AWARDS

Find out what awards, Grants, and other efforts our students are being recognized for outside of the UMSOM.

PUBLICATIONS

Our students are hard at work researching and writing. What have they discovered?

OUR FIRST YEAR MEDICAL STUDENTS

Read a little bit about our first year medical students....
Da’Kuawn Johnson was recently featured in a blog on what motivates and drives the next generation of leaders. Below is an excerpt:

Q: Are there any unique or special aspects of your organization that contribute to a positive workplace culture?
A: I believe the unique aspect of my current position is that I am surrounded by people who genuinely love what they do, and it is not simply a job. [continued on page 27]

Adrienne Kambouris is in her first year of graduate school and was recently featured in a blog called BlackGirlMedicine. Here is an excerpt:

When I was 8, I decided I wanted to be a doctor. The adults that I interacted with regularly reinforced that dream. But at 17, I had no idea how to accomplish my goal. After I graduated from high school, I joined the Army. I ended up serving for ten years. [continued on page 27]
The conventional meaning of “treatment” does not account for the flexibility and humility it takes to take care of patients with conditions that challenge a physician’s line of reasoning.

-Michael Sikorski

Michael Sikorski Receives Award for Essay

Global Genes celebrates these recipients and all of the medical students who participated in the Cox Scholarship this year. We also want to thank the patients and families connected with Foundation Alliance members who opened up their homes and lives to help future physicians learn more and develop compassion for the daily challenges facing the rare community.

From January to June, Michael participated in the Global Genes David R. Cox Scholarship for Rare Compassion program, where he was matched with a patient with a rare genetic condition and their family. The following is an excerpt from an essay written about the experience:

Hi, I am a second-year MD-PhD student and I am eager to share with you my experience meeting the White family. Like all medical students, my dream is to someday become a good doctor – a smart, kind, and good doctor. In medical school, I am learning how to begin with a patient’s chief complaint, elicit a history of the present illness, conduct a physical examination, differentiate the probable diagnosis amongst all possibilities, and propose an assessment and plan of care according to evidence-based medicine. The star of the following story, Sarah White, carries seven diagnoses: pediatric autoimmune neuropsychiatric disorder associated with streptococcus (PANDAS), encephalopathy, postural orthostatic tachycardia syndrome (POTS), autoimmune thyroid disease, scoliosis, small fiber polyneuropathy (SFPN), and chronic inflammatory demyelinating polyneuritis (CIDP). I wonder if a good doctor can read that list, recreate the patient in their mind, and pinpoint the right treatment protocol.

The full essay can be found at: https://globalgenes.org/2018-david-r-cox-scholarship-for-rare-compassion-recipients/
Scenes from MSTP life

This journey was made possible by my amazing advisor Dr. Tom Blanpied, the entire Blanpied Lab of stud scientists, our immensely helpful collaborators and colleagues, the UMSOM Medical Scientist Training Program, Program in Neuroscience, and Meyerhoff Graduate Fellows Program, our funding sources (esp. the NIH), and of course, family and friends.

Thank you all! On to the next one...
Infectious Diseases Society of America Foundation Medical Scholars Program

Whether stopping worldwide outbreaks or uncovering that rare condition that eluded the primary care team, ID physicians save lives. Thanks to advances in the field, these proverbial “medical detectives” have also help to make it safe for us to have routine surgery, receive chemotherapy treatment, survive organ transplants and much more.

With the rate of infectious diseases outpacing the number of new ID physicians entering the field, the IDSA Foundation is taking a forward-thinking approach to building a pipeline of tomorrow’s ID leaders.

That’s why the IDSA developed the Medical Scholars Program. Through this highly rated program, the IDSA provides first, second or third-year medical students with access to an ID research experience designed to spark intellectual curiosity and inspire the pursuit of a career in the field of infectious diseases.

Selected scholars are sponsored by an IDSA Member or Fellow, such as Dr. Roghmann, our current director, to advance ongoing research, initiate new studies, or explore other concepts within the field of infectious diseases outside of their primary institution. Eligible categories include: Clinical Infectious Diseases, Clinical Research, Epidemiology, International Health, Laboratory Research, Medical Education and/or Prevention.

