THE RIGHT MENTOR IS OUT THERE
Make it your mission to find them... A conversation with Dr. Shane Liddelow

BEHIND THE SCENES
How a Sackler student created her own series based on her passion for science and outreach

LET'S HAVE AN AWESOME TIME DOING SCIENCE
Attend the new 'INSPIRE Science' symposium this fall
Hello, Sackler!

Front Row, left to right: Joey Mays (Secretary), Runyu Hong (Diversity and Inclusion Chair), Kody Mansfield (Co-President), and Mark MacRae (Co-President)

Back Row, left to right: Exene Anderson (Treasurer), Alexis Sommersfield (Vice President), Rachel Prescott (Social Chair), and Niklas Boess (Health & Wellness Chair)

Please join the Sackler Student Council (SSC) in welcoming our new students! We are so excited to have you all here and look forward to getting to know you. For those who don’t know us yet, SSC is made up of second and third year graduate students from various training programs who are dedicated to advocating for all of our students, providing a bridge between students and administration, and planning fun events for our Sackler community! Given the majority of us were incoming students ourselves only a year ago, we understand how daunting the transition to graduate school can be and aim to make it as easy as possible for you.

One way that SSC has been working to ensure a smooth transition for our incoming students is through the Big/Little Sib program. This program has been running for several years now and has been a great success; we hope it will be helpful for you as well. Our Big Sib volunteers are exceptionally friendly and involved members of the Sackler community, with a great breadth of knowledge of all aspects of grad school, NYU, and NYC. Feel free to ask them about anything, from which classes you should take to where to find the best pizza near campus (no, it’s not Rocky’s). In addition to the Big/Little Sib program, Sackler administration organizes “Grad Groups,” which are small groups of current students and incoming first-years in the same training program who get together for dinner or coffee about once a month to talk about all things grad school. We hope that this will provide another opportunity for you to get to know your class and senior students, as well as learn how to get the most out of your grad school experience. Thank you to all current students who volunteered for these programs!

In addition to orientation and transition events for incoming students, SSC organizes events throughout the year including our traditional events like happy hours, Halloween and holiday parties, pumpkin carving, and the spring semi-formal. We are also planning to introduce new events this year including a community-service oriented event and an afternoon of tie-dying. As we plan these events, SSC aims to be as accessible and open to feedback as possible this year so that we can tailor our events to the Sackler community. We will continue to be available to chat at our monthly happy hours, and will also be including an anonymous feedback link in all of our SSC emails to open up another avenue for ideas and suggestions. We are eager to hear from you all this year about how we can make Sackler the best place it can be for all of our students!

Sackler Student Council 2019-2020
Welcome to our incoming students!

11 MSTP students and 22 Masters students began their program on July 1, and 44 PhD students were on-boarded on August 7th. Please join our community for our first mixer of the academic year, on Friday, August 16th (5pm, Farkas Breezeway) to meet them all.

We’d like to use this opportunity to announce a few personnel changes in our graduate office. First, we would like to welcome Lori Chiraz to our team. Lori is no stranger to NYU Langone Health, having worked with the Biochemistry & Molecular Pharmacology department for many years. She will join our team as Program Manager of Graduate Programs and will sit in Susanne’s former office in MSB 228. We also plan to hire a Program Coordinator of Admissions, to help with both MD/PhD and PhD admissions. Susanne has expanded her role to oversee research reputation and communications in the Office of Science and Research. She will continue her role with our office as well. With these changes, and with the new students arriving, we thought it would be an ideal time to let everyone know which staff can help with student needs. Of course, you can always ask any of us, and we would be happy to direct you to the appropriate person.

Please remember to access the Student Community (https://central.nyumc.org/edu/site/sackler-student/sitepages/default.aspx) to find links to graduate forms (lab rotation selection, thesis mentor selection, grant award notification, thesis defense notification, STARS application) and training program-specific forms (qualifying exam guidelines, works in progress schedules). We also post course syllabi, external events, career opportunities, and other resources. And of course, please come speak to us about any concerns or feedback you may have.

Have a great semester, and we will see you all soon!

