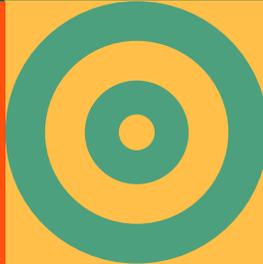
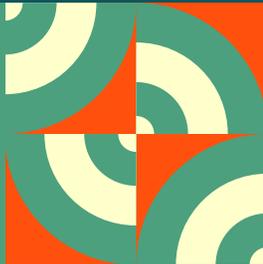


# 2023 Highlights





From those who have donated their time to mentor our teams, to the faculty, staff and students who continue to develop groundbreaking technologies and innovations, we are grateful for all that you do.

Brandeis Innovation continued to thrive in FY 2023 and I am pleased to share Highlights from both our technology transfer and entrepreneurship programming activities. It has been exciting and rewarding to support the Brandeis community of inventors, entrepreneurs, students, faculty and staff as they continue to innovate solutions aimed at repairing the world.

Highlights of the year for Brandeis Innovation include:

- Forty-six new licenses executed
- Over \$1.3 million in licensing revenue received
- Twenty-five new projects launched by our Spark, Sprout and I-Corps teams
- Fourteen newly issued patents

We are always striving to elevate the amazing discoveries coming out of labs, classrooms and dorm rooms and find new ways to ensure the innovations are brought to people and places around the world. It is not something we do alone. We thank the cadre of mentors and advisors, many of whom are Brandeis alum, for helping us reach our goals and the exceptional faculty and students that share their groundbreaking ideas and inventions.

I hope you are inspired by the stories, statistics and innovations of 2023. We look forward to continuing to fulfill the mission of Brandeis Innovation in the coming year!

**Rebecca Menapace**

Associate Provost for Innovation and  
Executive Director, Office of Technology Licensing





Since its early days, Brandeis has been a top tier university with global reach, attracting students and faculty from around the world to pursue learning and scholarship at the highest levels. It is a community rooted in purpose, guided by its founding values, poised to lead in education and research in the 21st century. Brandeis is one of the 65 members of the American Association of Universities and is one of only 35 private universities to be designated by the Carnegie Foundation as research universities with a “very high research activity.” Among the top awards and honors Brandeis counts: Nobel Prize winners; fellowship in the American Academy of Arts and Sciences; membership in the National Academy of Sciences and the National Academy of Medicine; Pulitzer Prizes; MacArthur Foundation “genius grants”; and Howard Hughes Medical Institute investigatorships.



We support the University's researchers with a full range of intellectual property, commercialization, and business development services through the Office of Technology Licensing and our Virtual Incubator. Our incubator and grant programs also foster new entrepreneurial activity among students, faculty and staff.



### **We accelerate innovation at Brandeis by:**

- Funding new ventures and innovations through our Spark, Sprout, and I-Corps programs.
- Determining commercialization pathways for inventions born at Brandeis by evaluating inventions, securing IP protection, and developing pathways to commercialization.
- Developing significant revenue streams for the University through structuring licensing deals for profitability and equitable distribution of income.
- Supporting development of industry-academic collaborations, partnerships, funding options and materials sharing.
- Maintaining long-term relationships with licensees, assuring compliance with agreement terms and distributing any income generated by licenses.
- Ensuring compliance with the University's IP and other research commercialization policies.
- Mentoring and training Brandesian entrepreneurs through our Virtual Incubator.
- Creating opportunities for visibility through our events and outreach.

# A History of Innovation

## Intellectual Property (IP) created by Brandeis University's research programs have powered several successful startups, including:

- Syntonix, acquired by Biogen and spun off as Bioerativ™, later acquired by Sanofi, developer of two FDA-approved hemophilia drugs: Eloctate™ and Alprolix™;
- ThermaGenix, creator of PCR additives to enable better sequencing sample prep;
- RC Analytics, providing data analytics solutions for organizational performance optimization;
- Dexela, producer of Complementary Metal-Oxide-Semiconductor X-ray detection technologies, acquired by PerkinElmer;
- ArQule®, pioneer in small molecules for biomarker-defined oncology and rare disease therapeutics.