Selected awardees receive a $2,000 grant and a FREE one-year membership to IDSA.
A GLIMPSE OF A RESEARCH TRACK RESIDENCY

Mark Kvarta, MD, PhD, MSTP class of 2017

I graduated from the MSTP after an 8 year journey as part of the class of 2017. I completed the Program in Neuroscience with my thesis focused on the opposing effects of chronic stress and antidepressants on synaptic function in the hippocampus and behavioral phenotypes in rodent models of depression.

Selecting a specialty to pursue in residency, or even deciding whether to do a residency, varies in difficulty and complexity by individual. You'll get heaps of advice about this along the way from many different perspectives; it may help to remember that the advice-giver is also just one individual along this spectrum, and I am no exception. For me, I had been leaning somewhere between neurology and psychiatry for most of my training, with psychiatry fully solidifying as my life choice during my MS3 year.

Figuring out where you want to go for residency can be a bear. The next decision after selecting your desired specialty may be to consider to what extent you hope to continue to pursue research during this next phase of your training. The exact format of what this might look like also will vary based on specialty and whether it is a formal "research track," whether there are opportunities to make it research intensive, (i.e. primarily through elective time or other special considerations in a general track) or simply whether a program will encourage you to squeeze research in on your nights and weekends and then hope to take credit for supporting you while whispering that you should just wait and do a fellowship. Even within psychiatry, I had the chance to observe each of these approaches on the interview trail. Some residencies will have a single general program into which you will apply before moving into a research track after intern year, others will have a separate code in ERAS and a separate application to fill out from the general residency from the outset. Some will have a well-oiled track to send you on, while others don’t have much recommended structure at all. Obviously there are positives and negatives to each approach.
I was lucky enough to land in my top choice in the newly created "Physician Scientist Training Program" open only to MD/PhDs in the joint UMMC/Sheppard and Enoch Pratt Hospital psychiatry program as the inaugural trainee. Incidentally the general psychiatry residency is one of the largest psych programs in the country--class size being yet another thing to consider when making your match list with its own pros and cons along with geography, hospital(s) covered size and scope, exposure to different training settings, how researchers are treated in training, actual research opportunities available, call schedules, moonlighting/extra training opportunities, departmental focus, vacation time, family leave policies, whether parking and food are free, educational stipends, whether the program will pay for your license, gut feeling, etc., etc., etc.

I will write the most here about that which I best know - the research track program I am currently in. Most psychiatry residencies start with a built-in intern year that includes about half of a year of not-psychiatry, and programs are generally 4 years total. The UMMC/SEPH program includes 3 months of medicine (done at Mercy alongside their prelims), 2 months of neurology (at UMMC and the VA) and 1 month of emergency medicine at UMMC (either adult or pediatric). Within the 6 months of psychiatry as a 1st year resident (PGY1), you typically switch service or site every 4-6 weeks. My experience included substance abuse psychiatry (both inpatient and outpatient), an inpatient psychosis unit at SEPH, an inpatient treatment-refractory psychosis unit at Spring Grove Hospital in Catonsville, child psychiatry (day hospital, inpatient, and outpatient), and the infamous Psychiatry Emergency Services--a locked emergency department unit for patients who are acutely suicidal, psychotic, or in psychiatric crisis in some way.

As a PGY2, I have 3 months of protected research time with no call, sandwiched between 9 months of inpatient and consult/liaison psychiatry duties. In my third year of residency I will have 20% research time throughout the year (~1 day per week) but a normal senior call schedule (which is generally light anyway - 2-3 overnight or 24-28 hour shifts per month); this will be integrated alongside my outpatient clinic schedule which is the balance of PGY3 time. Finally as a PGY4 I will have up to 80% time for research and electives, again with a typical senior call schedule. Hopefully I'll be in a good place to be applying for independent research funding as I near the end of residency. Additional benefits of the program includes some additional funding from the department for research as needed on a case-by-case basis above that already provided for general residents for educational funds and presenting at conferences. The stated goal for this program is to produce physician-scientists that an academic psychiatric department would want to hire as faculty. From my point of view I would hopefully be in a good position to negotiate a startup package that will give me both protected research time along with a desirable clinical duty schedule.

