

Appel 5



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Interview



Dr. Anna Orr

Nan and Stephen Swid Assistant Professor of Frontotemporal Dementia Research and Assistant Professor of Neuroscience
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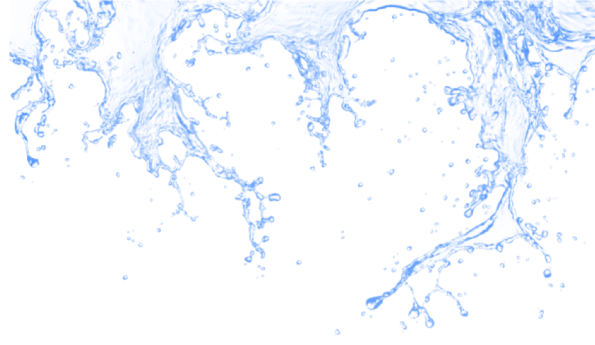
Dr. Anna Orr, thank you so much for taking the time to do this interview. You were recently awarded the **2021 Outstanding Neuroscience Teaching and Mentoring Award** from the Weill Cornell Graduate School. Could you share with us your thoughts about this award?

I am incredibly honored! Mentoring students is a pleasure and privilege. Graduate school can be stressful and overwhelming, I think in part because each decision feels consequential, both scientifically and personally, and the road to success is often long and winding. My goal is to foster a nurturing and inclusive environment that develops confident, rigorous, and (dare I say) joyful scientists that become leaders and even better mentors than me.

Every scientist has a mentor who impacted their academic lives. Would you share with us who was your mentor and how she or he inspired you to become the scientist that you are today?

I've had several great mentors, and each of them taught me different aspects about being a scientist. As an undergrad at Allegheny College, I was fortunate to have Drs. Cross and Hollerman as professors. They helped to ignite my love of neuroscience and appreciate it as an exciting endeavor to truly explain and improve our world. In graduate school, Dr. Traynelis at Emory University allowed me to initiate a research project that was outside the scope of his funding and expertise. Despite the risks, he let me delve into a new area that really excited me. He generously purchased a microscope for my specific experiments and enabled me to collaborate with a neurosurgeon to isolate primary glia from patients, which was a thrill and validated my findings in human samples. In addition to research training, he taught me valuable life lessons just by his example, including kindness and integrity, and that it's possible to successfully balance lab work and family. As a postdoc, I joined the Mucke lab at the Gladstone Institutes. Dr. Mucke provided amazing intellectual freedom and was instrumental to my career in many ways. At the time of my postdoc interview, I was 'very' pregnant, but this did not discourage him from hiring me. He helped me to learn many additional methods and concepts, gain more resilience and a broader view, and get more practice in the 'arts' of communication and leadership (and grant writing)!

Interview



From your perspective, what is the most important discovery in Neuroscience of all time?

Every discovery, big and small, builds on previous discoveries. Science is like a stone arch or bridge, in which every stone (i.e., discovery) has a unique position in space and time and is vital for the overall structure. Discoveries support and are supported by others and help to create something much greater.

What is your favorite cell organelle and why?

I am not sure about being the favorite, but mitochondria are truly fascinating. Studies suggest that all mitochondria (in you, me, cats, mice, dinosaurs, etc.) descended from one original 'mother' mitochondrion, which was actually an ancient bacteria that decided to take up residence in a eukaryotic cell about 1.5 billion years ago. Our cells not only tolerate this long-term tenant (with its own genome, ability to replicate, and maybe even its own agenda), but now depend on it for almost everything, including energy and metabolism, immunity, cell death signaling, calcium homeostasis, etc. Check out the book "*Power, Sex, Suicide: Mitochondria and the Meaning of Life*" by Nick Lane. Also, come chat with Dr. Adam Orr, who has been studying these organelles for many years and knows more about mitos than almost anyone!

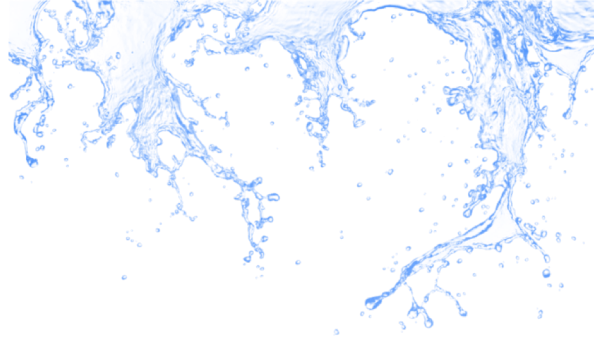
What is your favorite book and why?

I rarely have quiet time for anything but scientific text or children's books. On the rare occasion that I get time to myself (mostly on long flights), I've enjoyed comedy (like "Bossypants" by Tina Fey) and practical/skill-building books (like "Getting to Yes" by Roger Fisher and William Ury).