## Select Brandeis Products in the Market

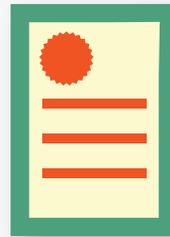
Partnering with Brandeis University means tapping into our deep expertise in functional foods, neuroscience, research reagents, chemistry, therapeutics, materials science, AI, and data analytics. We have a wide variety of IP and technologies available for licensing. Our diverse portfolio has a strong track record in the market, with 54 active licenses, including:

- **Sanofi Eloctate™(ELOCTA® in EU) and Alprolix™:** two FDA-approved hemophilia therapeutics Corazonas Heartbars: Utilizes non-esterified plant sterols to lower cholesterol and promote cardiovascular health.
- **Conagra Smart Balance®, Earth Balance®, Bestlife™:** All use a Brandeis developed 1:1 blend of saturated and polyunsaturated fats to improve cholesterol ratios.
- **Bruker FluoroType® STI:** an innovative fluorescence-based test system, can be used for the fast and reliable diagnostics of sexually transmitted diseases.
- **Bruker FluoroType® SARS-CoV-2 varID Q:** a multiplex PCR test for detection and quantification of SARS-CoV-2 and simultaneous identification of four different S gene mutations of SARS-CoV-2.
- **Thermagenix ThermaStop™, ThermaGo™ and ThermaStop-RT™:** Simple, Universal, easy-to-use reagents that improve product yield and specificity in PCR amplifications.
- **Spiritual Generalist Training for Healthcare Clinicians:** an educational tool to train healthcare providers to be spiritual generalists
- **RC Survey Tool:** for the assessment of organizational relationship coordination for driving higher performance outcomes.

