” at Augusta University in Atlanta, Georgia.

Jessica R. Barson, PhD, assistant professor, Department of Neurobiology & Anatomy, hosted a social titled “Para-ventricular Nucleus of the Thalamus (PVT),” at the Society for Neuroscience Global Connectome virtual meeting on January 12, 2021.

Matt Bell, a student in the Microbiology & Immunology PhD program, placed third in the poster competition at the Philadelphia Infection and Immunity Forum, hosted by the Eastern Pennsylvania Branch of the American Society for Microbiology (EPA-ASM) in December 2020. He was also selected to give a talk at the EPA-ASM May 2020 meeting. Both the poster and the talk were titled “Age-Associated Defects in the Adaptive Immune Response to Clostridium difficile Infection Impair the Development of a Protective Immune Response in the Elderly.” Bell and Kayla Socarras, Microbiology and Immunology PhD candidate, will serve as co-presidents of the student branch of the EPA-ASM.

Sarah Bennison, a Neuroscience PhD student, received an NIH F31 NRSA predoctoral fellowship in April 2021 for “ADNP Regulates Axogenesis and Dendritogenesis in the Developing Cortex.”

Dorothy Benton, Molecular & Cell Biology & Genetics PhD student, and colleagues at Fox Chase Cancer Center including adjunct faculty member Jonathan Chernoff, MD, PhD, published “Regulation of MST Complexes and Activity via SARAH Domain Modifications” in Biochemical Society Transactions online April 16, 2021.

Jadwiga Bilčak and Dillon Malloy, Neuroscience PhD students, Kyle Yeakle, Molecular & Cell Biology & Genetics PhD student, Guillaume Caron, PhD, former postdoctoral research fellow, and Marie-Pascale Côté, PhD, assistant professor of neurobiology and anatomy, co-authored “Enhancing KCC2 Activity Decreases Hyperreflexia and Spasticity After Chronic Spinal Cord Injury” in the Journal of Experimental Neurology. The article was published online on January 13, 2021.

Mandy Binning, MD, assistant professor of neurosurgery; Christina R. Maxwell, PhD, MTR, assistant professor of neurology; Erol Veznedaroglu, MD, Robert A. Groff Chair of Neurosurgery; Kenneth Liebman, MD, associate professor of surgery; and colleagues at Global Neurosciences Institute (GNI) and elsewhere published “The Use of Antiplatelet Agents and Heparin in the 24-Hour Postintravenous Alteplase Window for Neurointervention” in Neurosurgery, March 15, 2021. Binning and GNI received a grant from Jazz Pharmaceuticals to investigate the effects of soliriamfetol on wakefulness in stroke patients.

Michael Bouchard, PhD, professor in the Department of Biochemistry & Molecular Biology and director of the Division of Biomedical Science Programs, and Michael Nonnemacher, PhD, associate professor in the Department of Microbiology & Immunology, received an NIH National Institute of Allergy and Infectious Diseases (NIAID) R21 grant for their project “HIV Tat and HBV HBx in HIV/HBV Coinfection-Associated Liver Disease.” Bouchard and Srinivas Somarowthu, PhD, assistant professor, Department of Biochemistry & Molecular Biology, and interim director, Biochemistry graduate program, received an R21 grant from NIAID for “The Role of RNA Structure in the Hepatitis B Virus Lifecycle.”

Katie Bryant, a Neuroscience PhD student, won the Research Society on Alcoholism Student Merit Award.

Irwin Chaiken, PhD, professor of biochemistry and molecular biology, second-year MD student Priyanka Shah, senior research scientist Gabriela Canziani, and Microbiology & Immunology PhD student Erik Carter authored “The Case for S2: The Potential Benefits of the S2 Subunit of
the SARS-CoV-2 Spike Protein as an Immunogen in Fighting the COVID-19 Pandemic” in Frontiers in Immunology, March 9, 2021.

Chaiken and current and former members of his laboratory including Adel Ahmed Rashad, PhD (former research assistant professor), Biomedical Engineering program students Aakansha Nangaria and Charles Ang, and Md. Alamgir Hossain, PhD (former postdoctoral researcher); Chemical and Biological Engineering PhD student Steven Gossert, and Chemical and Biological Engineering Professor and Department Head Cameron Abrams, PhD, with colleagues at the University of Pennsylvania, published “HIV-1 Env-Dependent Cell Killing by Bifunctional Small-Molecule/Peptide Conjugates” in ACS Chemical Biology on January 15, 2021.

