

DEPARTMENT OF NEUROBIOLOGY & BEHAVIOR

Fall 2024 Newsletter

MESSAGE FROM THE CHAIR

Dear friends,

I hope you all had a wonderful summer and that you are ready to start a new semester. The spring semester and the summer have been very exciting here.

To start, we completed two faculty searches and successfully recruited Dr. Jun Takato from MIT and Dr. Shahriar Sheikbahaei from NIH/NINDS. Jun and Shahriar are outstanding neuroscientists whose research focuses on motor systems. We are looking forward to both of them joining us in January 2025. We also recruited a new member of our departmental staff, Dr. Lindsey Czarnecki, who will support our educational, research and outreach efforts. With Lindsey at the helm, you will see more activity on our communications side.



The Department has been actively engaged in a series of outreach activities, including a very successful Brain Awareness Week and participation in the SfN Brain Awareness Video Contest. While the final results have not been announced yet, we already know that we made the top 10 with a claymation short on the circadian rhythm. You can see the video [here](#) and if you wish you can give us a “like” to support us for the People’s Choice Award.

Departmental faculty members and students continued to receive awards and publish their outstanding research, but the accomplishments in this area here are too many to mention. However, I would like to give a shout out to the PhD Graduate Program in Neuroscience, which was awarded a very competitive NIH T32 Training grant. This grant will allow us to support early stage PhD students and boost quantitative training within the program.

Speaking of students, the semester has begun, and our hallways are livening up again as we welcome our new students. In addition to all the undergraduates who are arriving on campus and studying toward their Neuroscience specialization, we are also excited to welcome our new MS and PhD cohorts. You can find more about them in the newsletter.

The new year promises to be as exciting as the last (if not more). We have a series of events and activities planned. Starting from this weekend (Labor Day Weekend), we will support the Run 4 Miles event organized by Wai Law and Dennis Almodovar. Over the years, Wai and Dennis have championed the Department running in support of the Hartman Center for Parkinson’s Research and raising awareness for a disease that impacts many lives. This year Wai will run 200 miles in 48 hours. Join us to support them. You can participate in the event (see details in the newsletter) and/or consider a donation at this [link](#). Thank you, Wai and Dennis for all you are doing!

The Department retreat is coming soon, in addition to faculty and student presentations and posters, our keynote speaker will be Dr. John Foxe from the University of Rochester. During the fall, we will also have our 4th edition of the Bolstering Research through Inclusion, Talent and Excellence (BRITE) seminars which will bring talented postdocs from across the nation on campus as feature speakers. We are looking forward to meeting them.

We have more to come, but I don’t want to spoil the surprise. We will keep you updated on all our events and news throughout the year.

Have a wonderful Fall.

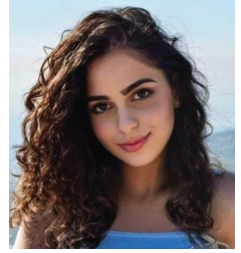
Ciao!
Alfredo

WELCOME TO THE DEPARTMENT!

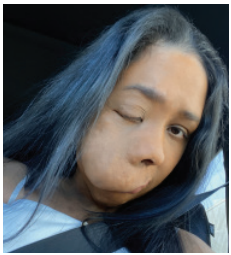
Please give a warm welcome
to our 2024 incoming cohorts!

MASTER'S PROGRAM

Sandra AlBanna



Tasmia Ali



Christopher Altamura



Virgil Ballew



Gargi Ginia Chakraborti



Justin Fazel



Christian Quiros



Dani Shaji



David Smith



Yuhui Wang



Tai Yuan

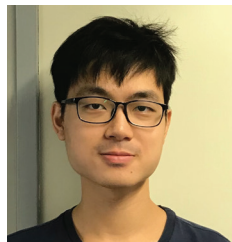


PhD PROGRAM

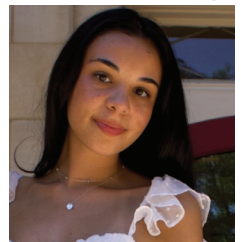
Elyse Brozost



Lik Chun Chan



Emma Craig



Joseph DuPree



Hieu 'Max' Nguyen



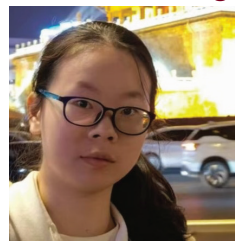
Rachell Rivera



Julianna Saxena



Yizhou Wang



CONGRATULATIONS TO OUR GRADUATES!

