



BGSA NEWSLETTER

FEBRUARY 2024
BLACK HISTORY MONTH



UPCOMING EVENTS

- BGSA Monthly meeting.....March 4th
- BGSA event by Pharmacology Dep.....March 23rd
(Stay tuned for more updates!)

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LETTER FROM THE EDITOR



SUDIPTA PATHAK

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Dear School of Medicine,

Welcome to the new year!

Another year with a boundless horizon of opportunities- a chance to set new goals, pursue new dreams, and embrace new challenges.

In this newsletter, we are celebrating **Black History Month** to honor the rich and diverse contributions of Black individuals to history, culture, and society. Through education, commemoration, and advocacy, Black History Month serves as a reminder of the importance of inclusivity, diversity, and understanding in our society. We highly encourage you to read the exceptional work of the Diversity and Inclusion committee in underscoring some of the 'African American Pioneers of Pittsburgh'.

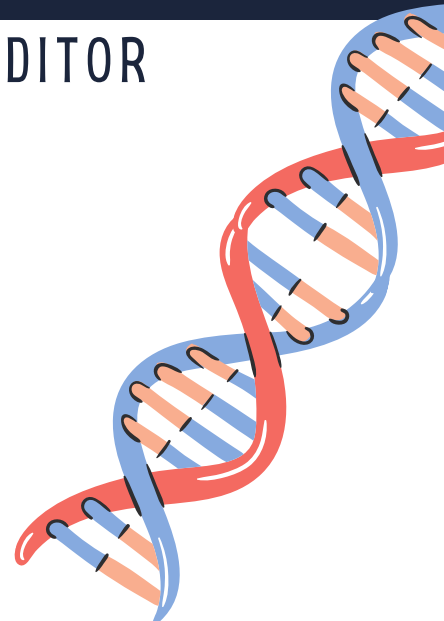
As we hear from the students and their amazing research in our student spotlight section, we encourage you to take a look at their research goals and interests outside the lab. Some of them run a YouTube channel, '**BioZone**' which educates people about simple scientific questions from a creative perspective.

Have you ever wondered how science can be translated from bench to market? How can we, as biologists articulate the impact and market the potential of our scientific innovation? We reached out to some representatives of **Fourth River Solutions**, a non-profit consulting organization led by grad students and postdoctoral fellows at Pitt. Their responses are imperative in understanding how we can apply our lab- and soft-skills in developing real-world business solutions.

This time again, we have a fun poem written by Gabriel Ratcliffe, a first-year IBGP student. We all have seen a kinesin walk (the famous animation by John Liebler!). But have you ever wondered if kinesin talked?

In our 'A Beautiful Day in the Neighborhood' section, we honor Black-owned businesses and recognize their invaluable contributions to our economy and society. We hope you enjoy reading it as much as we enjoyed curating this newsletter for you.

Cheers!



award winning YouTube channel

bioZone



sponsored by UPMC, NIH, and others



TRAVEL AWARDS

CONGRATULATIONS TO THE FELLOW GRADUATE STUDENTS FOR WINNING TRAVEL AWARDS:

DECEMBER: GABRIELLA GERLACH (CPCB), SAHANA BALASUBRAMANIAN (CBMP)

JANUARY: DARIAN YANG (MBSB)

FEBRUARY: CATHERINE THOMAS (MBSB)



DIVERSITY AND INCLUSION COMMITTEE



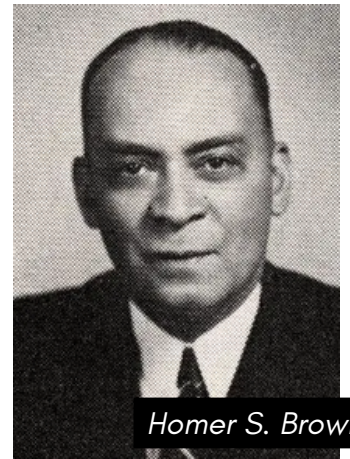
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African American Pioneers of Pittsburgh

Homer S. Brown was the first African American judge in Pittsburgh. In 1923, he received his law degree from the University of Pittsburgh and was known as an activist for civil and political rights. He was involved in the Pittsburgh Board of Education investigation for refusal to hire Black teachers, which ultimately led to the reform of the Board's hiring practices. Later, Brown became considered the "Father of the State Fair Employment Practices Act" for authoring a bill prohibiting employment discrimination in 1945. As a judge, he also declared the "sick tax", a City of Pittsburgh tax on hospitals, to be unconstitutional. Aside from his legal influence, Brown also took part in several organizations in the community. In fact, he was the founder and first president of the Pittsburgh branch of the National Association for the Advancement of Colored Persons (NAACP).