Chaiken; Abrams; Nangaria; Bibek Parajuli, PhD, former postdoctoral fellow; Kriti Acharya, MS biochemistry ’15, former Chaiken Lab manager; Shiyu Zhang, Biomedical Engineering PhD student; Alexej Dick, PhD, former postdoctoral researcher; and Brendon Ngo, first-year MD student, authored “Identification of a Glycan Cluster in gp120 Essential for Irreversible HIV-1 Lytic Inactivation by a Lectin-Based Recombinantly Engineered Protein Conjugate,” which appeared in the November 13, 2020, issue of the Journal of Biochemistry. Gossert, Parajuli, Chaiken and Abrams published “Roles of Variable Linker Length in Dual Acting Virucidal Entry Inhibitors on HIV-1 Potency via On-the-Fly Free Energy Molecular Simulations” in Protein Science, November 2020.

Chaiken’s project in collaboration with a colleague from Yale University, titled “Structure-Based Antagonism of HIV-1 Envelope Function in Cell Entry,” achieved its 24th year of funding. The project received additional NIH funding for an administrative bridge-to-the-doctorate supplement, which funds the stipend, tuition, benefits and supplies for an underrepresented minority PhD student. Aicha Bendia, from the Biochemistry of Health & Disease program, was the recipient. Chaiken’s project “Bifunctional Chimeras Targeting Both HIV-1 Env and Host Cell Co-receptors” was also awarded continued funding from NIH. The project is a joint effort by laboratories at the Chinese Academy of Sciences in Shanghai and Drexel.

John Chojnowski, a student in the Molecular & Cell Biology & Genetics PhD program, received a 2021 Dean’s Fellowship for Excellence in Research for his project “Evaluating a Novel Mechanism of Regulation for a Master Kinase.”

Lorela Ciraku, PhD candidate in the Molecular & Cell Biology & Genetics program, was chosen to present her research titled “O-GlcNAc Transferase Regulates Glioblastoma Acetate Metabolism via Regulation of CDK5-Dependent ACS2 Phosphorylation” as a short talk at the 2021 American Association for Cancer Research Annual Meeting: Minisymposium on Metabolic Pathways in Cancer.

Jennifer Connors, a PhD student in the Microbiology & Immunology program, received a 2021 Dean’s Fellowship for Excellence in Collaborative or Themed Research, a Trainee Abstract Award for the 2021 American Association of Immunology conference, and honorable mention for Best Senior Poster at the Philadelphia Infection and Immunity Forum in December 2020.

Connors published “The Impact of Immuno-aging on SARS-CoV-2 Vaccine Development” in the February 2021 issue of GeroScience. Coauthors include Matt Bell, Microbiology & Immunology PhD student; Jennifer Marcy, MS molecular and cell biology and genetics ’18; Michele Kutzler, PhD, associate dean for faculty and associate professor, Departments of Microbiology & Immunology and Medicine; and Elias El Haddad, PhD, professor, Department of Medicine.

Connors, Haddad, and a colleague at University of Lausanne, Switzerland, authored “Aging Alters Immune Responses to Vaccines” in the January 31, 2021, issue of Aging. In addition, Connors, Kutzler, Haddad, Sana Alturki, MS immunology ’19, Saswan Alturki, MS infectious disease ’18, and Gina Cusimano and Abdullah Izmirly, Microbiology & Immunology PhD students, published “The 2020 Pandemic: Current SARS-CoV-2 Vaccine Development,” in Frontiers in Immunology, August 19, 2020.

Genevieve R. Curtis, Neuroscience PhD student, Kathleen Oakes, MD program class of 2023, and Jessica R. Barson, PhD, assistant professor, Department of Neurobiology & Anatomy, published a review paper, “Expression and Distribution of Neuropeptide-Expressing Cells Throughout the Rodent Paraventricular Nucleus of the Thalamus” in Frontiers in Behavioral Neuroscience in January 2021. Curtis was awarded a Dean’s Fellowship for Excellence in Collaborative or Themed Research from the Graduate School of Biomedical Sciences and Professional Studies.

Marie-Pascale Côté, PhD, assistant professor, Department of Neurobiology & Anatomy, was awarded a five-year, $1.89 million R01 grant from the National Institutes of Health, which supports the project “Mechanisms of Action Contributing to Decrease Spasticity and Improve Motor Recovery With Repeated Transcutaneous Stimulation After Spinal Cord Injury.”