2024

Jordan Bauer, MS, Shelly Lab
Sheed Itaman, PhD, Enikolopov Lab
Fatemeh Kakei, MS, Plotkin Lab
Thomas Kim, MSTP, Ge Lab

Joshua Kogan, MSTP, Fontanini Lab
Kevin Nelson, MS, Riessland Lab
Andrea Schuettinger, MS, Martino Lab

2023

Tushar Arora, MS, Park Lab
Andrea Arreguin, PhD, Colognato Lab
Katherine Denney, PhD, Tollkuhn lab
Alan Guo, PhD, Shelly Lab
Ava Gurba, MS, Lerner Lab
Shahbegh Kalra, MS, DeLorenzo Lab
Liam Lang, PhD, Fontanini Lab
Tianshu Li, PhD, LaCamera Lab
Tong Liang PhD, Brinkman & Dill Labs

Tianrui Liu, MS, Shelly Lab
Tristan Liu, MS, Zador Lab
Jeffrey M Malgady, PhD, Plotkin Lab
Christopher Matteo, MS, DeLorenzo Lab
Amalia Napoli, PhD, Sirotkin Lab
Danielle Roedel, MS, Brinkman Lab
Piotr Sokol, PhD, Park Lab
Lu-Tang Yang, MS, Plotkin Lab

2022

Allen Chen, MSTP, Ge Lab
Kathryn Hill, MSTP, Parsey Lab
Michelle Hoffman, MS, Sher Lab
Kimberly Jimenez, MS, Plotkin Lab

Zerong Jin, MS, Ge Lab
Mohanlall Narine, PhD, Colognato Lab
Deborah Rupert, MSTP, Shea Lab
Lillian Talbot, PhD, Dubnau Lab
Josiah Zoodsma, PhD, Sirotkin & Wollmuth Labs

Science Communication & Outreach

The 2023-2024 academic year featured our largest outreach efforts to date! Graduate students and postdocs developed a series of programs designed to deliver interactive neuroscience content to the general public, with materials developed for every age group. During Brain Awareness Week, we partnered with local public libraries and the Girl Scouts to present programs on emotions & mental health, sleep, taste, and neural communication. For the first time, we hosted a hybrid event on campus and invited area high school students to learn about brain-related careers from basic research to clinical practice. The department also had a strong showing at the Long Island Maker Faire, where volunteer scientists engage attendees to answer their scientific questions.



A HUGE thank you to all of the volunteers:

Allison George	Gina Rizzo
Arianna Maffei	Jacqueline Martin
Ariel Nieves	Jasmine Stansil
Camelia Zheng	Narmin Mekawy
Christieann Aprea	Prerana Shrestha
Colista West	Saheed Lawal
Erica Nebet	Srividya Pattisapu
	Stephanie Laderwager

Keep your eyes peeled for ways to join in!

We're in the running!

Gina Rizzo, Allison George, Diana Guarino, and Lindsey Czarnecki put their talents to work making an engaging claymation video submission for the 2024 Brain Awareness Video Contest hosted by SfN and BrainFacts.org. The video is a contender for the People's Choice award, so watch [here](#) and give the video a "thumbs up" on YouTube to cast your vote!

2023-2024 HIGHLIGHTS

2023 Department Retreat

On September 22, 2023, the Department met at the Old Field Club for a retreat day that featured keynote speaker Dr. Jamie Maguire, Kenneth and JoAnn G. Wellner Professor, Tufts University School of Medicine, as well as research presentations by department members.



22nd Annual Symposium in Neuroscience

Every year, our second year PhD students and first year Master's students organize the Symposium in Neuroscience. Students invited Dr. Farran Briggs from the University of Rochester. Dr. Briggs presented her work addressing two fundamental questions:

What is the role of attention in modulating activity in the neural circuits for visual processing? What is the contribution of corticogeniculate circuits to visual perception?