Can you share with us your future projects in Alzheimer's disease?

The lab has a major focus on glial pathobiology. We investigate astrocytic-neuronal interactions and three main types of signaling: neuroimmune, oxidative, and G protein-coupled. Broadly speaking, we examine their regulation and roles in astrocytes and how they affect neuronal functions and disease-related processes, especially proteinopathy, synaptic alterations, and behavior. In addition, we have a major effort devoted to therapeutic discovery and translating our findings into promising new treatments. We are always looking to advance the central mission of unraveling and harnessing glial-neuronal signaling to stop disease.

Interview



Finally, can you share any advice with those who would like to pursue a career in Neuroscience?

My advice usually depends on the trainee and their specific needs, talents, etc. However, I find it useful to consider these general strategies:

- 1) *Think carefully about your interests and aspirations and develop personal mission and value statements.* These statements are an internal compass to guide you in the right direction, especially in hard or uncertain times, and will motivate you to work your hardest and stay clear-eyed and determined.
- 2) *Play the long game.* Don't make decisions solely on short-term gains or to achieve the quickest or least painful outcome. Focus on long-term success and reaching goals that are deeply meaningful to you.
- 3) *Surround yourself with good people.* Science is a team sport. You will have to rely on others, and they will need to rely on you. Mutual trust, respect, and communication in the lab (and beyond) are vital. I have been fortunate in this regard! → → →
- 4) *Do not compare yourself to others (much).* Your career path and scientific accomplishments will be unique to you because science is unpredictable, projects are diverse, and initial setbacks can yield major advances later. It's futile (and often demoralizing) to expect a similar research career trajectory as your peers.
- 5) *Self-doubt and imposter syndrome are okay, and failure is part of every success story.* Self-doubt and disappointment are very common (and normal) but can derail a career if allowed. Don't let it happen, refer to #1 above, rinse and repeat.



By **Guillermo Coronas**
Laboratory Manager
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Diversity in Appel



**Weill Cornell
Medicine**

**Feil Family Brain & Mind
Research Institute**



**Weill Cornell
Medicine**

**Helen and Robert
Appel Alzheimer's
Disease
Research Institute**

July 12th, 2021

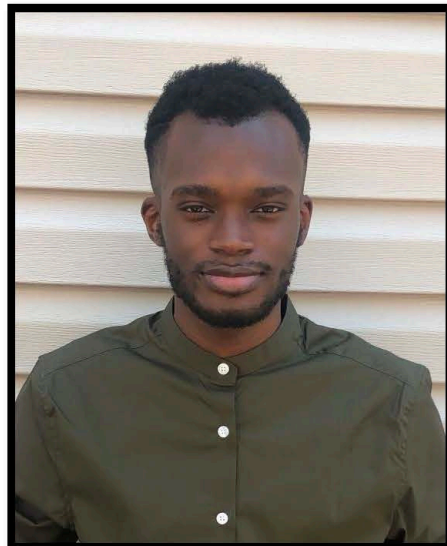
This summer, the BMRI piloted the Helen and Robert Appel Alzheimer's Disease Research Institute Summer Diversity Scholar and Neuroscience Summer Diversity Scholar Programs. These BMRI Summer Scholarships are a new opportunity for promising young college-level scientists identifying from an underrepresented background and residing in the New York City area. The program provides awardees 8-week long, paid internships within the BMRI with leaders in neurodegeneration and other neurological diseases as well as addiction and psychiatric disorders. Individuals are receiving one-on-one training within the Orr and Gan labs. Scholars are training to develop a research idea and plan, learn scientific methods, and produce their own data. They are also participating in workshops and seminars sponsored by WCM's Office of Diversity. At the end of the internship, scholars will be presenting their findings in a research seminar that will be available to the BMRI community.

The Feil Family Brain and Mind Research Institute at Weill Cornell Medicine (WCM) would like to congratulate the first participants of the Feil Family BMRI and Appel Neuroscience Summer Diversity Scholars Program, Shadé Eleazer and Shaun Pollard.

Welcome to the WCM Community!



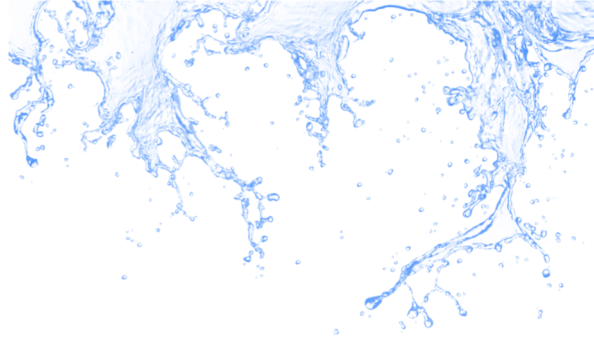
Shadé is currently pursuing her Bachelor's degree in Biomedical Sciences and Behavioral Neuroscience at Marymount Manhattan College. She would like to continue her education by obtaining her MD/PhD. This summer, Shadé is a member of the Orr Lab and learning more about the pathology and the progression of neurodegenerative illnesses.