If anyone has any questions from general to very specific about any stage in training, further advice about residency planning, the joys and challenges of having a baby immediately before intern year, or financial planning going into residency (with or without daycare bills!), feel free to email me. Best of luck in your training!
Meet our First Year Medical Students

Maddy Alizadeh
University of Maryland, College Park

Ken Brandon II
Oakwood University & the University of Alabama in Huntsville

Matthew Eason
University of Maryland, College Park

Casey Hostaeder
Lehigh University

Aishu Iyer
University of Maryland Baltimore County

Katie Kruk
Grand Valley State University

Mitch Moyer
University of Pittsburgh

Chimdiya Onwuke
University of Maryland Baltimore County

Justin Schumacher
University of Rochester

Erin Wildermuth
American University

London School of Economics
Maddy Alizadeh

is a very proud UMD alum (go Terps!!!) and was heavily involved in recruitment for the University and in the Iranian community (both on and off campus) during her years there. While there, she also did research in a trypanosome transcriptomics lab on campus for the last 3 years, while her first 2.5 years of research were done in a transgenics lab at NIMH.

WHY I CAME TO MSTP AT MARYLAND... I want to do a bioinformatics heavy PhD, and Maryland has an excellent program/opportunities for students interested in computational biology. It's also very close to home, and I loved the people I met and the vibe I got when I visited. I feel so lucky to have found such a perfect program!

Aishwarya “Aishu” Iyer

came to MSTP from UMBC where she received a B.S. in Biochemistry and Molecular Biology. In addition to being a Meyerhoff Scholar and student athlete in tennis, she founded a student organization called PHLEx (Physical Health Lifestyle Excellence) to educate students about resources on campus to lead a healthier lifestyle.

WHAT DREW YOU TO MEDICINE? As an athlete, I had a lot of injuries (fractured elbow, fractured feet, sprains, etc.). But the most impactful one was when I tore my retina playing tennis at the age of 15, and my retinal specialist really supported me through a scary experience. Within five days of the injury, he performed surgery to prevent retinal detachment and the possibility of blindness.
Mitchell Moyer went to the University of Pittsburgh for undergrad dual majoring in neuro/psych. He was heavily involved in research while there, working in a lab elucidating the effects of omega-3 fatty acid dietary deficiency on dopamine anatomy. He also was involved in a clinical research program called the Multidisciplinary Acute Care Research Organization (MACRO) designed to help physicians at UPMC facilitate the enrollment of patients from the ED/ICUs into clinical trials.

Erin Wildermuth grew up in a military-turned-state-department family, moving every couple of years. She completed her undergrad degree at American University in International Relations, a master's degree in International Political Economy from the London School of Economics, and completed her medical school prerequisites at Pima Community College in Tucson, AZ years later. [continued pg. 11]
Casey Hofstaeder

is from Richboro, Pennsylvania, a small town just north of Philadelphia. He went to Lehigh University and majored in Biology and French.

During his time there, Casey played the viola in the university orchestra and had a radio show.

This past summer, Casey went to Argentina, Chile and Peru. In South America, he hiked, ate a ton of food, and drank great wine.

WHAT DREW YOU TO SCIENCE & MEDICINE?

“Initially, I was drawn to the concrete nature of science; however, my interest in science persisted because of the many gaps in knowledge and questions to be addressed. I was initially drawn to medicine, because of the humanistic and technical aspects of the field.”

Erin Wildermuth

[continued]

WHAT DREW YOU TO SCIENCE & MEDICINE? I was drawn to science by the opportunity to contribute to society, and to medicine by the opportunity to make a difference individually, on a more personal level.

MORE RESEARCH INTERESTS

Mitch Moyer: the underlying biological mechanisms behind psychiatric and neurodegenerative disease, and the compensatory response of the dopamine system to cell death during pre-symptomatic development of Parkinson's disease

Chimdiya Onwukwe: Nicotine addiction, Traumatic brain/spinal cord injury

Justin Schumaker: biomedical engineering and medical imaging

Erin Wildermuth: Aging
Ken Brandon II

Ken did a dual degree program at Oakwood University and the University of Alabama in Huntsville in Chemical Engineering and Chemistry. The environment at my schools provided comfort to get involved in all sorts of things like student government, basketball intramurals, pianist for musical groups, clubs, and student mentorship.

WHAT DREW YOU TO SCIENCE & MEDICINE?