Naoko & Susanne

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THE SACKLER ADMINISTRATION

Jessica Dong, MA
Program Manager, PhD Program

Lori Chiraz
Program Manager, Graduate Programs

Lisabeth Greene, MA
Assistant Director, Graduate Student Services

Ashton Murray, MDiv
Program Manager, Diversity and Inclusion

Tim Requarth, PhD
Lecturer in Science and Writing, Assistant Director, Academic Programs

Kelly Ruggles, PhD
Director, Academic Programs

Amanda Tufekcier
Program Manager, SURP

You can find Dr. Naoko Tanese in the Skirball 3rd Floor Administration area.

The rest of the Sackler Administration can be found in MSB 228.
The Right Mentor Is Out There.
Make It Your Mission to Find Them.

A Conversation with Dr. Shane Liddelow

By Hannah Gattuso

“Support, support, support.”

In the opinion of Dr. Shane Liddelow, the most essential part of graduate school is ensuring that you have the proper mentorship. Shane is an Assistant Professor in the Neuroscience Institute, where his lab opened its doors in the fall of 2018. Through their work, his lab aims to understand the involvement of glia in neurological diseases, such as Alzheimer’s.

Shane completed his graduate training in pharmacology at the University of Melbourne where he studied the blood brain barrier. He thrived in the extremely supportive environment that he found in the lab of Katarzyna Dziegielewksa and Norman Saunders. It was during this time that he truly began to understand the importance of collaborations and taking full advantage of his resources, realizing that science expanded beyond the scope of just one lab or institution.

“You have to reach outside of your little niche to be successful in science.”

He noted, it is in this endeavor, that more interesting questions are uncovered.

When Shane felt he needed assistance beyond the scope of his own graduate lab, he made an active point to seek it out. With the support of his own advisors, he spent time in the United States expanding his repertoire of techniques, learning both molecular and primate neuroscience methodology.

In his own lab, Shane hopes to provide all his students with the same support and encourages them to seek outside expertise when it is needed. Not only does this mentality benefit his research, but also cultivates stronger scientists.

“The broader your understanding of approaches are, the more competitive you become on the [job] market.”

When asked further about his graduate experience, Shane expressed that not all his classmates were as fortunate as he in choosing the right mentor. He hopes that incoming students take the proper steps to insure they find themselves in the correct environment.

“You have to be very proactive [in choosing a mentor].”

Shane advises students take the time and energy to determine which advisor is right for them.

“Look on PubMed at their papers, find out who the first author is, and see if that person goes on to have the job you want.”

More so, he emphasizes that it is essential to reach out to past members of the potential labs. These people are more likely to voice their honest opinions, as current students may fear ramifications of criticizing their lab environment.

“[Finding the right lab] takes a lot of work, but it really is your life.”

While Shane feels he fell on good fate with his graduate advisor, when he picked his post-doctoral lab, he made a point to actively seek out a good mentor who had a history of producing strong faculty candidates. He found the support he sought in the lab of Ben Barres at Stanford.

“[Every science topic] should be interesting. If you don’t have the support, then the science doesn’t really matter.”

This mindset brought him to his current position in the Neuroscience Institute. He felt that the support at NYU, across the board, was better for him personally than the other institutions he had seen.

In his own lab, Shane hopes to train strong, independent researchers. He hopes that his students demonstrate the ability to recognize and conquer problems and how to seek out the proper resources when needed.

“My goal is for my trainees to be more successful than me. That would be really cool.”

Dr. Shane Liddelow

DC 1/29/2020
Shane actively works to provide his students and post-docs with mutually exciting projects. He admits that research is difficult and does not always go as planned, and so it is essential that both the student and mentor share a common drive to power through the tough moments.

Shane enjoys the fact that his lab is not a "fiefdom," lacking the normal hierarchy associated with science. He believes that it is important for everyone in the laboratory to understand when they are the expert in something and to be valued for that.

"Knowing when to say 'I am the expert in this,' and knowing when to say 'I need an expert in this,' is really important."