Shaun Pollard is recent graduate of New York City College of Technology, where he studied Applied Mathematics. His current career goals involve pursuing higher education and a career in data science. Currently, Shaun is a member of the Gan laboratory working on his summer project.

For more information about this program contact **Dr. Eileen Torres** at est4003@med.cornell.edu

Poems



An Instant

*My emotions are rolling
Always, "Come, sleep," they say
All the same
Somehow here I am
Scrubbing dishes at night in the kitchen
Looking at the tiled wall
And feeling suddenly
The need to cry
I feel lonely now
But not sad, really
More sorrowful
And it occurs to me
That I want someone
To run errands and do chores with me
And tomorrow
I want not to be tired*

11/24–12/21, 2020

Have you ever looked at a tree
And just thought,
"Oh, what a beautiful tree."?—
Have you ever smiled and not wondered
why?

Life feels like a sigh
Without the breath before,
Like a splash of rainbow color
From a single falling tear.

Sometimes the wind blows
And it brings down a forest,
But the wind is still beautiful—
Full of whirling leaves.

10/7/2013

Songbird, will you write a song for me
To wake me in the morn'?

Songbird, can you make a song for me
To bring my heart some warmth
As I wait for the sun
To blaze through the quiet dawn?

Jun-11-2020

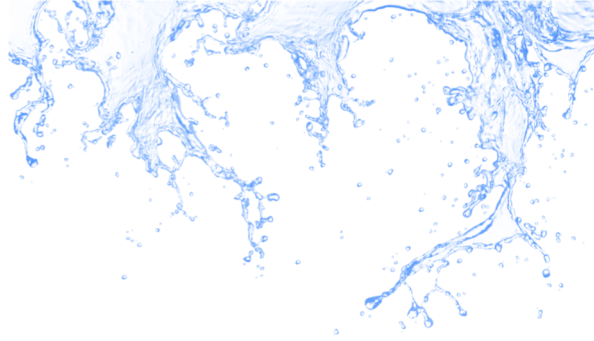
City

If your reflection
is the sky,
Then what
are you?

July/August 2020

Silvie H Lundgren
Research Technician
Appel Institute
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Poems



Apariencia de Picasso

*When you turn your head
The corner of your eye
Meets the indent of your nose
As if slicing across your face
Two eyes peering in concert from
disconcerted space
One in the sly perspective
Of the forwardmost face
Biding in the shadow of the distant brow
Almost a coquettish squint
Staring dispassionately from its removed
place*

April 23 + July 12, 2021

(Semblance of Picasso)

*Inspired by a dramatic selfie posted by
an acquaintance.*

*I went walking
Amid the fireflies
Flashing and dancing
Before my eyes.*

*I went walking
To the sound
Of frogs
And birds' trilled cries.*

*I went down to the river
And heard the music of the water
And watched
A twilight bat in flight.*

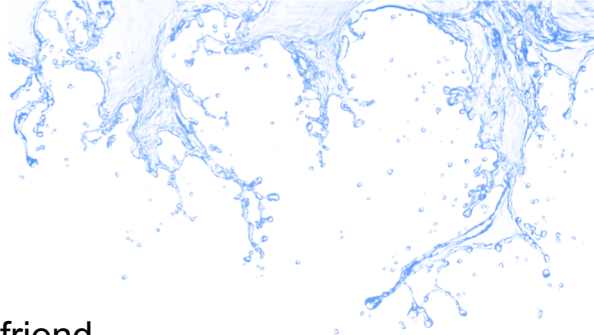
Jun-12-2020

*Be gentle with me, won't you?
My heart's already bruised
By the crushing of
these blades of shoulders
Not meant to hold the world.*

December 14, 2019

Silvie H Lundgren
Research Technician
Appel Institute
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Poems



Telecommunication

It's strange—
Saying “good morning” to a friend
Starting the day who is,
At the same moment,
Wishing you a good night
As you go to sleep.

My night is your morning.
Your night is my afternoon.
And sometimes they
Bleed into each other,
Depending on who might stay up late.

It's funny—
To be able to share a laugh
With someone across the ocean
And smile at
Each other's words.

I don't always understand you,
And you often don't understand me.
But we still share and explain
(And sometimes re-explain)
And find humor and frustration amid it
all.