# 2023 Tech Transfer by the Numbers



**46 Invention  
Disclosures**



**14 Patents  
Issued**



**220 Material Transfer  
Agreements**



**Licensing Income  
\$1,337,659**



**32 Non-Disclosure  
Agreements**

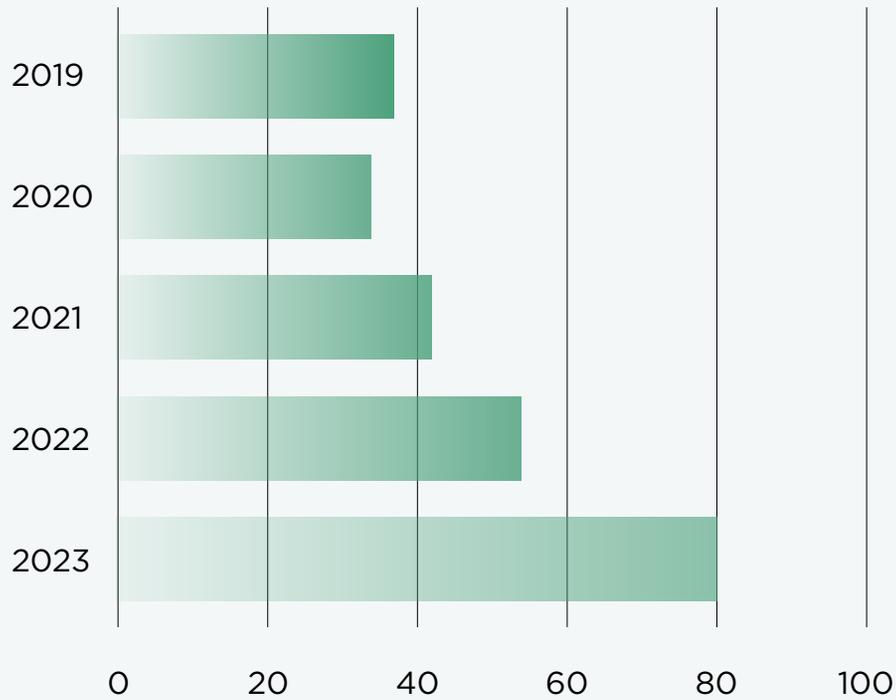


**80 Active  
Licenses**

# More 2023 Tech Transfer by the Numbers

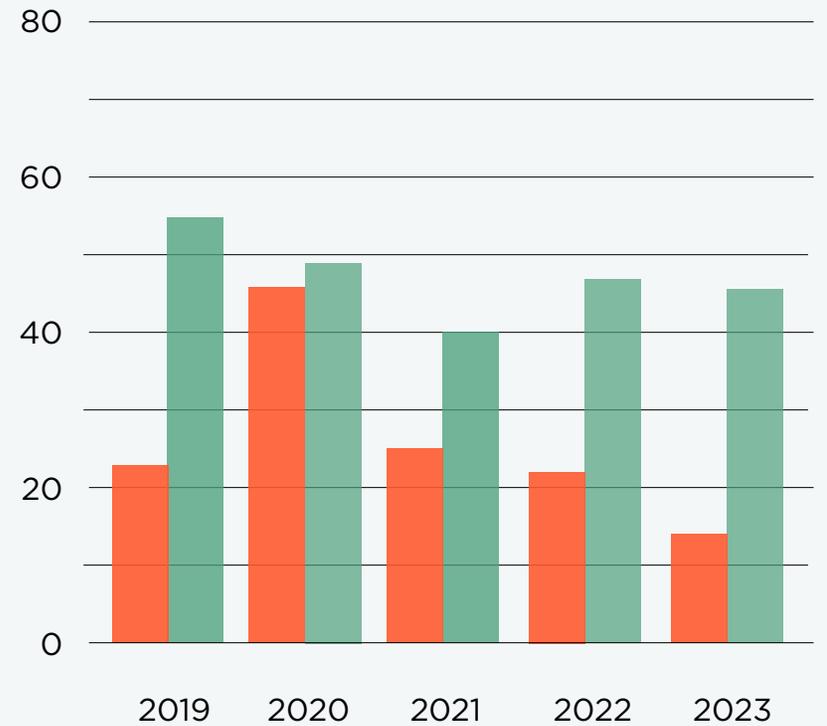
## Active Licenses

(number of licenses)



## Inventions Disclosed and Patents Granted

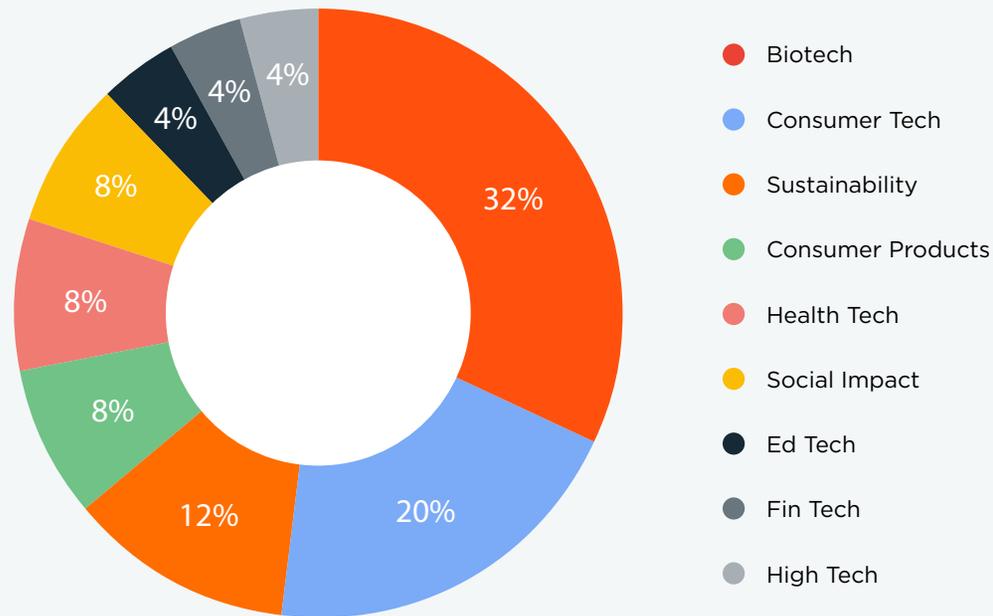
(US and Non-US)