Shane believes that it is important to draw support from outside the lab as well. He encourages students to find their community, team, or group who will support them throughout graduate school. Last year, Shane ran the New York City marathon for a spinal cord injury charity. He also enjoys getting involved with outreach events.

"New York can be a lonely place, but it can also be really heartwarming as well."

Having recently moved to New York himself, Shane encourages new students to take the city for all it's worth.

"You don't need to have money to have fun in New York."

Shane enjoys the melting pot that is New York City and believes it is essential to integrate into and experience as many communities as possible. I took a moment to ask Shane what every new student must do in their first year in New York.

"Go to the [Coney Island] Mermaid Parade. It's like Pride on the beach."

Hannah Gattuso is a 2nd year PhD student studying the neural basis of olfactory driven behavior in Drosophila in the lab of Katherine Nagel. In her free time, she enjoys discovering new foods and playing the ukulele. Her latest endeavor is learning how to paint.
Behind the Scenes:
How a Sackler student created her own series based on her passion for science and outreach

By Stephanie Rogers

It’s a warm, breezy night and I’m walking in the Lower East Side toward a bar. I’ve decided to go watch a science musical. That’s right: science musicals exist.

I walk down the steps and through the curtain of the speakeasy-like Caveat. I grab a drink and some popcorn and sit back and enjoy the show. That was in my third year of grad school.

Fast forward 365 days. Now I’m walking down those same stairs, except this time I don’t grab a drink and sit at a table. I’m running a mic check, discussing last minute tech needs with the booth, and handing out free drink tickets to my entourage.

So, how did I get from audience member to series producer? With a lot of persistence, a fair amount of sheer will, and someone who believed in me and my idea.

Since high school, I’ve had a passion for educating the public about brain disorders and I’ve always been adamant about acknowledging the subconscious stigmas we assign to people with diagnoses. This passion, however, did not blossom from nothing. It was carefully cultivated by my shared experiences with my sister, who has untreatable epilepsy and faces stigma and ignorance every day.

Seizure first aid is wrought with misinformation which can lead to very dangerous situations for her. Have you heard to restrain a person and put a spoon in his/her mouth during a seizure?

PLEASE NEVER do either of these things. I am also hyper aware that epilepsy carries many stigmas and is often the sole identifier people assign to my sister. To try to share my sister’s experiences, I started hosting events and giving talks to educate the people around us.

But, no matter how many talks I gave at outreach events, I always felt that something was missing. I felt something was inherently strange about me preaching that people with epilepsy should not be treated any differently. That people with epilepsy have interests, hobbies, and talents just like everyone else. I felt it would be more powerful if my sister told them. If my sister showed them.

That’s when I first had the idea. What if there was a show that taught people the basics behind a neurological diagnosis, then had someone with that diagnosis talk about his/her life and show off his/her talents? I asked around to see if anything like this existed. It didn’t.

Before I could start thinking of a venue or finding sponsors, I needed to have a clear idea of the structure of my event. I knew that I wanted the event to be live. I knew I wanted to make science more relatable. And I knew that I wanted to incorporate the vast talent pool of the population of people with diagnoses.

I designed the show to have two acts. The first act would feature a talented science communicator talking about the biological basis of a neurological disorder in a fun and engaging way. The audience would then hear a brief blurb from a scientist about the research being done to study the disorder. After an intermission, a person who had been diagnosed with a disorder would share his/her life story with audience members then show off their passions: as poets, painters, dancers, short story authors, etc.

Ingrained within this concept itself is a marriage of two worlds: science and art. And if I could, I wanted this to be a long and fruitful marriage, in other words, it was going to be a series.

I went to Heather, the assistant director of education and outreach for the Neuroscience Institute at that time, knowing that what I need now was someone or some group to sponsor the idea. I don’t have a name or reputation in the science communication world, so if someone is going to let me use their venue, they had better have some type of assurance that I’m capable of delivering my show.

Heather liked the structure and content of the show and offered Brainy (Society for Neuroscience New York Chapter) to be the official sponsor. She also knew the Creative Director at Caveat, and suggested that I email her first to see if they would be interested in hosting the series.