It's strange—
For it to be so easy
To stay in touch
With someone
So beyond reach.

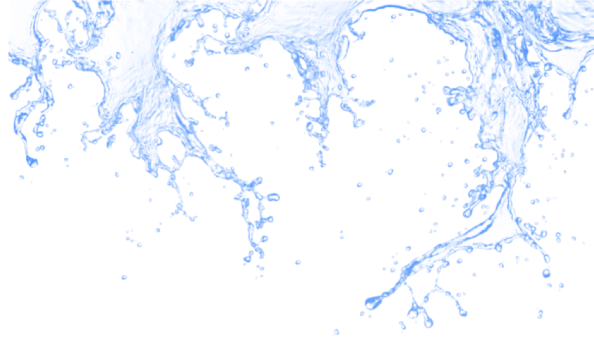
My “yesterday” tomorrow is in your
“today”;
Our words are translated
Sometimes between languages
And always
Between time and space.

08-10 June 2020

Silvie H Lundgren
Research Technician
Appel Institute
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News

Orr Lab



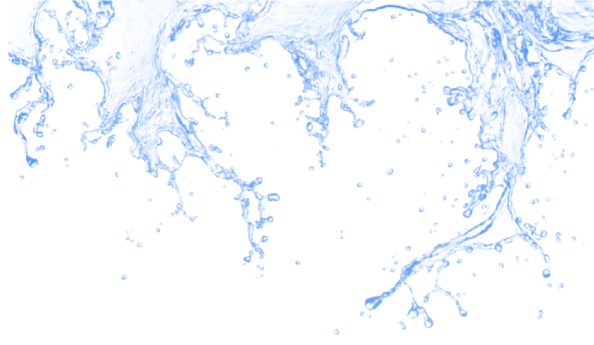
Anna Orr has been appointed to the newly established **Nan and Stephen Swid Professorship of Frontotemporal Dementia Research**, which endows the lab's ongoing research on FTD-related disease mechanisms and novel therapeutics.



Fernando Pelaguachi was promoted to Research Technician Level II in recognition of his superb dedication, hard work, and being incredibly helpful to everyone in the lab. Fernando was profiled in the last Bulletin.

News

Orr Lab



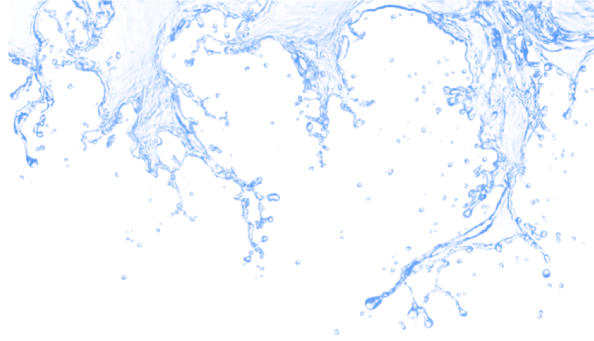
Shadé Eleazer has joined the lab as an Undergraduate BMRI Scholar from Marymount Manhattan College. This summer, she is working with graduate students Samantha and Connie on the roles of glutamate receptors.



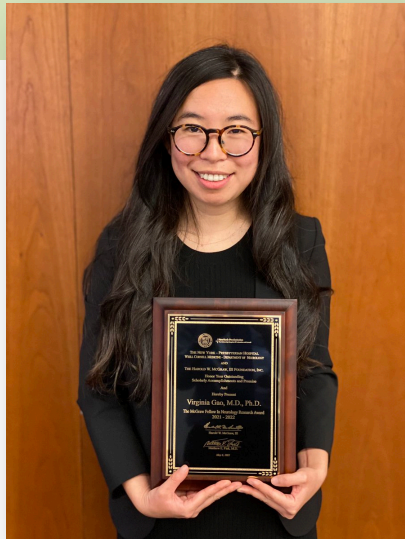
Stephanie Jackvony, B.A., is a Neuroscience graduate student and is joining the Orr lab for her thesis work on cAMP-related signaling mechanisms and their effects on glial-neuronal interactions.

News

Burré Lab



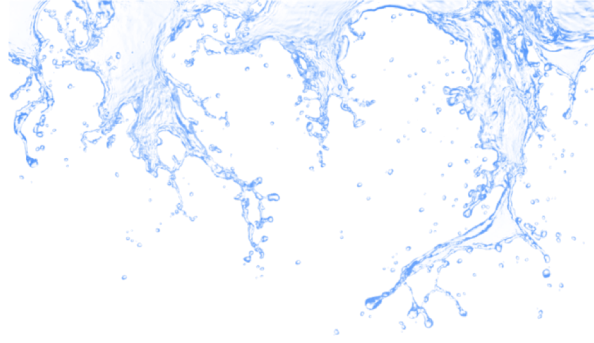
Virginia Gao has received the **McGraw Fellowship in Neurology Research**. The McGraw Fellow is chosen based on high-quality, compassionate, and scholarly care for patients as well as the initiative to develop a research interest that has potential to benefit patients with neurological disease.