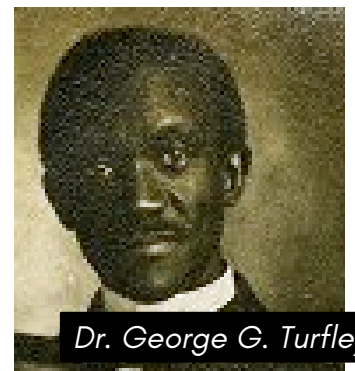
Homer S. Brown

Jackie Ormes grew up in Pittsburgh and is known as the first African American woman cartoonist. Her work was featured between 1937-1956 in newspapers such as the Pittsburgh Courier and the Chicago Defender. Ormes' work challenged political ideals, and the way in which Black women were portrayed in early 20th century media. She defied stereotypes with characters such as Torchy Brown, Patty-Jo, Candy and Ginger. Although Ormes passed in 1985, she was inducted into the National Association of Black Journalists Hall of Fame in 2014.



Jackie Ormes

Dr. George G. Turfley obtained his medical degree from Western Reserve Medical School in Cleveland - where he was one of the school's first graduates of color. Upon completion, he returned to Pittsburgh and opened a medical practice, and for ten years he was the only African American doctor in Pittsburgh. Dr. Turfley became the first registered African American doctor in Allegheny County, where he practiced for 55 years as one of the community's most prominent physicians. He was a member of Allegheny County Medical Society; Committee of Management of the Center Avenue Y.M.C.A.; Eureka Lodge of Odd Fellows and Grace Memorial Presbyterian Church where he served as clerk of session, as well as elder.



Dr. George G. Turfley

DIVERSITY AND INCLUSION COMMITTEE

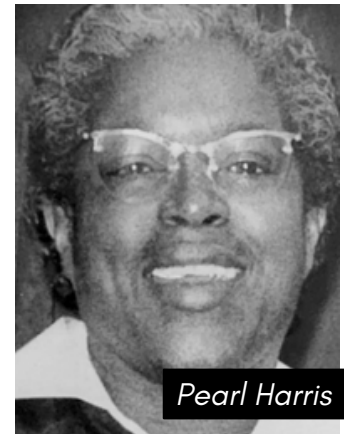


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Pearl Harris -- The federally funded Head Start program, as known today, traces its origins to the year 1965. Preceding the establishment of this federal initiative, Pearl Harris, initiated her own educational endeavor aimed at assisting children from low-income backgrounds in preparing for academic success, after being denied employment as a teacher in the area. Pearl Harris, whose teaching career commenced in Maryland, was among the six million African Americans who embarked on the Great Migration in pursuit of enhanced opportunities beyond the Mason-Dixon Line.

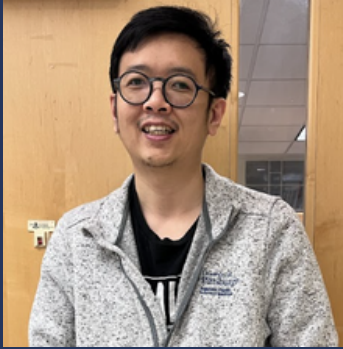


Pearl Harris

As an educator with a discerning eye for educational methodologies, Harris discerned a deficiency in the readiness of African American students as they entered the grade school system in her newly adopted community. In the year 1943, a considerable number of pre-kindergarten-aged African American children in the vicinity were erroneously diagnosed with learning disabilities or socioemotional impediments, resulting in their struggle with basic academic proficiency tests and subsequent failure to progress beyond the first grade. In response to this educational challenge, Harris formulated a preparatory curriculum explicitly tailored to ameliorate the prevalent disparities in academic achievement, which were predominantly attributable to systemic racism and socioeconomic deprivation rather than inherent academic inadequacies. The efficacy of Harris' educational model, augmented by the concerted efforts of likeminded educators, went on to be replicated throughout the country.