At this point, I was up against some pretty unlikely odds. Brainy was sponsoring the idea, but they couldn’t provide much monetary support. So I met the Creative Director with nothing more than an idea that was supported by Brainy. I was basically going to ask them to let me rent the space for no charge up front.

The Creative Director liked the idea, much to my relief, and after several negotiations, we finally agreed that the money to rent Caveat would be taken directly from ticket sales. This meant that we would need to sell at least 33 tickets for each show to meet the fee. Additionally, she inquired about other sponsors for the individual shows. I assured her, despite not knowing if I could, that we would sell the tickets and I would partner with other foundations to spread the word. Classic Stephanie, diving headfirst.

Here’s where the sheer willpower came into play. Each show focused on a different neurological disorder. We had three shows booked. Epilepsy, autism spectrum disorder, and Huntington’s Disease.

When I signed the contract with Caveat, about three months before our first show, I had only one speaker and one
foundation supporting the shows. With three shows, each with three speakers, I had a lot more work to do. I began sending emails to various foundations. And when they didn’t respond, I called. And if they didn’t get back to me, I contacted the Executive Directors.

With each phone call I assured the Executive Directors of the foundations, that BraiNY was sponsoring it and that we required no monetary aid. All they needed to do was promote the event on their social media, and I would set up a table with information about the foundation at the event. It was easy publicity for them, and a wider audience for me.

Some of the foundations were very excited for the event, offering more than just social media help. Some connected me to other organizations or support groups to help me find people who wanted to share their art and share their stories. Some even sent me talented science communicators and free swag to give away at the events.

It was my obligation, as the producer of the series, to ensure that all the speakers would fit with the ambiance at Caveat. At first this may seem intuitive, as long as someone was charismatic, they should be fine, right? Well, there’s more to it than that.

The slides should have no more than two sentences on them. Tell your information with pictures and videos. Minimize the number of hard data graphs to two, please! There should be snippets of humor incorporated, and an interactive component is required. These aren’t the typical talks you would give to colleagues. These needed to be entertaining and engaging; they had to be something that a person would want to see at a bar. That proved to be the most difficult and educational aspect of producing this show for me. I worked with many people who have a more senior rank than me. How do you offer constructive criticism to the person you are taught to seek advice from? How do you make sure that none of the content is offensive?

This became a real issue for the autism show, as I quickly learned that there are a lot of activists who feel very negatively about how the diagnosis of autism is treated. I had to sit with the speakers and discuss how they were going to approach the diagnosis and make certain they clarify that their research is aimed for the very severe cases of autism spectrum disorder that affect a person’s quality of life.

Sometimes, all of this felt like it would overwhelm me. It was too much to keep track of, particularly by myself. A few times it became so nerve-wracking that I rushed into Heather’s office and asked for her advice.

It was the day before our first show, our rehearsal went well, but ticket sales were looming over my head. We had to sell 33. We had only sold 15. The next morning, I was so agitated that I bit my nails down to the bone and gave myself a migraine. I thought I could do it, but maybe I couldn’t. Regardless, as they say, the show must go on.

As it turns out, 20 people bought tickets for that first show at the door. We made our goal. And attendance kept climbing show after show. We continued the shows after the first three, partnering with different science festivals and events (and consequently, hosting them at their venues).

We had a mental illness show featuring Reyna, an artist with schizoaffective disorder. We taught people about neurotransmitters by playing beer pong (Neurotransmitter pong – yes this happened). We taught people about movement by participating in an exercise routine. We watched Justin, a dancer and skydiver with Huntington’s Disease, perform extremely moving choreography. These are just a few examples of the fun and touching shows we’ve done.

Happily, Heather and the Neuroscience Institute have granted money to continue the initiative, and we are collaborating and partnering to keep the series going. You can catch the next show in September. If you’re interested in helping coordinate, volunteer, or just attending a show, you can email alotonthemind@gmail.com for more information!

In the end, creating this show has been a lot of work. It’s been an anxiety-laden adventure, but it has taught me so much. It has taught me how to be a better manager, how to budget, to negotiate, and to convince people of my idea. It has also been the most rewarding thing I’ve ever done – giving people a platform to speak their truths and to show that they are more than just a medical diagnosis.