● 46 Inventions Disclosed ● 14 Patents Granted Worldwide

# Diverse Projects, Common Goals

In FY '23, Brandies Innovation teams represented a cross-section of the fastest-growing tech sectors today:



*“We bring together interdisciplinary teams because it is diversity, in all its forms, that sparks the best thinking.”*

Rebecca Menapace

Associate Provost for Innovation and Executive Director, Office of Technology Licensing

During 2023, Brandeis Innovation engaged stakeholders with training, events and mentorship:

760k

Media  
impressions



400

Mentorship &  
Staff Office Hours



90

Mentors



905

Training  
Hours



72

Program  
Participants



*“Brandeis Innovation provides a bridge between Brandeis innovators and the global innovation community.”*

Rebecca Menapace

Associate Provost for Innovation and  
Executive Director, Office of Technology Licensing



**Prof. Suzanne Paradis** and her lab are working on gene therapies for treatment-resistant epilepsy, bringing new hope for the millions of patients with the most challenging cases of the disease.

## **Faculty Spotlight:**

# Suzanne Paradis

**Epilepsy is a brain condition characterized by repeated seizures. These seizures can be thought of like sudden electrical storms in the brain that can come from almost anywhere in it. Around 2-3% of people will get epilepsy in their lifetime, with about 3.4 million people in the U.S., including 470,000 children, currently living with epilepsy.**

About 1 million of these people live with seizures that cannot be controlled by current medical interventions and which adversely affects their quality of life. People with frequent seizures might face life-threatening emergencies like sudden unexpected death in epilepsy (SUDEP) or mental health issues like depression and anxiety.

The go-to treatment for seizures are medications that aim to stop them from

happening. Basically, seizures can start when there's too much excitement in the brain cells or when the brain's networks get too synchronized. Most medications work by either calming down the excitement in the brain cells or by helping the brain's own calming signals work better.

Professor Suzanne Paradis and her team have come up with a new treatment to decrease seizures called Sema4D gene therapy. This approach increases the brain's natural calming signals by creating more of the connections that help quiet the brain, keeping the excessive excitement in check. This idea came from her discovery that a protein called Semaphorin 4D (Sema4D) can quickly help form these calming connections in the brain. Their research found that delivering Sema4D directly to the brain helped create more of these calming connections and reduced seizure activity.



The therapy might even work well alongside current medications, offering a new hope for better managing seizures.

Prof Paradis' mission now is to create a therapy for the 30% of patients with epilepsy who don't find relief with the usual treatments, experiencing what is called intractable epilepsy, a serious condition that can disable patients.

Despite all the advancements and new medications approved in the last 40 years, many current treatments still don't work for everyone. Her goal is to change that, especially since these individuals face bigger risks, including more severe health events.

Thanks to an award from CURE Epilepsy, a nonprofit organization dedicated to finding cures for Epilepsy, Prof Paradis and her team are working on clinical applications of the research, including dosing and administration regimens.

Next up, they're looking to answer some big questions that will help move the therapy from the lab to real-life use. They are working to confirm that the treatments don't interfere with memory or cognition, and to determine whether the treatment is effective in preventing the worst health outcomes, especially for patients with intractable epilepsy. The Paradis lab is working hard to bring new hope to epileptic patients, improving quality of life and longevity for the most challenging cases.

**Prof Paradis' mission now is to create a therapy for the 30% of patients with epilepsy who don't find relief with the usual treatments**

# Annually, on Average, Brandeis Innovation Funds:



**Sprout**

**6 Teams**  
**14 Participants**  
Up to  
**\$100,000**



**Spark**

**8 Teams**  
**25 Participants**  
Up to  
**\$50,000**



**8 Teams**  
**28 Participants**  
Up to  
**\$35,000**

*Innovation programs accelerate connections among the University's  
researchers inventors, entrepreneurs and industry.*



## Spark

Brandeis' Spark Program is designed to encourage and support entrepreneurial activity within the Brandeis community, including students (graduate and undergraduate), postdocs, faculty and staff. The awards are intended to help bring ideas and entrepreneurial ambitions to life.