The McGraw Fellowship in Neurology Research is a one-year award given to a fourth-year neurology resident with great career potential to become an academic clinician. The award helps prepare the McGraw Fellow for a career in academic neurology to be cultivated at Weill Cornell Medicine and New York-Presbyterian. The broad goal is to advance discovery of diagnostics and innovative treatments to improve outcomes for patients with neurological diseases. The McGraw Fellow is chosen based on high-quality, compassionate, and scholarly care for patients during the first three years of residency training as well as the initiative to develop a research interest or preliminary work in clinical, basic, educational, or epidemiological science that has potential to benefit patients with neurological disease and that can be completed during the fourth year of neurology residency training.

News

Burré Lab



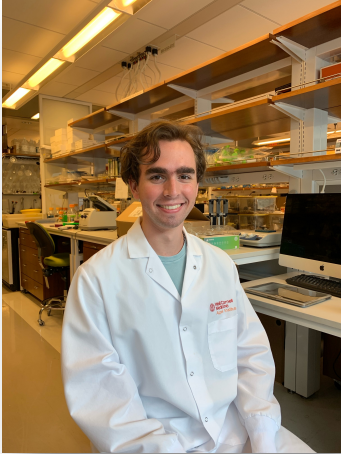
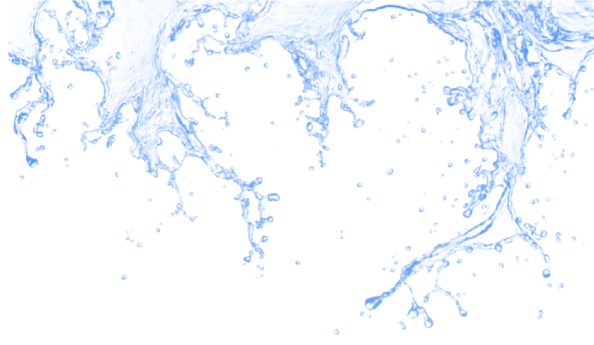
Debby Abramov in my lab defended her thesis on June 3rd, 2021!

And here I am inspecting my graduation hat made for me by the members of the lab:



News

Burré Lab



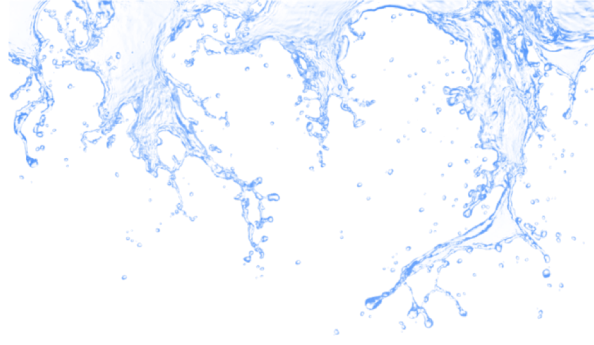
Juan (Jack) Briano has joined my lab as Research Technician.



Ari (Aryeh) Reuven Zolin, M.D., Ph.D. has joined the Sharma & Burré labs. He is *a* Neurology Resident and is the new BMRI Neurology Research Fellow

News

Gan Lab

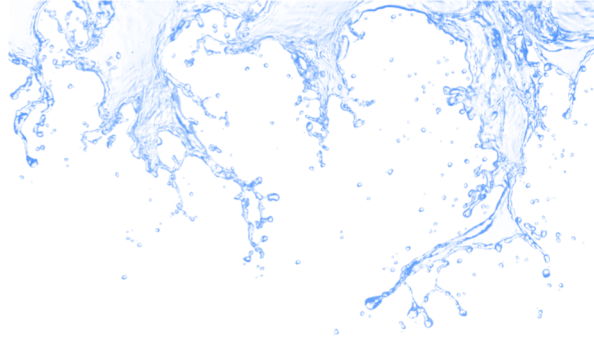


The lab received **funding from the Cure Alzheimer's** fund, towards to study Human cGAS small molecule inhibitors

The lab **received funding from the National Institute of Aging** for the project Functional Characterization of Alzheimer's Disease Associated Genetic Variants.

We welcome our new lab members: **Jennifer, Nessa, Judy-Mae Lima, Alice, Shaun and Sanjith.**

Welcome to Appel



Hello! I am an incoming senior at Cornell University majoring in Biological Sciences. After graduation, I plan on taking a gap year and apply to medical school. At Cornell, I have been involved in research on the role of various lysosome transmembrane proteins in neurons. In the Gan lab, I hope to study the role of inflammatory pathways in neurodegeneration and learn more about other novel approaches to studying the brain. Outside the lab, I am usually busy drawing in my sketchbook, or at my local park playing volleyball with friends.