STUDENT SPOTLIGHT



Febri Sugiotko
(he/him)

Program: 3rd year, PMI

Lab: Li Lab

Email: fgs15@pitt.edu

Your experience:

In our lab, we work with Epstein-Barr Virus. EBV has been known as the one of tumor viruses that cause several cancers, such as Burkitt lymphoma, gastric cancer, Hodgkin lymphoma, and nasopharyngeal cancer. We are mainly focus in EBV life cycle, especially how is the dynamic between host and viral protein interactions. We discovered several host proteins that worked to restrict EBV reactivation, such as PIAS1, YTHDF families. We employ several molecular technique such as CRISPR/Cas9 knockout, Chormatin Immunoprecipitation, RNA Immunoprecipitation, confocal microscopy, western blot, qRT-PCR and others.



Breonna Runk
(she/her)

Program: 3rd year, PMI

Lab: Dermody Lab

Email: brr126@pitt.edu

Your experience:

I'm investigating how reovirus engages a newly identified receptor called paired immunoglobulin receptor B (PirB). My research aims to uncover the molecular details of the reovirus-PirB binding interface through mutagenesis and structural studies.



Huy Pham
(he/him)

Program: 1st year, PMI

Lab: Zandrea Ambrose Lab

Email: hup24@pitt.edu

Your experience:

Having learned techniques in protein research, confocal microscopy and basic programming, I'm pursuing PMI program and exploring different labs to strengthen my favorite research in host - pathogen interactions, especially at cellular and molecular levels. Currently I am rotating in Dr. Zandrea Ambrose lab to investigate how one mutation in the capsid protein of HIV (which appears more frequently in patients treated with antiviral drug) affects HIV replication within the cells.

STUDENT SPOTLIGHT



April Rich (she/her)

Program: 4th year, CPCB

Lab: Anne-Ruxandra Carvunis Lab

Email: aar75@pitt.edu

Your experience:

I study the evolution of new genes. In our lab we are particularly interested in these novel sequences that we call proto-genes which are like potential genes in the making. I specifically investigated the expression of proto-genes by reusing thousands of publicly available rna sequencing datasets to create a giant coexpression network which I used to look at questions like: under what conditions do proto-genes get transcribed? Are there certain cellular processes that are more likely to incorporate novel genes? This is all super interesting because proto-genes tend to be species specific, so understanding them gives us clues about how molecular novelty emerges and what makes different species unique!

Your interest outside lab: I along with 6 other graduate students run a science YouTube channel called bioZone to showcase interesting biology research and quirks of nature with a focus on evolutionary topic to a general audience. To give you an idea we have videos such as "How a medicine can turn your bones green", "armadillos have bad eyesight", "are banana peels actually slippery?", "birds don't have teeth". We recently reached 2,000 subscribers and have over 230,000 total views. I am very proud of the work we have done!!!

Your goals: To be a teaching professional



Mark Ebeid (he/him)

Program: 5th year, CPCB

Lab: Anne-Ruxandra Carvunis Lab

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Your experience:

I have and continue to learn the principles of scientific reasoning and thought in my lab. We focus in causal method development and application within the scope of biomedical data, so having a strong perception to guide you has been a must!

Your interest outside lab: My primary hobby is science communication. I, along with 5 other graduate students, help run several social media platforms all dedicated to producing faithful science content that is easily accessible.

Your goals: To be involved in science policy

BEYOND ACADEMIA: FOURTH RIVER SOLUTIONS



Alex Kunisky
(he/him)

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How would you define 4RS to a biologist who has no experience with business or consulting?

4RS is a student-led consulting group that advises local start-ups on business strategy using transferable skills from their graduate studies. Most of the work 4RS does is with biotech and life science start-ups in the Pittsburgh area in the form of engagements, or structured interactions with clients where the goal is to advise them on a logical course of action towards solving real-world business problems. The work 4RS does with start-ups is highly diverse which in turn exposes our consultants to different career paths. Those interested in medical science liaison roles, for example, can get to work with start-ups seeking to conduct stakeholder research which involves identifying, scheduling and/or conducting interviews with scientists, doctors, and business leaders in a particular healthcare sector or disease field.

Other projects 4RS does include market research, help with navigating FDA regulation, and preparing some of the scientific components of an FDA application. My personal favorite kind of projects I have been involved in were ones where a startup that developed a new technology with a wide range of applications seeks our help in determining which application should be prioritized as the first step, as I got to use my scientific expertise to help make a business decision.