A range of things drew me to science: the thought process involved, the range of material discussed (from thermodynamics to photosynthesis), the quantitative component (I LOVE MATH), and the way it explains our development and behaviors. What drew me to medicine was that it was a vehicle in which science could be applied to address some of the most vulnerable positions/situations any of us will face as humans.

In his own words...

I wouldn’t say I am most religious. In fact, I know I am not. However, I do consider myself to be a spiritual person. The reason I believe this is relevant, especially as it relates to me and medicine, is that it provides my basis for how I view myself (as a servant) and how I view others. It lays not only the foundation for my moral beliefs, but it also speaks to my experience mentoring for my last two years in college.

I had the chance to mentor Jeremiah Hall, an eight-year-old. I would stop by his school during recess or lunch time, occasionally bringing his favorite candy bar, HERSHEY’S Cookies ‘n’ Crème. Over time, I found myself bringing more than one as some of the other third graders became comfortable enough to ask. I did not mind. My favorite pastime was the swing set. I still do not know how he was able to jump off higher than me. During lunch, we had the best conversations. He liked math; I liked math. As our relationship grew, I could see beyond his quiet demeanor and see his unselfishness. He said that if he could change anything, he would make the world a nicer place.

I would agree.
Katie Kruk joins the UMD program direct from NIH where she was working on a post-baccalaureate research in retinal circuitry. Katie graduated from Grand Valley State University in Michigan where she majored in physics and minored in mathematics (for fun). At Grand Valley, Katie was a founding member of the Women in STEM Fields Club as well as on the executive board of the Physics Club and Pre-MD/PhD Club. She also tutored at the university tutoring center in physics, chemistry, organic chemistry, and biology.

THAT MOMENT WHEN MEDICINE BECAME PART OF A FUTURE PATH...

I decided to volunteer at the hospital, and I truly began to have a desire to study medicine when an older woman walked in the gift shop at the hospital one night, looking very distraught, and appearing as though she was searching for something in particular. After a couple of minutes of her searching seemingly aimlessly, I asked her, "Is there anything I can help you find?" She paused for a second and looked me directly in the eye, responding with, "What do you buy your mother who is dying?" I was speechless for about a minute as I thought about how to answer her question, or if there even was an answer to her question.

FUN FACTS

Maddy is a classically trained singer and almost did a dual program with a conservatory for undergrad. She also does traditional Iranian singing.

Erin and her husband met while working as underwater videographers in Thailand. Their new favorite place is the Baltimore aquarium, with our two-year-old in tow.

Aishu has a black belt in karate and has been a vegetarian all her life.

When Mitch lived in Germany, he managed to go to several soccer games, including a Champions League Semi-Final Match between Bayern Munich and Real Madrid, and was there when Germany won the World Cup.

Justin built his own lightsaber for use in fencing (see right).
Matthew Eason went to undergrad at the University of Maryland, College Park. He obtained a dual degree, both B.S., with majors in Biochemistry and Cell Biology/Genetics. Matthew also completed the Honors Integrative Life Sciences Program, graduated as a member of Phi Delta Epsilon’s professional pre-medical fraternity, served as secretary of a veterans and active duty member military support organization called Terps for Service Members, and served as president of the Christian college missions group Terps for Christ.

A really big part of my life was changed almost one year ago when I visited a small town outside Quito, Ecuador. While working as a counselor for a Christian missions camp for underprivileged children, the cultural bubble formed by 21 previous years of living in the exact same place was finally shattered. After seeing what impacted me as an entirely new level of domestic abuse and poverty, nonetheless among children, an additional dream to apply my physician scientist training to aid children in underprivileged Spanish speaking populations is also a huge interest of mine following my MD/PhD training here at the University of Maryland.

Matthew Eason, first year medical student
Chimdiya Onwukwe

Joins us from UMBC, where she was a Meyerhoff Scholar majoring in Biological Sciences. Chimdiya got her first serious taste for research at a summer research internship at the University of Chicago studying the neural pathways involved in nicotine aversion. She later leapt into research on the biocompatibility of hemostatic nanoparticles designed to reduce internal bleeding.

Chimdiya kept involved as an undergraduate with her volunteer work with a refugee youth project, the Gender Women’s Empowerment Committee, UMBC student government, and Bethel Campus Fellowship.