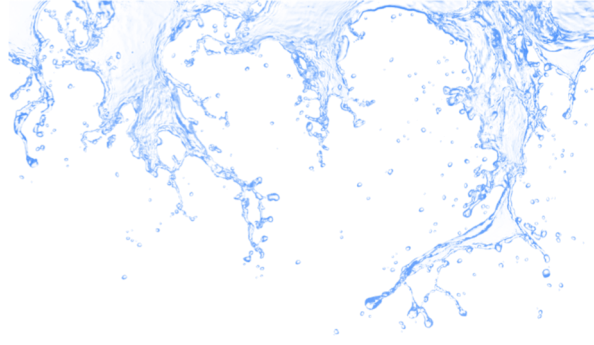


Jennifer Guo

Student, Research Admin
Gan Lab

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Welcome to Appel

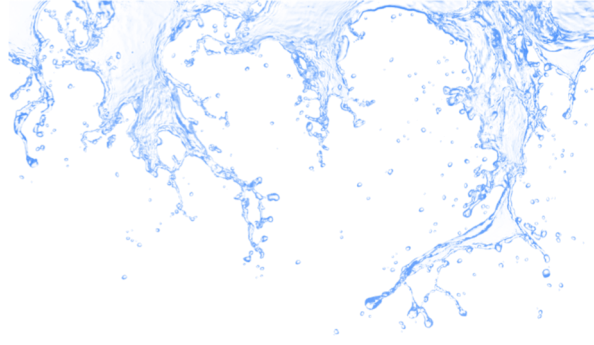


Judy-Mae received her bachelor's degree in Biology (with a concentration in cellular and molecular biology and a minor in chemistry) from Fairleigh Dickinson University in New Jersey this past spring of 2021. While attending the school, she worked in Dr. Myer's lab, learning about the effects of triclosan on the dopaminergic neurons of *C. Elegans* and the possible effect it could have on their locomotion behaviors. Her long-term goal is to become a physician with interests in pediatrics, surgery, and obstetrics. Her goals in the Gan lab are to develop a new skill set while creating a research project based on Alzheimer's disease, network with other lab members, and overall learn as much as she can in the short time that she has. When her life does not revolve around science, she enjoys watching basketball (go Lakers), weight training, and spending time with friends and family.

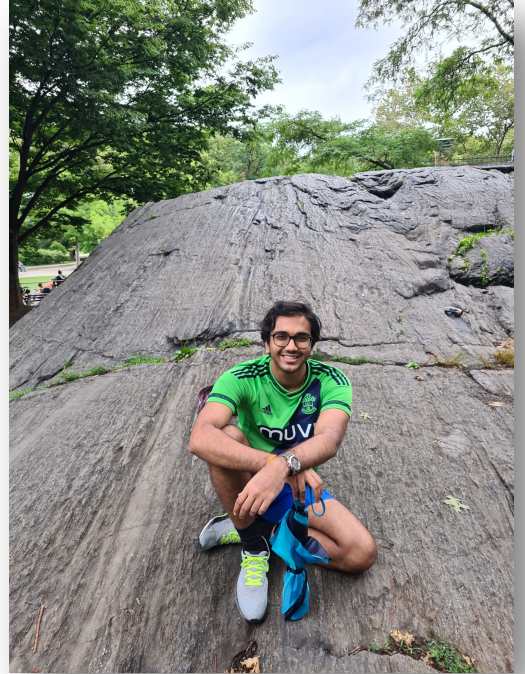


Judy-Mae Lima
Weill Cornell Travelers
Research Summer Fellowship
Gan Lab
jul4012@med.cornell.edu

Welcome to Appel



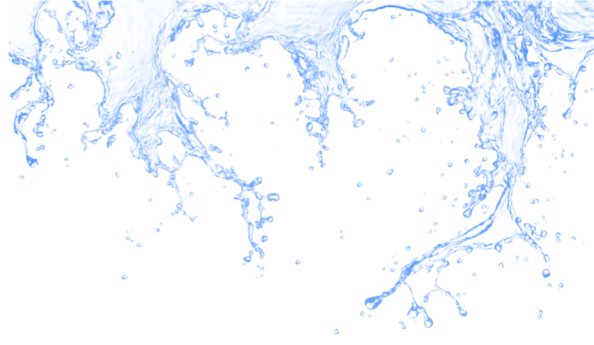
Sanjith graduated from Doha College in Qatar in 2018. Afterwards, he joined Weill Cornell Medicine - Qatar's 6 year program where he attended lectures in both psychology and neuroscience which sparked an interest into the inner workings of the brain particularly in how disruption of the many mechanisms can lead to neurological diseases like Alzheimer's. To further develop his understanding, Sanjith hopes to explore in the Gan Lab the roles of Alzheimer's disease risk factor APOE and TREM2 in microglial responses to brain demyelination. Outside the lab, Sanjith can be found running through central park and searching for the best chicken wing shops.