How have your soft skills, such as problem-solving and critical thinking, in your research helped you?

The way we use problem solving and critical thinking to develop hypotheses and test them in the lab is the same in the business world. The main difference is learning the methods to collect the data and what data are important. That's where 4RS comes in. They offer training opportunities to gain the top-level knowledge of business concepts and terminology before extending real, client-centered opportunities to its members for them to practice and adapt these skills. In addition, communication and creativity are always valued in the business world as much as in an academic setting, if not more so.

BEYOND ACADEMIA: FOURTH RIVER SOLUTIONS

What project or aspect of 4RS did you find the most challenging?

The most challenging aspect is learning a new framework and set of parameters to work around. Business has different metrics for success and different methods of assessment. Understanding the methods is the key gap that we do not have. Intuition does help substantially, but experience with these foreign concepts is what is needed to excel in corporate decision making. With regards to projects, I have been on a few challenging ones where client communication has been lacking or vague. Learning how to ask the right questions to better understand client needs is a new facet of communication that was in its infancy for me before working on projects that required this adaptation. Hence communication remains a highly sought after soft skill in both academia and industry.

If there are conflicts of interest, how are they addressed?

Conflicts of interests, while rare, do happen from time to time largely due the nature of 4RS's clientele. A lot of the startups we work with are founded by PIs, postdocs, and/or PhD students who are attempting to commercialize promising results from their academic research. As such, there have been cases where one or more 4RS consultants were working in laboratories that are "in competition" with the startup founder's academic laboratory. When these situations occurred, the 4RS consultants in question were not allowed to work on projects with this particular client and were barred from accessing any confidential client documents shared with 4RS as part of the project.

What advice would you give to someone interested in pursuing business development and consulting after their graduate studies?

Network, network, network. It's all about who you know. In addition, while networking, gain as much relevant experience as possible. Working in any business context is better than having no prior experience at all to discuss during an interview.

BEYOND ACADEMIA: FOURTH RIVER SOLUTIONS



Brian Chew
(he/him)

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How would you define 4RS to a biologist who has no experience with business or consulting?

4RS is a consulting firm staffed by graduate students and post doctoral fellows at Universities in the Pittsburgh area which engages in multiple kinds of consulting work for businesses largely, but not exclusively, in the biotech or healthcare industries. Each engagement (consulting project for a company) is staffed by a group of graduate students, with a project manager and engagement manager, so you are never alone on a project, while allowing individual members of the project to develop skills like how to organize presentations for a business focused clientele, how to analyze economic data related to a market, and more. Due to the nature of consulting, every engagement has specific requirements and goals, and will allow for the development of different skills. The organization does not pay its consultants, but instead uses funds it raises to provide additional networking and training opportunities to its members. Its overall goal is to provide graduate students with vital industry skills while providing clients to individuals engaged in cutting edge research.

How have your soft skills, such as problem-solving and critical thinking, in your research helped you?

As each engagement is quite different, projects can involve more than just a persons specific knowledge, and as such emphasize ones ability to think through the engagements required targets through a critical thinking lens, with opportunities to apply specific knowledge if it is applicable for a project. Through working with project managers presentation skills will be refined throughout the project, as well as teamwork, as consultants work with a team for each engagement. Having some experience with presenting data and working on a team, as is developed graduate work, definitely helps to improve your ability to work with a team to hit project targets, and convey data important to a customer to them in an efficient manner

BEYOND ACADEMIA: FOURTH RIVER SOLUTIONS

What project or aspect of 4RS did you find the most challenging?

One aspect I found difficult in 4RS was identifying data that is readily available to the public to provide those data to customers. 4RS provides consultants with ideas on where to look for data.

If there are conflicts of interest, how are they addressed?

Prior to an engagement consultants must declare any conflict of interest. Conflicts of interest may result in a consultant not being staffed on an engagement.

What advice would you give to someone interested in pursuing business development and consulting after their graduate studies?

Engage in business development opportunities during your graduate studies. Prior knowledge of how businesses operate, presentation skills for a business, market analysis and more are helpful skills which can help one to achieve a position in consulting or in a relevant industry following graduate studies. 4RS is an example of a opportunity that allows for development of industry related skills, general soft skills, and allows for one to interact with businesses outside of the university setting which can allow one to understand the atmosphere of industry, and to network while engaged in graduate studies.