Justin Schumacher

Hails from the University of Rochester where he earned a M.S. in Biomedical Engineering and a BS in Biomedical Engineering (Biosignals and Biosystems). His senior design project was conducted working with an industry partner on hyperspectral imaging for clinical sepsis detection.

Justin put his engineering skills to work not just in the lab, but also as the Chief Engineer of WRUR radio station at the University of Rochester, where he also hosted an improv radio show for five years.
Students receiving F30 or F31 Grants

Ruth L. Kirschstein Individual Predoctoral National Research Service Award for MD/PhD and other Dual Degree Fellowships (F30) and Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (F31)

The purpose of this F30 program is to enhance the integrated research and clinical training of promising predoctoral students, who are matriculated in a combined MD/PhD or other dual-doctoral degree training program, and who intend careers as physician-scientists or other clinician-scientists. The purpose of the F31 program is to enhance the diversity of the health-related research workforce by supporting the research training of predoctoral students from population groups that have been shown to be underrepresented in the biomedical, behavioral, or clinical research workforce. The proposed mentored research training is expected to clearly enhance the individual's potential to develop into a productive, independent research scientist. Our students are encouraged to apply for these competitive grants to both receive funding as well as have experience writing research grants to further their career as a physician scientist.

Current Students:
Nathan Roberts
Allison Arai
Sai Divakaruni
Joshua Brown
Sarah Aronson
Philip Smith

2018 Graduates:
Sarah Boudova
Haiwen Chen
Tuo Peter Li
Kristi Charkrabarti
PhD Dissertations in 2018

Molly Hritzo Ahye
“Differential FOXO1 localization in SLE and health human lymphocyte subsets”
Microbiology and Immunology PhD program

Joshua Brown
“Structures and functions of the HIV-1 RNA genome”
Biochemistry PhD program

Sai Sachin Divakaruni
“The regulation and role of dendritic mitochondrial fission during long-term potentiation”
Neuroscience PhD program

Nathan Roberts
“Repurposing oxaliplatin for the treatment of glioblastoma”
Molecular Medicine PhD program

Andrew Wescott
“Cardiac Ca\(^{2+}\) signals: from local elevations, a matrix of potential”
Molecular Medicine PhD program
2019 MSTP Match Day

UCLA EyeSTAR Program, Ophthalmology, Elise Ma, MD, PhD

University of Pittsburgh Medical Center, Pathology, Jeff Kleinberger, MD, PhD

University of Colorado Medical Center, Internal Medicine/Physician Scientist Track, Haley Simpson, MD, PhD

University of Maryland Medical Center, Family Medicine, L Latey Bradford, MD, PhD

University of Pittsburgh Medical Center, Internal Medicine—Women’s Health Track, Sara Stockman, MD, PhD

University of Maryland Medical Center, Neurosurgery, Jesse Stokum, MD, PhD

University of Minnesota Medical Center, Internal Medicine, Alexander Tsai, MD, PhD
Stanford University School of Medicine, Pediatrics/Medical Genetics, Christina Tise, MD, PhD

Harvard Spaulding Rehabilitation Hospital, Physical Medicine and Rehabilitation, Anthony Park, MD, PhD

Vanderbilt University Medical Center, Internal Medicine—ABIM Research Path (Infectious Diseases), Jeffrey Freiberg, MD, PhD

Indiana University School of Medicine, Obstetrics and Gynecology, Sarah Boudova, MD, PhD

Johns Hopkins School of Medicine, Internal Medicine (Gastroenterology), Kristi Chakrabarti, MD, PhD

Johns Hopkins School of Medicine, Pediatric Neurology, Haiwen Chen, MD, PhD

New York University School of Medicine, Neurological Surgery, David Kurland, MD, PhD

Johns Hopkins School of Medicine, Orthopedic Surgery, Peter Li, MD, PhD

2018 MSTP Match Day
The Rally for Medical Research was held this year on September 12th and 13th, the same day that the House and Senate committees were meeting to reconcile the two different LHHS Funding bills passed in each chamber.