Sanjith Ganesan
Student, Intern
Gan Lab

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Welcome to Appel



Hi Appel! My name is Nessa and I am a new research technician in the Gan Laboratory. I received my BA in Neuroscience with a minor in Biology from Boston University this past May. While at BU, I worked in several laboratories, ultimately ending up at Dr. Farb's laboratory using in-vivo electrophysiology to investigate sharp wave ripple network activity in a transgenic rat model of Alzheimer's Disease. With this, I became increasingly interested in investigating neurodegenerative diseases, and came to the Gan lab excited to continue this work in the context of neuroinflammation. With what I learn, I plan to pursue my PhD in Neuroscience in the future. When not in the lab, I can be found painting or exploring new places in NYC!

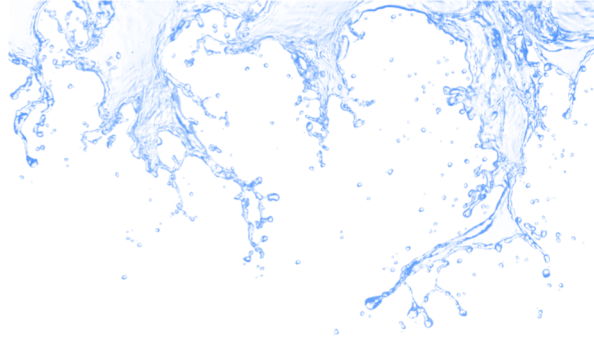


Nessa Foxe

Research Technician
Gan Lab

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Welcome to Appel



Stephanie Jackvony received her Bachelor's degree in Behavioral Neuroscience and Philosophy from Connecticut College. During her undergraduate training, Stephanie conducted clinical fMRI research with Dr. Daniel Dickstein at Bradley Hospital, where they studied cognitive flexibility and examined biomarkers of psychiatric disorders. Her work at Bradley Hospital inspired her Honors thesis in Dr. Joseph Schroeder's laboratory, where she examined the effect of an altered light/dark cycle and methylphenidate treatment on learning and memory in an animal model of ADHD. Stephanie was awarded a Barry Goldwater Scholarship. She also received Honorable Mention for her National Science Foundation (NSF) Graduate Research Fellowship proposal and developed a new graduate course at WCM entitled *Introduction to Neuroimmunology*. In the Orr lab, Stephanie is interested in neuron-glia interactions and astrocytic GPCR signaling across aging and disease. When she isn't in lab, Stephanie can most likely be found exploring coffee shops in the city (recommendations welcome), baking, or snuggling with her cat, Mia.