# Meet the Current Spark Teams

## Tree for the Taking

Sam Aronson, Alden Kennedy, Gess Kelly

## ProjectTee

Eleftheria Topaloglou

## Chasing Stars

Marco Qin, Jacob Mikelberg, Eric Siebert, Jingqian Cheng, Jian He

## Owly

Peter Meng, Randy Wang, Alex Danilkovas

## Get Started

Erica Hwang, Arie Rich, Archer Heffern

## MESKEREM

Kalkidan Antonios, Caleb Britton

Check out details on these teams at [brandeis.edu/innovation/grant-programs/spark/](https://brandeis.edu/innovation/grant-programs/spark/)

## Pool

Eyal Cohen, Bar Weiner

## Buffr

George Nekwaya, Julius Nakale, Evan Goddard, Tina Li

## Talent Pair

Susan Li, Angela Lam, Jaden Farquhar, Yalda Mauj, Zihao Li

## Blockety

Jacob Schireson, Isaac Goldings

## Caribbean Connect

Djounia Saint-Fleurant





Profile in Innovation:

# Tree for the Taking

**Sam Aronson** '20, MBA '22, co-founder of Tree for the Taking, learned to be a luthier, or guitar-maker, in order to transform the industry and the instrument he loves.

**Tree for the Taking, the innovative start-up that crafts sustainable guitars and accessories from waste-wood of invasive trees, is intriguing green consumers and music enthusiasts alike. Tree for the Taking is the brainchild of Brandeis Heller School for Social Policy and Management graduates Sam Aronson, '20, MBA '22, and Alden Kennedy, MBA '22.**

Working together in 2023 as part of the Spark program cohort with PhD candidate Gess Kelley, they developed their business model while creating a prototype guitar using 3D printing methods they learned in the Makerlab. Over that summer, co-founder Sam Aronson built Tree for the Taking's first guitar, which is already attracting acclaim from industry experts.

Tree for the Taking seeks to lead the guitar manufacturing industry away from its extractive roots through domestic additive manufacturing, and to further democratize the electric guitar by making them more accessible. It's an ambitious plan, but one that the team feels confident that they can achieve one step at a time thanks to the skills that they learned at Brandeis.

The problem they aim to address is sustainability in guitar manufacturing.



**Tree for the Taking hopes to make sustainable guitars accessible to all, with their innovative electric models rooted in the history of luthiery but utilizing modern manufacturing methods learned at Brandeis.**



“It’s common for guitarists to laud and lust after the most rare and exotic tonewoods of yesteryear, namely Brazilian Rosewood or old-growth spruce. Vintage guitars with Brazilian Rosewood demand huge premiums, with some reaching beyond the quarter-million dollar mark,” says Sam. “All I think about when I see those is how many children could attend music lessons for that value, and how much of a loss it is to society when exorbitant capital values are placed on the woods themselves when they cause genuine social and environmental harm. The rainforests of Brazil were decimated by rosewood logging” to the point that such wood now needs extensive documentation, raising prices and making premium guitars more inaccessible. By contrast, Tree for the Taking’s business model centers around additive manufacturing and providing accessible alternatives to traditionally expensive guitars. Through intensive dedication and skill honing, Aronson crafted the company’s first guitar this year – a unique creation that met acclaim from musicians and luthiers.



**Alden Kennedy, MBA '22, co-founded Tree for the Taking to combine his passion for sustainable design with technology.**

Tree for the Taking aims to redefine the global standard for guitar production by prioritizing sustainability and ethical sourcing over exotic timber use.