The first day of the event was focused on training the rally attendees in preparation for visiting congressional hill the next day. One aspect of the rally that really stood out to me was how focused and organized it was. It was not just a general call for supporting medical research. Instead, the training day focused on the basics of how a bill becomes a law (with all the Schoolhouse Rock references one could hope for), how to speak with elected officials and their aides to most effectively get your message across, and the NIH funding levels passed by the House and Senate (the Senate funding level was greater than the House).
The training also covered the unique situation that occurred this year with the merging of the LHHS and Defense funding bills and how that would alter our approach. Finally, the training covered the message of the rally, which was to ensure the NIH funding level passed in the Senate bill was the number included in the final bill. This provided a specific action to request of our elected officials as opposed to the more vague request to support medical research.

The second day involved everyone getting into assigned groups based on congressional district and heading over to congressional hill for meetings. The Rally organizers had already dealt with scheduling all the meetings and provided easy to understand schedule with maps to ensure we were all able to find our way between offices. The meetings themselves would involve meeting either the elected official themselves or their health policy aide where one or two members of our group would tell stories from either a patient’s or researcher’s perspective before making our request. Ultimately, as someone who has never really been involved in science policy or visited the offices of elected officials, I found the experience contributed greatly to my understanding of how policy and funding decisions are made. I hope the University of Maryland MSTP continues to send members to the Rally for Medical Research every year as the decisions made in DC can have a huge impact on what we are able to do in the lab and clinic.

Talia Guardia at SACNAS

“Interrogating the tumor and metastasis suppressor function of giant oscurins in breast cancer” was presented at the Society for the Advancement of Chicano and Native Americans in Science in October 2018.
Age-related changes in the gut microbiota influence systemic inflammation and stroke outcome.

Amplified parabrachial nucleus activity in a rat model of trigeminal neuropathic pain.

Chronic Alterations in Systemic Immune Function after Traumatic Brain Injury.
Ritzel RM, Doran SJ, Barrett JP, Henry RJ, Ma EL, Faden AI, Loane DJ.

Comparing effects of CDK inhibition and E2F1/2 ablation on neuronal cell death pathways in vitro and after traumatic brain injury.
Aubrecht TG, Faden AI, Sabirzhanov B, Glaser EP, Roelofs BA, Polster BM, Makarevich O, Stoica BA.

Concurrent Inhibition of Pim and FLT3 Kinases Enhances Apoptosis of FLT3-ITD Acute Myeloid Leukemia Cells through Increased Mcl-1 Proteasomal Degradation.
Kapoor S, Natarajan K, Baldwin PR, Doshi KA, Lapidus RG, Mathias TJ, Scarpa M, Trotta R, Davila E, Kraus M, Huszar D, Ttron AE, Pernotti D, Baer MR.

Cross-species transcriptional analysis reveals conserved and host-specific neoplastic processes in mammalian glioma.
Current and Future Perspectives on Skin Tissue Engineering: Key Features of Biomedical Research, Translational Assessment, and Clinical Application.


Design and Synthesis of Potent HIV-1 Protease Inhibitors Containing Bicyclic Oxazolidinone Scaffold as the P2 Ligands: Structure-Activity Studies and Biological and X-ray Structural Studies.

Distant Insulin Signaling Regulates Vertebrate Pigmentation through the Sheddase Bace2.

Fast, furious and enduring: Sensitive versus critical periods in sexual differentiation of the brain.
McCarthy MM, Herold K, Stockman SL.

Genome-Scale Transcriptional Regulatory Network Models of Psychiatric and Neurodegenerative Disorders.

Homotransfer of FRET Reporters for Live Cell Imaging.
Snell NE, Rao VP, Seckinger KM, Liang J, Leser J, Mancini AE, Rizzo MA.

Imaging flow cytometry: A method for examining dynamic native FOXO1 localization in human lymphocytes.
Hritzo MK, Courmeya JP, Golding A.

Inhibition of miR-155 Limits Neuroinflammation and Improves Functional Recovery After Experimental Traumatic Brain Injury in Mice.
Henry RJ, Doan SJ, Barrett JP, Meadows VE, Sabirzhanov B, Stoica BA, Loane DJ, Faden AI.

Long-Term Potentiation Requires a Rapid Burst of Dendritic Mitochondrial Fission during Induction.
Divakaruni SS, Van Dyke AM, Chandra R, LeGates TA, Contreras M, Dhamasri PA, Higgs HN, Lobo MK, Thompson SM, Blanpied TA.