Stephanie Rogers is a rising 5th year PhD student in Gyorgy Buzsaki’s Lab. She is the producer of A Lot on the Mind and designed and teaches a course to raise awareness about human health. On weekends you’ll find her stuffing her face with delicious food and pretending to be Legolas at the archery range.

People with diagnoses sharing their art and their stories at various A Lot on the Mind shows. From left to right: Ronaldo Byrd, an amazing cartoonist and artist who is on the autism spectrum; Reyna Vera, an artist who paints and makes ceramics, who has schizoaffective disorder; Alyssa D’Amico, a poet with epilepsy; Josh Goldberg who dances and was a skydiver, who is positive for the Huntington’s Disease mutation; and Manny Torrijos, a dancer and author of short stories, who has Parkinson’s Disease.
HELP CREATE THE SACKLER MESSENGER!

What is the Messenger?
The Sackler Messenger is a student newsletter that is written, edited, and produced by Sackler graduate students.

Who reads it?
Primarily Sackler students, faculty, and staff, but all issues are available for anyone to read through the Sackler website.

How can I contribute?
Pitch an article idea. Do an interview. Write up a story. Take pictures. Help with editing and layout.

Why should I get involved?
Advertise your new research, club, etc. Improve your writing skills with peer feedback. Produce a piece you can add to a science communication portfolio. Help us diversify the student voices in the Messenger.

Want to get involved with a future issue?

Have feedback or an idea about how we can improve?

CONTACT US:
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Lisabeth Greene  Staff Advisor  lisabeth.greene@nyulangone.org
LET'S HAVE AN AWESOME TIME DOING SCIENCE

Attend the new 'INSPIRE Science' symposium this fall!

By Sudarshan Pinglay

This past January, I went to the IFC theater in the West Village to watch ‘Genesis 2.0,’ a documentary by the Austrian filmmaker Christian Frei. The protagonists are a group of hunters in the New Siberian Islands in the Arctic Ocean that spend the summer months in search of perfectly preserved woolly mammoth tusks that reveal themselves from underneath the melting tundra. In juxtaposition to these hunters, Frei profiles two groups of scientists that are attempting to resurrect the woolly mammoth in so-called ‘de-extinction’ efforts. To me, the similarity between the hunters and the scientists goes far beyond their preoccupation with the mammoth.

Every morning, the hunters head out to explore vast swathes of the bleak, featureless landscape armed with only a simple pickaxe. They probe the ground at various intervals to detect the presence of any hard material. When they do, they dig around the area hoping for a tusk. Most often, all they are left with is a worthless piece of rock, aching backs, and a sense of desperation and self-doubt about the value of this seemingly mindless pursuit. Is this beginning to sound familiar?

Although scientists operate at the edge of human knowledge rather than the edge of the world, the feeling of isolation is similar.

Often, it can be hard to keep sight of our big-picture motivations or long-term goals when our daily activities can sometimes feel rote. This monotony makes it hard to keep in touch with our inner passions and may even lead us to forget what inspired us to enter science in the first place. Once-enthusiastic students can slowly become cynical and scare neophytes away from science. Sadly, it is all-too-common for scientists to lose self-confidence and suffer from depression and anxiety. Low morale reduces both individual and group well-being among scientists. How can we address this issue?

Often, symposia for scientists are either scientific conferences or career-fair type events about what to do with a PhD. Unfortunately, there are not many opportunities for us to get together and talk about all the things that they can do to make the process of doing science everyday much better. This half-day symposium will host speakers covering a wide breadth of topics including cultural revolutions in science, love for the scientific process, and pursuits outside of academia that can give science meaning. This is a fun, interactive forum in which scientists share their deepest passions, their stories, their struggles, and, ultimately, how they connect to happiness and continue to maintain excitement throughout their careers.

Doing outreach and helping the public connect with science can be a fantastic way for scientists to reconnect with why they became passionate about science in the first place. Therefore, this year, a substantial portion of the symposium will be dedicated to discussing how scientists can get involved in outreach. We will be hosting outreach groups from across New York City that will enable participants to both network and sign up to volunteer.