Gina Cusimano, a PhD candidate in the Microbiology & Immunology graduate program, was selected to give a talk, “ADA-1 Adjuvanted SARS-CoV-2 DNA Vaccines Have Enhanced Immune Durability and Antibody Quality,” at the 2021 American Association of Immunologists Immunology Conference on May 10, 2021.

Dr. Haddad

Ms. Curtis

Ms. Oakes

Dr. Chaiken

Dr. Chaiken
WHAT WE’RE DOING

Simon Danner, PhD, assistant professor, Department of Neurobiology & Anatomy, and two colleagues from the University of Louisville received a five-year, $2.9 million, multi-investigator R01 grant from the National Institutes of Health for “Propiospinal Neuron Function in Normal and Post-SCI Locomotion.”

Anthony DiNatale, Pharmacology & Physiology PhD student, received the department’s Benjamin Weiss Scholar Award, which was established in honor of Dr. Weiss’ legacy of teaching, research, mentorship and commitment to the advancement of scientific knowledge.

Laura Giacometti, PhD, a postdoctoral fellow in the Department of Pharmacology and Physiology, won the Research Society on Alcoholism’s Junior Investigator Award.

Peter G. Gliebus, MD, academic chair of neurology, with colleagues from the College of Nursing & Health Professions and the Dornsife School of Public Health, received a grant from Independence Blue Cross to investigate non-pharmaceutical interventions to combat dementia.

Haviva M. Goldman, PhD, professor and vice chair for medical education in the Department of Neurobiology & Anatomy, presented two medical education papers at the virtual American Association for Anatomy meetings at Experimental Biology 2021, held April 27-30. As an invited speaker in a symposium titled “Histology, What Is It Good For?” she presented “Weaving Histology Into the Fabric of Medical Education: Histology as a Foundation for Integration and Application.” She was also selected to present a collaborative research project, “Shifts in Digital Resources Usage for Gross Anatomy Education During Covid-19” at an educational platform session. Some of the research presented was recently published in a paper in the March 2021 issue of Anatomical Sciences Education, “An Analysis of Anatomy Education Before and During Covid 19: May–August 2020.”


Renée Jean-Toussaint, PhD pharmacology and physiology ’19; Pharmacology & Physiology PhD students Zhucheng Lin and Xuan Luo; Pharmacology & Physiology research associates Yuzhen Tian and Richa Gupta; Microbiology & Immunology PhD student Richa Pandé; Ahmet Sacan, PhD, associate teaching professor, School of Biomedical Engineering, Science and Health Systems; Seena K. Ajit, PhD, associate professor, Department of Pharmacology & Physiology; and a colleague at Rutgers New Jersey Medical School published “Therapeutic and Prophylactic Effects of Macrophage-Derived Small Extracellular Vesicles in the Attenuation of Inflammatory Pain” in the May 2021 issue of Brain, Behavior, and Immunity. The work was highlighted by the article recommendation service Faculty Opinions.

Michele Kutzler, PhD, associate dean for faculty and associate professor, Departments of Medicine and Microbiology & Immunology, was elected to serve on the AAMC Group on Faculty Affairs Research and Scholarship Committee, which is responsible for promoting faculty affairs and faculty development research and scholarship. Kutzler has also been elected president of the Eastern Pennsylvania Branch of the American Society for Microbiology, starting July 1, 2021.

Kutzler; colleagues from the Dornsife School of Public Health including Daniel Vader, PhD epidemiology ’20, Seth Welles, PhD, and Neal Goldstein, PhD, MBI; and Chelsea Weldie, MS drug discovery and development ’19, published “Hospital-Acquired Clostridioides difficile Infection Among Patients at an Urban Safety-Net Hospital in Philadelphia: Demographics, Neighborhood Deprivation, and the Transferability of National Statistics” in Infection Control & Hospital Epidemiology, December 7, 2020. Kutzler was a panelist for the Infectious Diseases and Vaccines Panel for the Association for Women in Science Philadelphia chapter on April 22, 2021. Rosshell Muir, PhD, postdoctoral researcher, Department of Medicine, moderated the panel.