Monogenic diabetes in overweight and obese youth diagnosed with type 2 diabetes: the TODAY clinical trial.
Kleinberger JW, Copeland KC, Gandica RG, Haymond MW, Levitsky LL, Linder B, Shuldiner AR, Tollefsen S, White NH, Pollin TI.

Nitric Oxide Activates β-Cell Glucokinase by Promoting Formation of the "Glucose-Activated" State.
Seckinger KM, Rao VP, Snell NE, Mancini AE, Markwardt ML, Rizzo MA.

Oxaliplatin disrupts pathological features of glioma cells and associated macrophages independent of apoptosis induction.

Pain After Spinal Cord Injury Is Associated With Abnormal Presynaptic Inhibition in the Posterior Nucleus of the Thalamus.
Park A, Uddin O, Li Y, Masri R, Keller A.
Phasic Dopamine Signals in the Nucleus Accumbens that Cause Active Avoidance Require Endocannabinoid Mobilization in the Midbrain.

Radiation-induced undifferentiated pleomorphic sarcoma of the heart: A case report.
Tsai AK, Vyfhuis MAL, Francis M, Merechi F, Burke AP, Regine WF.

Real-time local oxygen measurements for high resolution cellular imaging.
Boyman L, Williams GSB, Wescott AP, Leach JB, Kao JPY, Lederer WJ.

Real-time scratch assay reveals mechanisms of early calcium signaling in breast cancer cells in response to wounding.

Resting State Functional Connectivity of the Rat Claustrum.
Krimmel SR, Qadir H, Hesselgrave N, White MG, Reser DH, Mathur BN, Seminowicz DA.

Role of the LDL Receptor-Related Protein 1 in Regulating Protease Activity and Signaling Pathways in the Vasculature.
Au DT, Arai AL, Fondrie WE, Muratoglu SC, Strickland DK.

Selective Vulnerability of the Foramen Magnum in a Rat Blast Traumatic Brain Injury Model.
Hayman E, Keledjian K, Stokum JA, Pampori A, Gerzanich V, Simard JM.
Sex differences in acute neuroinflammation after experimental traumatic brain injury are mediated by infiltrating myeloid cells.


Small-Molecule Inhibitor of FosA Expands Fosfomycin Activity to Multidrug-Resistant Gram-Negative Pathogens.


**STAT5** inhibition induces TRAIL/DR4 dependent apoptosis in peripheral T-cell lymphoma.

**Simpson HM**, Furusawa A, Sadashivaiah K, Civin CI, Banerjee A.

Structural basis for the recognition of complex-type N-glycans by Endoglycosidase S.


Sulfonylurea Receptor 1, Transient Receptor Potential Cation Channel Subfamily M Member 4, and Kir6.2: Role in Hemorrhagic Progression of Contusion.


**SUR1-TRPM4 and AQP4 form a heteromultimeric complex that amplifies ion/water osmotic coupling and drives astrocyte swelling.**

**Stokum JA**, Kwon MS, Woo SK, Tsembalyuk O, Vennekens R, Gerzanich V, Simard JM.

Towards rationally designed biomanufacturing of therapeutic extracellular vesicles: impact of the bioproduction microenvironment.

Continued from page 2, Da’Kuawn Johnson:
When you are surrounded by people who are passionate about what you are passionate about, you don’t mind working or getting your required tasks done. I believe the passion from everyone makes a more positive and enjoyable environment.
The whole piece can be found at: http://www.sparkvisionnow.com/millennial-voices-dakuawn-johnson/

Continued from page 2, Adrienne Kambouris:
I also met my husband and had two of our children. In 2013, I decided to separate (from the military) because I felt that I could no longer grow my career; but I still had the dream to pursue medicine. I went back to school after more than 10 years out of the classroom and pregnant with my third child. I graduated in 2016 from Augusta University with a BS in Cell and Molecular Biology and Chemistry and I started an MD/PhD program at University of Maryland that fall. I have currently completed two years of medical school and have started my PhD program.
The full article can be found:
https://blackgirlmedicine.wordpress.com/2018/08/01/womencrushingitwednesday-adrienne/