Their guitars stand out in two distinct ways: the use of invasive waste-wood such as Tree of Heaven and reclaimed or scrap materials, and the creation of custom molds to reduce both waste and labor-hours. As a testament to their transparency and ethics, they ensure the traceability of all materials used, giving players a unique connection to their instrument.

The future of this revolutionizing enterprise is bound to be exciting, as they continually refine their techniques and prepare to scale. As part of their growth plan, they will be launching a Kickstarter campaign to fund a manufacturing run once their production model is final. Support their mission by visiting their website at [treeforthetaking.com](http://treeforthetaking.com) and purchasing their

handmade guitar picks or sustainable merchandise.



## Sprout

The Sprout Program, funded by the Provost's Office and the Office of Technology Licensing (OTL), is designed to encourage and support entrepreneurial activity within the Brandeis community for students (graduate and undergraduate), postdocs, faculty and staff in the Division of Science. The awards are intended to help bring innovative research and entrepreneurial ambitions to life.

# Meet the Current Sprout Teams

## Treatment of hypertension using novel chemogenetic approach

Teams: Susan Birren (PI), Joshua Harrison

## Small-molecule control of kinase-phosphatase interactions

Team: Niels Bradshaw (PI), Emily Stadnicki

## Solid-state MOST system utilizing 2+2 cycloaddition

Team: Grace Han (PI), Saubhayan Chakrabarty

## CaMKII inhibition as an alternative for different cancer treatments

Team: Lizbeth Hedstrom (PI), Harlinson Osorio Franco

## Development of galectin inhibitors

Team: Isaac Krauss (PI), Kayla Cerri

## Machine learning methods for scoring telephone assessments of reaction time

Team: Margie Lachman (PI), Sara Motoyama, Liz Mahon

## Colibody

Team: Michael Marr (PI), Will Dahl

## A new antiviral avenue: Targeting Fe-S clusters in viral proteases

Team: Maria-Eirini Pandelia (PI), Trent Quist

Check out details on these teams at [brandeis.edu/innovation/grant-programs/sprout](https://brandeis.edu/innovation/grant-programs/sprout)





## I-CORPS

In 2017, Brandeis University received a grant from the National Science Foundation (NSF) to create an I-Corps™ site. The I-Corps program prepares scientists to extend their focus beyond the university laboratory, accelerating the economic and societal benefits of basic research. Brandeis is one of 10 I-Corps sites in New England. Working with select teams, we provide training, resources and funding for innovative startups developed by Brandeis students, faculty and staff.

# Meet the Current I-Corps Teams

### Assessing emotion regulation ability through a portable mental health care system

Tong Lin, Bhavya V. Kondamuri, Yaxuan Wen, Victoria Melbourne

PI: Jennifer Gutsell

### Microfluidic chip for water quality inspection

Michael Stehnach, Dante Sasso, Yichen Ma

PI: Seth Fraden

### Engagement analytics for online classrooms

Yousuf Khan

PIs: Benjamin Gomes-Casseres, Pito Salas

**Check out details on these teams at [brandeis.edu/innovation/grant-programs/icorps](https://brandeis.edu/innovation/grant-programs/icorps)**

### Leveraging phosphatase synergy for tissue specific p38 inhibition

Emily Stadnicki, Khaing Hnin Hnin Oo, Ci Song

PI: Niels Bradshaw

### CapGun Genomics

Manny Glinsky, Omer Barash, Viraj Gandhi

PI: Paul Garrity

### Optical-controlled reusable nano-porous material for water purification

Mingrui Qi, Scarlett Ren, Tianyu Gao

PIs: Grace Han, Xiang Li (graduate student)

## I-CORPS benefits



### Support with Research

The Office of Technology Licensing provides support in the form of mentor introductions and training sessions.



### Customer Discovery Funding

Up to \$3,000 is provided to each team for expenses related to customer discovery and equipment or materials.



### Eligibility for Future NSF Funding

Teams that successfully complete I-Corps training become eligible to apply to the NSF I-Corps Teams Program to receive additional support—in the form of mentoring and funding (up to \$50,000)—to accelerate the translation of knowledge derived from fundamental research into emerging products and services that can attract subsequent third-party funding.