Dana Lengel, MS, a PhD student in the Neuroscience program, published a review titled “Stem Cell Therapy for Pediatric Traumatic Brain Injury” in Frontiers in Neurology in December 2020. Ramesh Raghupathi PhD, professor, Department of Neurobiology & Anatomy,
Zoe Romm, MLAS ’17, research technician, Department of Neurobiology & Anatomy, and Cruz Sevilla, MS, second-year MD student, were co-authors. Lengel also received a $5,000 Dissertation Award from the Brain Injury Association of America for a project titled “The Role of FK506-Binding Protein 51 (FKBP5) in Long-term Psychosocial Outcomes of Pediatric TBI.”

Zhucheng Lin, a PhD student in the Pharmacology & Physiology program, received the Department of Pharmacology & Physiology’s Mary Hoffman Shaw Travel Award. The award provides travel support for graduate students to present their research at a national meeting.

Jared Luchetta and Chunta Ho, Pharmacology & Physiology PhD students; Elena Irollo, PhD, research associate; Bradley Nash, PhD pharmacology and physiology ’17, scientific writer; and Olimpia Meucci, MD, PhD, professor and chair, all in the Department of Pharmacology & Physiology, authored “Mechanisms of Neuronal Dysfunction in HIV-Associated Neurocognitive Disorders,” published in Cellular and Molecular Life Sciences, February 13, 2021. Luchetta also received a Mary Hoffman Shaw Travel Award from the Department of Pharmacology & Physiology.

Petyo Manev, a chemical engineering undergraduate student working in Irwin Chaiken’s laboratory, received a mini-grant for “Profiling the SARS-CoV-2 Immune Response Post-Infection and Vaccination” from the Undergraduate Research & Enrichment Programs, Pennoni Honors College.

Joanne Mathiasen, PhD, professor of pharmacology and physiology and co-director of the Drug Discovery & Development program, served as a scientist reviewer on the Chronic Pain Management Research Program Study Section for the Department of Defense Directed Medical Research Programs. Congressionally

Taylor McCorkle, MS, a PhD student in the Neuroscience program, published a review titled “A Role for the Amygdala in Impairments of Affective Behavior Following Mild Traumatic Brain Injury” in Frontiers in Behavioral Neuroscience in March 2021. Ramesh Raghupathi, PhD, professor, and Jessica R. Barson, PhD, assistant professor, both in the Department of Neurobiology & Anatomy, were co-authors.

Calendar

Ongoing
Now–September
Seat at the Table Exhibition
View the multimedia segment at women100/seatatthetable
In-person exhibition temporarily closed until the Kimmel Center reopens
Contact: vision2020@drexel.edu

July
5 Independence Day (Observed)

August
2 West Reading Campus Open
26 Toast to Tenacity
The grand finale of Vision 2020’s yearlong Women 100 celebration
Contact: vision2020@drexel.edu

September
6 Labor Day

October
21 Discovery Day
The College of Medicine’s annual day of research returns to the Pennsylvania Convention Center
Contact: Stephanie Schleidt, ss3946@drexel.edu

Save the Date
Women’s Leadership Summit, December 3, 2021
Contact: Karen Berkowitz, kmb354@drexel.edu

Full calendar: All College of Medicine events are available at drexel.edu/medicine/news-events/events.

Alumni: For information about alumni events, please call toll-free 888.DUGRADS (888.384.7237), email medical.alumni@drexel.edu or visit drexel.edu/medicine/alumni/events.
WHAT WE’RE DOING

Megan Meuser, Biochemistry of Health & Disease PhD student, Camille Cunanan, Molecular & Cell Biology & Genetics PhD student, Simon Cocklin, PhD, associate professor of biochemistry and molecular biology, and a colleague at Angle North America published “Structure, Function, and Interactions of the HIV-1 Capsid Protein” in *Life* online January 29, 2021. Meuser; Alexej Dick, PhD, former postdoctoral researcher; Jean Marc Maurancy, MS molecular and cell biology and genetics ’20; and Cocklin authored “Rapid Optimization of the Metabolic Stability of a Human Immunodeficiency Virus Type-1 Capsid Inhibitor Using a Multistep Computational Workflow,” which appeared in the *Journal of Medicinal Chemistry* online March 22, 2021.