The symposium will end with a reception featuring a surprise musical performance (from a scientist you may know). Keep your eyes open for announcements. Hope to see you all there!

Sudarshan Pinglay is a PhD student in the labs of Jef Boeke and Liam Holt working towards engineering biological systems to understand their function. He is from Bangalore, India and completed undergraduate degrees at Johns Hopkins University. Sudarshan is passionate about soccer, heavy metal guitar, food, and exposing everyone to the joys of a scientific worldview.

Technically, it’s Always Full

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Sudarshan Pinglay
The brain contains roughly 86 billion neurons, wired up in distinct patterns called neural circuits. The organization of these circuits allows for information to travel precisely within and between brain regions to control everything we do, from perception to cognition to movement. Conceptually, the brain is similar to a computer: there is hardware (brain regions) with specific functions, and there are electrical (neural) circuits that allow for efficient information transfer throughout the machine.

To work seamlessly, it is critical for both the hardware and communication routes to function properly. When things go wrong, disease ensues. The dysfunction of neural circuits has been implicated in various neurodevelopmental, neurodegenerative, and neuropsychiatric disorders. For example, Alzheimer’s Disease, Parkinson’s Disease, Huntington’s Disease, epilepsy, schizophrenia, post-traumatic stress disorder, and other mental disorders are all thought to originate from the degeneration or inappropriate activity in particular neural circuits found in the brain.

Fortunately, modern scientific tools enable us to study neural circuits in unprecedented detail. Genetically-engineered mice allow us to visualize or manipulate virtually any subpopulation of neurons (or glia). A technique called ‘optogenetics’ allows us to use light to activate or suppress neuronal activity. And genetically-modified viruses can be injected into particular brain regions to express fluorescent or light-sensitive proteins in specific neurons for visualization or optogenetic manipulation. Labs all over the world use these tools for functional circuit dissection to study the elements of neural circuits in order to understand their function in health and disease.

At NYU’s Washington Square Campus, Dr. Adam Carter’s lab uses such tools to study the neural circuits underlying attention, memory, and emotional regulation – critical circuits, whose dysfunction has been implicated in disorders like post-traumatic stress disorder and schizophrenia.

Xingchen Liu, a fourth-year PhD student in Dr. Carter’s lab, is carefully characterizing one of these circuits. Specifically, he is studying the projections from the ventral hippocampus to the prefrontal cortex.

While many people may recognize the hippocampus as the classic learning and memory center of the brain, the ventral portion of the hippocampus (vHPC) is involved in emotion and stress. The prefrontal cortex (PFC), on the other hand, is a higher-order brain structure that exerts top-down control over various cognitive and emotional behaviors. It is a large brain structure that regulates many, diverse cognitive processes. As a result, abnormalities in prefrontal cortex circuits and functions can lead to a wide array of mental disorders.

It is known that the ventral hippocampus sends projections to the prefrontal cortex and that these projections are important for emotional regulation. However, the detailed organization of the vHPC-PFC circuit has been understudied, until now. In his recent paper, published in the Journal of Neuroscience, Xingchen describes the elegant experiments he performed to figure out how the vHPC-PFC circuit is organized in the mouse brain.

Using viral tracing, he labeled neurons in the ventral hippocampus with fluorescent proteins and imaged where these neurons project in the prefrontal cortex. He demonstrated that the ventral hippocampus projects to regions of the prefrontal cortex known to be important for the expression and suppression of fear.

Using optogenetics and a technique called slice electrophysiology, Xingchen stimulated ventral hippocampus neurons with light and recorded the resulting responses in excitatory neurons throughout the prefrontal cortex in mouse brain slices. He found that the strongest connections exist between the ventral
After recording activity from a prefrontal cortex neuron, Xingchen fills it with a fluorescent dye, to look at its morphology and extent of projections.

hippocampus and the excitatory neurons in the region of the prefrontal cortex involved in fear suppression. Interestingly, these target neurons in the prefrontal cortex are specifically those that project to, and likely influence, multiple other brain regions.