We also enjoyed a presentation from Elizabeth Bojsza from the Alan Alda Center for Communicating Science. Students presented their research in talks and a lively poster session. We also celebrated student accomplishments in publication and outreach.



Best Talk:

Maria Isaac

Best Poster (PhD):

Kimberly Nnah

Best Poster (MS):

Anosha Arshad

Best Publication:

Taylor Russo

Outstanding Service:

Gina Rizzo

Outstanding Scholar:

Allison George

2024 Mind Brain Lecture

On April 9, 2024, the Staller Center Main Stage hosted a compelling lecture by Dr. Sabine Kastner from Princeton University. Dr. Kastner, a leading figure in cognitive neuroscience, shared her expertise on the neural mechanisms of visual attention.



In her talk, "Everyone knows what attention is...-On its neural basis in the primate brain," Dr. Kastner explored how the brain prioritizes and processes sensory information. She provided a comprehensive overview of the brain networks involved in attention and discussed the consequences when these mechanisms are disrupted. Her presentation highlighted recent research on the temporal aspects of attention networks and their role in integrating memory and sensory information, offering valuable insights into attention deficit disorders and their broader implications.

UPCOMING EVENTS

Mark your calendar!

Run 4 Miles

Department friends Wai Law and Dennis Almodovar are once again planning an epic run to raise funds and support for The Thomas Hartman Center for Parkinson's Research and Agape Meals for Kids. In previous years, Wai has run from Buffalo to Manhattan on the Empire State Trail and gotten to know Long Island well by running around its perimeter. This year he will be running 200 miles in 48 hours by making 50 4-miles loops. Loops begin and end at the Green Street Eatery, 7 Emerson Avenue, Levittown, NY 11756. The event kicks off at 9am on Friday August 30th. You can stop by at any time during the 48 hour event to join in on the run, take a stroll, or cheer Wai on during this Labor Day Weekend excursion.



Join local ultrarunner **Wai Law** as he attempts to run a 4-mile loop 50 times for **200 miles in 48 hours!** Help him accomplish his goal while supporting 2 amazing local non-profit organizations:

- **Agape Meals for Kids**

- **Thomas Hartman Center for Parkinson's Research at Stony Brook University**

9am Fri 08.30.24 - 9am Sun 09.01.24

Each 4-mile loop starts and ends at:

Green Street Eatery

7 Emerson Avenue, Levittown



2 WAYS TO SHOW YOUR SUPPORT!

- **Come out to cheer or run a loop or 2 with Wai**
- **Go to the following links to make donations:**

Meals for Kids

<https://agapemealsforkids.org/run-donations>



Parkinson's Research

<https://sbugiving.com/Run4Miles>



Follow us on FB for latest updates or inquiries: www.facebook.com/Run4Miles

2024 Department Retreat

In just a few weeks, the Neurobiology & Behavior Department will gather at Old Field Club for our annual retreat. We will hear engaging talks from faculty and postdocs and our keynote speaker, Dr. John J Foxe, the Kilian J and Caroline F. Schmitt Chair in Neuroscience at the University of Rochester Medical Center.

Please be sure to register here: <https://tinyurl.com/bdh2dyz8>



Attention

The Department of Neurobiology & Behavior at Stony Brook University invites you to apply for this year's BRITE postdoctoral seminar series!!

<https://forms.gle/GnnYXDywarHjarbg6>



The goal of BRITE is to enhance inclusion in neuroscience research by recognizing the achievements of talented postdoctoral fellows and providing an opportunity to foster their professional development. Three outstanding applicants will be selected to give a seminar for the Neuroscience community at Stony Brook University in the Fall semester of 2024 (honorarium and coverage for travel arrangements and expenses included). Awardees will be selected based on their scientific accomplishments and potential in all fields of neuroscience, and commitment to diversity and inclusion in science.

SUBMISSIONS ARE DUE BY **OCTOBER 15, 2024**. PLEASE DIRECT ANY QUESTIONS TO ELSIE PERSAUD (GAITREE.CHANDRAPERSAUD.1@STONYBROOK.EDU).