Hager Mohamed and Jennifer Connors, PhD students in the Microbiology & Immunology program; Elias El Haddad, PhD, professor, Department of Medicine; Microbiology & Immunology faculty members Will Dampier, PhD, assistant professor, Brian Wigdahl, PhD, professor and chair, Vandana Miller, PhD, associate professor, and Fred Krebs, PhD, associate professor; and colleagues from the Leibniz Institute for Plasma Science and Technology Greifswald published “Non-thermal Plasma Modulates Cellular Markers Associated With Immunogenicity in a Model of Latent HIV-1 Infection” in *PLoS One*, March 1, 2021.

Kamran Mohiuddin, MD, MBA LeBow ’19, associate professor and director of the Clinical Research graduate programs, has been named a fellow of the Academy of Physicians in Clinical Research in recognition of his excellence, innovation and leadership in clinical research.

Micaela O’Reilly, a Neuroscience PhD student, received an F31 NRSA predoctoral fellowship in April 2021, for “Role of NF-kB in Sympathetic Hyperreflexia After Spinal Cord Injury.”

Mitchell Parker, a graduate student in the Molecular & Cell Biology & Genetics PhD program, was awarded a Ruth L. Kirschstein National Research Service Award (F30) from the NIH’s National Institute of General Medical Sciences (NIH-NIGMS) for “Creating a Unified RAS Structural Nomenclature to Compare the Impact of Oncogenic Mutations on KRAS, NRAS and HRAS.”

Danielle Piazza, a PhD student in the Molecular & Cell Biology & Genetics program; Joshua Chang Mell, PhD, assistant professor of microbiology and immunology; and colleagues from the School of Biomedical Engineering, Science & Health Systems including students Heba Zuhair Abid, Kaitlin Raseley and Dharma Varapula; postdoctoral researcher Eleanor Young, PhD; alumni Jennifer McCaffrey, PhD biomedical/medical engineering ’18, and Hung-Yi Wang, MS biomedical engineering ’20; and Associate Professor Ming Xiao MD, PhD, published “Customized Optical Mapping by CRISPR-Cas9 Mediated DNA Labeling With Multiple sgRNAs” in the January 25, 2021, issue of *Nucleic Acids Research*.

Breanne E. Pirino, Neuroscience PhD student, was awarded a Student Merit Award from the National Institute on Alcohol Abuse and Alcoholism to attend the Research Society on Alcoholism 2021 conference. Pirino and her mentor, Jessica R. Barson, PhD, assistant professor, Department of Neurobiology & Anatomy, published a commentary, “A little Night(PA)CAP: Pituitary Adenylyl Cyclase-Activating Polypeptide Mediates Behavioral Effects of Alcohol Withdrawal” in *Neuropsychopharmacology*, February 2021.

Kristopher Raghavan, a PhD student in the Molecular & Cell Biology & Genetics program, Edna Cukierman, PhD, an adjunct faculty member for the program, and colleagues at Fox Chase Cancer Center published “Palladin Isoforms 3 and 4 Regulate Cancer-Associated Fibroblast Pro-tumor Functions in Pancreatic Ductal Adenocarcinoma” in *Scientific Reports* on February 15, 2021.

Ramesh Raghupathi, PhD, professor, Department of Neurobiology & Anatomy, received a five-year R01 grant from the National Institute of Neurological Disorders and Stroke, for “Dopaminergic Mechanisms Underlying Behavioral Deficits Following Mild Traumatic Brain Injury” in the amount of $1,764,049. Rodrigo España, PhD, associate professor, Department of Neurobiology & Anatomy, is a co-investigator on the grant. Raghupathi and Taylor McCorkle, MS, a student in the Neuroscience PhD program, received an NIH research supplement to promote diversity in health-related research programs, providing three years of support for a project titled “Cholinergic Mechanisms Underlying Cognitive Deficits Following Repeated Mild TBI.”

Raghupathi delivered a talk, “Long-Term Behavioral Consequences of Pediatric Traumatic Brain Injury,” at the triennial meeting of the International Neurotrauma Society, held virtually in Melbourne, Australia, February 8–11, 2021.
Katelyn Reeb, a PhD student in the Pharmacology & Physiology program, was a runner-up in the Science Sketch Competition of the Philadelphia chapter of the Society for Neuroscience for her submission “The Mechanism of Allosteric Modulation of Glutamate Transporters.”

Jonathan Richards, a Neuroscience PhD candidate, presented a poster, “CCL2-Induced Macrophage Accumulation in the Dorsal Root Ganglia Correlates With Persistent Paw Hypersensitivity,” at the onlineTexas Pain Research Meeting held on April 7 and 8, 2021.