Thus, Xingchen’s paper provides important insight for the field, identifying that the ventral hippocampus can influence the information sent by the prefrontal cortex to other cortical regions, likely influencing specific cognitive and emotional processes.

Using functional circuit dissection techniques, Xingchen is establishing the first detailed blueprint of the vHPC-PFC circuit. In recent months, he has also extended his research to characterize which prefrontal cortex inhibitory neurons are targeted by ventral hippocampus projections. Inhibitory neurons can suppress other neurons’ activity, so they can regulate the neuronal computations within a circuit. Inhibitory neurons add another layer of complexity and computational power to this circuit, allowing the ventral hippocampus to control both excitation and inhibition in the prefrontal cortex.

In studying a circuit involved in emotional regulation, Xingchen is curious to see how elements of the vHPC-PFC circuit are engaged during behaviors involving fear and anxiety. Xingchen is eager to begin working with awake, behaving mice, in order to bring his circuit-level findings to the next level.

“Brain circuit wiring fundamentally reflects [the circuits’] function in behavior,” says Xingchen, so he wants to begin “[recording] neuronal activity in vivo during behavioral tasks, and [manipulating] the activity of certain cell types during behavior.”

Manipulating specific elements of the vHPC-PFC circuit could clarify their role in normal behavior, which would help future studies pinpoint what goes wrong in disease. Eventually, both the circuit-level and behavioral-level discoveries in Xingchen’s experiments could provide clues to the underlying causes of multiple mental disorders.

William F. Allman once said, "The brain is a monstrous, beautiful mess" (1989).

With billions of neurons and trillions of connections, there are countless things that could go wrong in the brain to result in disease. By researching a particular neural circuit involved in emotional regulation, Xingchen Liu hopes to contribute to our understanding of neuropsychiatric disorders and mental health.
Preparing for the NYC Marathon

Three Sackler students discuss running in NYC & completing the NYRR 9+1 program!

By Britney Martinez

Having hobbies outside of our lab work can provide an outlet to release frustration from stressful experiments and give us a sense of accomplishment when our work stagnates. Breaks from work can prevent us from becoming burnt out and losing our motivation to continue on the long, arduous path of a PhD.

If running a marathon is on your bucket list, living in NYC provides the perfect opportunity to check it off. Three graduate students, Patty Martin, Shushan Sargsian, and Marisol Zuniga are doing just this and have taken on long-distance running to relieve stress and work towards accomplishments outside of the lab.

Last year, they completed the 9+1 program offered by the New York Road Runners (NYRR), a non-profit organization that hosts various races throughout NYC. This November, they will be running in the NYC marathon, a 26.2-mile race that touches all 5 boroughs. It is the largest marathon in the world and people usually claim a spot through a lottery system or through qualifying race times (that are almost impossible for the average runner to attain).

The 9+1 program is a great option for us unlucky, non-elite athletes. This guarantees marathon entry to runners that complete 9 NYRR sponsored races and volunteer at one race. The races are varied in location and distance. Some include: 4 miles in Central Park, 1 mile on 5th ave, 6.2 miles in Queens, or 10 miles in the Bronx.

To gain a more personal perspective on running in NYC, I asked Marisol, Shushan, and Patty about their experience with marathon training and the program.

Where are your favorite places to run in the city?

Marisol: Along the East River.
Patty: Running the East River Path down to Battery Park and back allows me to catch a breeze and wave at the Statue of Liberty.

What is the hardest part of marathon training?

Patty: Running in the heat. It kind of really sucks.
Shushan: The mental aspect and the distance. The longest I have ever ran is a half marathon so I am excited, but also terrified to double it! I know it will be challenging and long, but I know I have it in me to get it done! (I guess this is similar to doing your PhD)
Marisol: Getting started, the start of any marathon program is difficult because you have to develop a level of discipline in order to stick to your program.

What are your Marathon goals?

Shushan: Just finish and feel proud of myself. Whatever my speed was, however many breaks I had to take, I want to feel that I gave it my all and ran the New York fricken Marathon!
Marisol: Finish the marathon in under 4 hours, but even if I don't finish in that time I'll be happy that I even completed it.