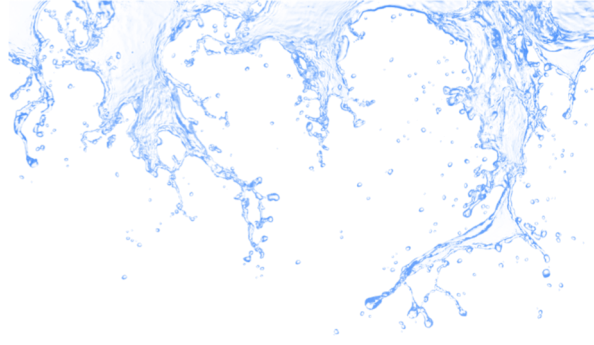


Stephanie Jackvony
Graduate Student
Orr Lab

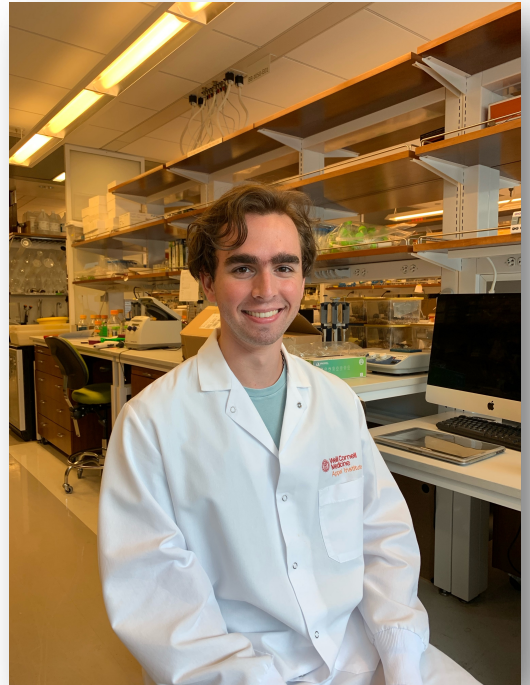
stj4001@med.cornell.edu



Welcome to Appel



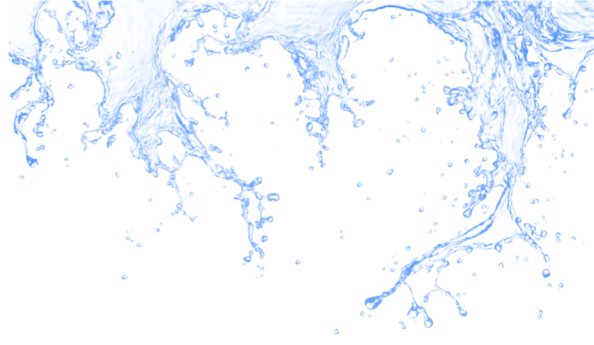
Juan (Jack) is a recent graduate of Brown University (class of 2021), having majored in Neuroscience and Classics. While at Brown, he worked in Dr. Eric Morrow's lab as an undergraduate research assistant, where he studied cortical and hippocampal abnormalities in a mouse model of 17q12 deletion syndrome. Now that he is joining the Burré lab, he is excited to shift focus from neurodevelopmental to neurodegenerative disorders as he investigates the role of the gut-brain axis in Parkinson's disease pathology. In the future, he hopes to go on to medical school and explore the clinical side of neuroscience. Outside of the lab, Jack enjoys cooking, reading, and watching bad movies.



Juan (Jack) Briano
Research Technician
Burré Lab

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Welcome to Appel



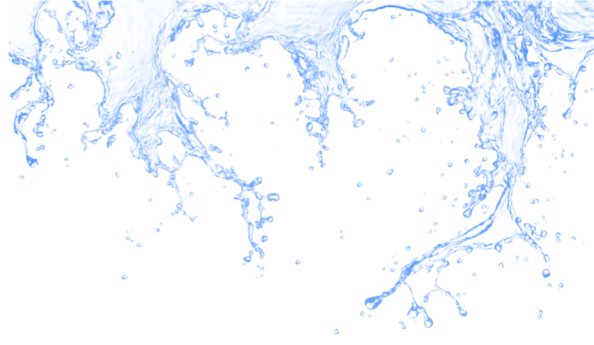
I am a physicist by training, and completed a B.Sc. in Physics from the University of Milano (2008) and a M.Sc. in Biophysics from the University of Milano-Bicocca (2012). During my Master studies, I transitioned to Neuroscience and later received a PhD in Molecular and Cellular Biology from the University of Milan in 2018, performing research both in Milan and at Yale University. My graduate research has been focused on using induced pluripotent stem cells (iPSCs) and functional genomics approaches to study neurodevelopmental disorders, such as autism and Williams syndrome, and to identify human-specific traits of brain development. In 2018, I joined Dr. Chen's lab here at Weill Cornell Medicine to investigate the risk loci associated with Zika virus infection. In the Gan lab, I will use iPSCs as a model system for Alzheimer's disease. Outside of the lab, I like reading, cooking, playing with my cat and spending time in nature



Alice Maria Giani
Postdoctoral
Gan Lab

amg4001@med.cornell.edu

Welcome to Appel



Aryeh Zolin a Neurology resident at NYP-WCM and Research Fellow at the Feil Family Brain and Mind Research Institute. He received his undergraduate degree at Columbia University and then performed his graduate studies at the Weill Cornell - Rockefeller University - Memorial Sloan Kettering Tri-Institutional MD-PhD program. He received his PhD in neuroscience from Rockefeller University, working in the laboratory of Vanessa Ruta PhD, where he studied how dopaminergic pathways in the brain of the fruit fly *Drosophila melanogaster* multiplex reward and motor signals to modulate both concurrent behavior and learning. He received his MD from Weil Cornell Medicine in 2021. Moving forward, he is interested in how protein aggregates are transmitted between neurons and across networks and how neural activity impacts transmission of pathological prion-like particles that lead to neurodegenerative diseases, such as Parkinsons Disease. Aryeh is beyond excited to join the Burre lab and begin this next phase of his career!



Aryeh Reuven Zolin
MD/PhD Student
Burré Lab

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Safety recommendations

Clean your hands often

Put distance between yourself and other people (at least 6 feet)

Cover your mouth and nose with a mask when around others

Clean and disinfect frequently touched objects and surfaces daily

Collaborations

Would you like to recommend a book, a movie or an inspiring quote?

You can participate!

Contact Billy: guc9014@med.cornell.edu