Anas Qatanani, a third-year MD student, was selected as a semifinalist for the Fullbright U.S. Student Program for 2021–2022.

Atom Sarkar, MD, PhD, professor of neurosurgery, and colleagues from Brown University, Albert Einstein College of Medicine, and University of Minnesota College of Veterinary Medicine, published “miRNA-Mediated Loss of m6A Increases Nascent Translation in Glioblastoma” in PLoS Genetics on March 8, 2021.

Priscila Sato, PhD, assistant professor, Department of Pharmacology & Physiology, received a pilot grant from the Diabetes Research Center at the University of Pennsylvania Perelman School of Medicine. The funding will support her project “The Functional Role of GRK2 in Regulating Islet Function,” and open new collaborative opportunities with colleagues at the University of Pennsylvania. Sato was also invited to serve on the American Heart Association Fellowships Cardiology 3 Study Section.

Barbara Schindler, MD, professor of psychiatry and pediatrics, received the Distinguished Service Award from the Liaison Committee on Medical Education, in recognition of her dedication, generosity of time and spirit, insight and collegiality. Schindler, Nielufar Varjavand, MD, professor of medicine and director, Physician Refresher/Reentry Course, and Mark Reber, MD, affiliate psychiatry faculty, presented “Loter in Our Careers: Clinical and Developmental Issues” at the Philadelphia Psychiatric Society’s 2021 Colloquium of Scholars.

Christian Sell, PhD, associate professor, Department of Biochemistry & Molecular Biology, has been invited to speak at the 2021 Symposium on Health Aging hosted by the Orentreich Foundation for the Advancement of Science.

Meredith Singer, Molecular Medicine MS program student, presented a poster, “Unbiased Analysis of Primary Afferent Fibers in Spinal Cord Injured Rats With and Without Strength Training,” at the online Texas Pain Research Meeting, held April 7 and 8, 2021.

Jessica Smart, research assistant, Department of Pharmacology & Physiology, Julia Oleksak, Molecular & Cell Biology & Genetics PhD student, and Edward Hartsough, PhD, assistant professor, Department of Pharmacology & Physiology, authored “Cell Adhesion Molecules in Plasticity and Metastasis,” which was published in Molecular Cancer Research in January 2021.

Michelle L. Swift, Molecular & Cell Biology & Genetics PhD student; Kate Beishline, PhD biochemistry ‘13; Samuel Flashner, MS cancer biology ‘16; and Jane Azizkhan-Clifford, PhD, professor and chair, Department of Biochemistry & Molecular Biology, published “DSB Repair Pathway Choice Is Regulated by Recruitment of 53BP1 Through Cell Cycle-Dependent Regulation of Sp1” in Cell Reports, March 16, 2021.

Nielufar Varjavand, MD, professor of medicine and director, Physician Refresher/Reentry Course, presented “Global Health at Medical Schools & Drexel University College of Medicine” at Department of Medicine grand rounds for Tower Health on February 12, 2021. Varjavand also published “Student and Faculty Diversity Is Insufficient to Ensure High-Quality Medical Spanish Education in U.S. Medical Schools” in the Journal of Immigrant and Minority Health, April 9, 2021, with colleagues from the University of Illinois College of Medicine, Wake Forest School of Medicine, Northwestern University Feinberg School of Medicine, University of Michigan School of Medicine and Harvard Medical School.

Shayna Zanker, second-year Interdisciplinary Health Sciences student, co-authored “Mesenchymal Stem Cell-Derived Neural Progenitors in Progressive MS: Two-Year Follow-up of a Phase I Study” with colleagues from the Tisch Multiple Sclerosis Research Center of New York. The paper was published in Neurology: Neuroimmunology & Neuroinflammation in January 2021.

Erol Vezenedaroglu, MD, Robert A. Groff Chair of Neurosurgery, was awarded a grant from the American Syringomyelia & Chiari Alliance Project to study medicinal marijuana usage in patients with Chiari malformation. Vezenedaroglu was also elected president of the Society of University Neurosurgeons.

Tell your colleagues what you’re doing. Email CoM_Pulse@drexel.edu.
New Health Sciences Building Underway

Rendering of the new health sciences building currently under construction in University City. The building will house academics and administration for the College of Medicine and College of Nursing and Health Professions.