What are your favorite races from the 9+1 program?

Patty: The Pride Run was amazing and so much fun, but the one I cried at was Hope and Possibility. Having people pass me who are running with prosthetics, amputated legs and injuries really showed me how amazing and inspiring the human spirit is. It also highlighted for me the limits I put on myself.
Shushan: The Abbott Race to the Finish Line 5K takes place the day before the finish line in Central Park is for the actual marathon! It's super inspiring and exciting to run through the same final stretch, decorated with the flags of the world, that marathoners will cross the next day. I ran this 5K last year, and it made me even more determined to train for and complete the full 26.2 miles.

What is some of your favorite running gear?

Shushan: Jay Bird headphones, Garmin watch to track my distance, location, heart-rate and control my music. For longer runs, Gu energy gels taste amazing and some even have caffeine.
**Marisol:** Any version of the Jay Bird headphones because it comes with a phone app that allows you to tune your headphones so whatever music you listen to sounds amazing!

**Running is also a great way to explore the city.** Shushan adds that she loves running in the city because it makes her feel closer to the city and its people.

“I have traveled to and ran through places I might never have seen if not for the races and trying to find the best food in the area.”

Britney is a 5th year PhD student in the lab of Evgeny Nudler and is currently using Next-Generation Sequencing methods to study bacterial DNA repair. In her free time, Britney enjoys biking or running throughout NYC, trying to cook new recipes and playing board games with friends.

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**9+1 Info**

Link: [https://www.nyrr.org/run/guaranteed-entry/tcs-new-york-city-marathon-9plus1-program](https://www.nyrr.org/run/guaranteed-entry/tcs-new-york-city-marathon-9plus1-program)

**Steps towards completing the 9+1:**

1. Get a NYRR membership. As students, we qualify for a collegiate membership priced at $25. All you need to do is take a picture of your downtown ID and upload it to the website.

2. Sign up for races! We also get discounted race prices with a collegiate membership. Races range from $10-40 dollars, with longer races usually having a higher price. Races usually come with a themed shirt.

3. Book a race to volunteer at. Make sure the position qualifies for 9+1 on the website and sign up to volunteer at a race. I recommend shorter races so the shift isn’t too long. Water station, race guides, or bag check assistance are popular options.

4. After 9 races and 1 volunteer event is completed, you are guaranteed entry to the NYC marathon for the following year. It is priced at $255, so make sure to save up.
STUDENT PUBLICATIONS


Raymond Barry, NIH NRSA
David Collins, NIH NRSA
Joel Encarnacion-Rosado, NSF GRFP Honorable Mention
Joel Encarnacion-Rosado, HHMI Gilliam Fellowship
Kate Hockemeyer, NIH NRSA
Alice Hyeon Kyu Kwon NYSDH and NYSSCIRB Individual Predoctoral Fellowships in Spinal Cord Injury Research
Tabitha Julien, NIH Diversity Supplement
Kalman (Vigi) Katlowitz, Inaugural NYU University-Wide Outstanding Dissertation Award
Kalman (Vigi) Katlowitz, NYU GSAS Dean's Outstanding Dissertation Award in the Sciences
Rachel Kim, NSF GRFP
Graeme Koelwyn, Sackler Outstanding Dissertation Award
Graeme Koelwyn, Honorable Mention, Inaugural NYU University-Wide Outstanding Dissertation Award
Britney Martinez, NIH NRSA
Mary Rossillo, NIH NRSA
Eugene Rudensky, NIH NRSA
Yuta Senzai, Sackler Outstanding Dissertation Award
Kritika Srinivasan, Best Poster Award: Tumor Immunology, Perlmutter Cancer Center Retreat
Frank Yeung, NIH NRSA
GRADUATION DEADLINES

September 2019 Graduation Deadlines
Register on ALBERT at home.nyu.edu from February 4, 2019 to June 16, 2019
Preliminary thesis deadline: Friday, August 2, 2019
Final dissertation deadline: September 13, 2019

Resources for thesis preparation and the graduation checklist are available on our student community thesis defenses and graduation page, which you can access using your Kerberos ID.