Gabriel Ratcliffe (he/him)
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TRYST WITH SCIENCE

Tubulin Road Code

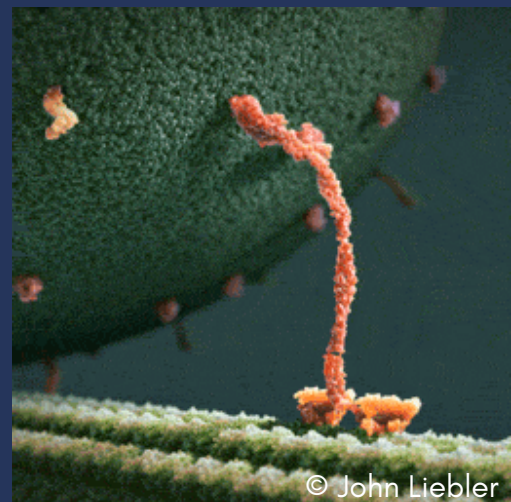
My name is Kinesin.

And I have the onus of carrying this cargo: To deliver the first defense. I'm instructed to translate and emulate the author of this script I'm given, this territory I have not long climbed with my own two motor heads. Because you often find me in neurons, you can probably deduce I'm a nervous motormouth right now, and you can tell I work m/sec and sound like a mustang whinnying and whining over the weight of this vesicle when I'm supposed to be the vehicle, a machine, a two-headed, but mindless, slave to these chain tracks, not a beast who goes his own way...whoa

I'm cool...I'm cool...run it back...

I swear I'm not ACTIN' up. (That's a Myosin problem).
This is processivity, me clinging to my substrate,
a soapbox, if you will
Man's been trying me lately,
reducing and restoring the tails of the trail
Sometimes, I just don't run right,
which depolymerizes my sanity dynamically
They TIRF'd off the surface of my new turf,
white-lining my distance, dotting my time

But the plus is my cuz Dynein, who shared the burden
and reeled me back toward the center for a sec
I can and will carry on. But like this:



© John Liebler

My name is Kinesin.

The Ki-**Nissan**.

Brand of engine driving from minus to plus

Purified, motorized, and testifying

I carry on, but to positive ends:

These roads of a/b cobblestones have a code dimerized across thousands-fold generations.

Each cobblestone has a helix 12 and a tail of their own.

They have tales of all shapes, who are iso-typed by the wills of their gluta-mates playing tag with them and the tyrosines, who make one wonder "Y" and how they reign in my race. This race has long been raced by my race, the motors. The tubular tracks build and break at different rates, yet I've reached many checkpoints. Past the yeast, past the porcine and last but not least...far different, yet similar to yeast at the cores... humanity.

If you drove this road alone and my mouth still sounds like code,
let's **C** the **Tale's Terminal...TOGETHER**.

A BEAUTIFUL DAY IN THE NEIGHBORHOOD



Art and Soul Café

Combining their love for southern style soul food and art, the Gist siblings established the Art and Soul Café. Their family has been providing catering services for over 40 years in Allegheny and other surrounding counties. In the café, you will find an eatery and art gallery, as well as Friday Night Live events.

📍 1125 Penn Avenue

Dorsey's Record Shop

Dorsey's Record Shop is family owned and has been supplying Pittsburgh with music since 1946. Whether it's new hits or old school classics, you can find a variety of collections at Dorsey's. They also offer computer networking services and analog-to-digital services.

📍 7614 Frankstown Avenue



Soil Sisters Plant Nursery

Soil Sisters Plant Nursery is dedicated to fighting against food insecurity by collaborating with local restaurants, schools and other businesses. Each plant sold by Soil Sisters is tended to personally by owners, Raynise and TaRay Kelly. TaRay Kelly works for the University of Pittsburgh's Grounds Department and is responsible for all the landscaping and gardening in the university. In addition, Soil Sisters have affiliations in Black Urban Gardeners, PA Farmers Union, and Western PA Young Farmers Coalition.

📍 123 Beltzhoover Avenue



<https://www.soilsistersplantnursery.com/>



BGSA

BIOMEDICAL GRADUATE STUDENT ASSOCIATION
AT THE UNIVERSITY OF PITTSBURGH

Newsletter Committee



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