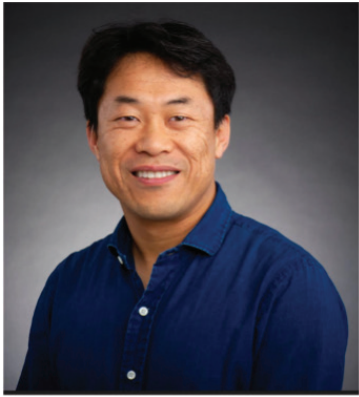
BRITE Seminar Series

Applications have just opened for 2024's **Bolstering Research through Inclusion, Talent and Excellence (BRITE)** seminar series. In December, three outstanding postdoctoral scholars will visit the department to present their research. Please help us spread the word by sharing the application found here:

<https://forms.gle/GnnYXDywarHjarbg6>

ALUMNI SPOTLIGHT

Young-Goo Han



Prior to enrolling at Stony Brook University, Young-Goo Han studied molecular biology and earned a master's degree in neuroendocrinology from Seoul National University. While studying the neuroendocrine

system that regulates reproduction, Han became interested in how animals sense their mates and environments. This led to an interest in Dr. Maurice Kernan's work on mechanosensation in *Drosophila*.

In Dr. Kernan's lab, Young-Goo Han began working on finding genes required to sense mechanical stimuli, such as sound and touch, using flies as a model system. Using mutant flies that cannot sense mechanical stimuli Han discovered a gene that was required to form the structure known as sensory cilia, which is critical in sensing mechanical stimuli. Although comparable to sperm flagella, Han discovered that the mutant fly's sensory cilia were defective, but its sperm was normal. This made him wonder why the mutation only impacted sensory cilia and not flagella. He observed that in flies, this gene is required for the formation of sensory cilia but not sperm flagella. His findings show the significance of this gene in various organisms and its involvement in sensory biology.

Han gained invaluable knowledge and inspiration from his mentor, Maurice Kernan's approachable nature and willingness to answer questions. His academic experience at Stony Brook was further enriched by meeting his future wife.

Dr. Han was unsure of his next moves after finishing his Ph.D. at Stony Brook and skimmed through many issues of *Science* and *Nature* to learn about the latest scientific developments. Those readings and his studies on the crucial gene for the formation of sensory cilia, however, led him to a different branch of science.

Young Goo Han is now researching the role of hedgehog signaling in brain development and medulloblastoma. Specifically, he is researching how hedgehog signaling governs cerebral cortex growth, and the molecular and cellular pathways that result in a larger and more folded brain in higher mammals including humans. He has found that hedgehog signaling is required and sufficient for the expansion of outer radial glia, a newly identified neural progenitor cell type that is vital in the formation of a larger folded brain. He investigates the molecular mechanisms that promote the expansion of outer radial glial cells.

While seeking jobs, Dr. Han suggests that graduate students should pay attention to the increased demand for researchers in the business. When he first started his work, he said, there were few job options for academics. In recent years, the scene has shifted considerably, with more chances in firms that demand support of professional researchers. Students should have an open mind and investigate both academic and corporate career options. Such investigation can help to discover additional opportunities to utilize research abilities in relevant ways.

More About Dr. Han

Lab Website:

<https://www.stjude.org/research/labs/han-lab.html>

Recent Publications:

Hou S, Ho W-L, Wang L, Kuo B, Park JY, Han YG. Biphasic roles of hedgehog signaling in the production and self-renewal of outer radial glia in the ferret cerebral cortex. *Cerebral Cortex* 31(10):4730-4741, 2021.

Wang L, Park JY, Liu F, Olesen K, Hou S, Peng JC, Infield J, Levesque AC, Wang YD, Jin H, Fan Y, Connelly JP, Pruett-Miller SM, Hu MG, Hinds PW, Han YG. A kinase-independent function of cyclin-dependent kinase 6 promotes outer radial glia expansion and neocortical folding. *Proc Natl Acad Sci U S A*. 2022 Sep 20;119(38):e2206147119.