## Revolutionizing Cognitive Testing:

# The Innovation Journey of Sara Motoyama at Brandeis University



**Sara Motoyama '24** was able to pursue advanced research at Brandeis on cognition while an undergraduate. Working in the lab of Prof. Margie Lachman, she explored ways to use data science to detect brain changes that can indicate cognitive decline.

**Sara Motoyama '24, was born in Tokyo, Japan, and has made significant research strides in her academic career while still an undergraduate.**

Majored in psychology with minors in philosophy and business, Sara was involved in many extracurricular activities. She served as a research assistant in Dr. Margie Lachman's Lifespan Lab, focused on studying healthy aging and dementia risk. She also worked at the campus library front desk tutoring peers. With her experience in research as an undergraduate, she was a research mentor for fellow undergraduates who were looking to get involved in research at Brandeis University.

### **Pioneering Cognitive Testing Automation**

One of Sara's most notable projects began in the summer of 2022. Working in Professor Lachman's group, Sara and her colleague, Bishal Baral, embarked on a groundbreaking initiative to automate the scoring of a cognitive reaction time test. This test, part of the Midlife in the United States study, was traditionally done over the phone and required substantial time for data processing. Sara and Bishal's work reduced the processing time from 45 minutes to just one minute, utilizing machine learning models to enhance efficiency and accuracy while minimizing human error.

Working with audio data presented unique challenges, yet Sara possesses a clear vision for the project's future and is determined to see it through as part of her work in the Lifespan Lab. She envisions her automated scoring method to revolutionize cognitive performance testing, making it more accessible and accurate for researchers and clinicians alike. The goal is to optimize the user experience of her scoring website, ensuring it serves its purpose effectively.

### **Support and Mentorship from Brandeis Innovation**

Brandeis Innovation's Sprout and I-Corps programs have significantly supported Sara's journey. These initiatives have provided Sara and her collaborators, Elizabeth Mahon and Bishal Baral, with essential resources such as funding, mentorship, and business insights, enabling them to advance their project and reach a broader audience. In her final year at Brandeis, she completed her final thesis, which focused on providing a solid grounding for her innovative scoring method. She also refined the user experience of her scoring website and introduced additional features to enhance functionality. She also plans to continue pitching her ideas to programs similar to I-Corps to secure additional support and funding.

Sara Motoyama's journey epitomizes the spirit of innovation and dedication that Brandeis University fosters. Her work not only aims to leave a lasting impact on cognitive testing but also inspires aspiring entrepreneurs and innovators within the Brandeis community.

**“I'm envisioning that this efficient method will facilitate research for clinicians and researchers in the field”**

**— Sara Motoyama**



# Exploring Neuroscience and Data with Professor Stephen Van Hooser and NDI Cloud



**Professor Stephen Van Hooser is an esteemed academic researcher and Associate Professor of Biology at Brandeis University, with a dedicated focus on the mysteries of brain science, particularly in the development and function of cortical circuits.**

His research journey into neuroscience revolves around understanding how neuronal networks assemble and function to facilitate perception and behavior, emphasizing the complex relationship between cellular and systems-level properties of neural circuits.

## **From Classroom to Cutting-Edge Research: The Synergy of Collaboration**

A defining aspect of Van Hooser's work is his collaboration with Audri Bhowmick, an undergraduate student at Brandeis. Their partnership, fostered under the university's commitment to mentorship and student involvement in research, underscores the dynamic interaction between teaching and innovative exploration. Their journey through the I-Corps™ program to develop the NDI

Cloud project exemplifies how academic environments can catalyze significant scientific advancements, providing students like Audri with invaluable research experience and insights.

**Prof Stephen Van Hooser** has worked closely with the Brandeis Innovation team to launch his startup, NDI Cloud, which aims to improve neuroscience data sharing.

**“I’ve always had my eye out looking for products, how one could either incorporate it into something else or improve it.”**

**— Stephen Van Hooser**

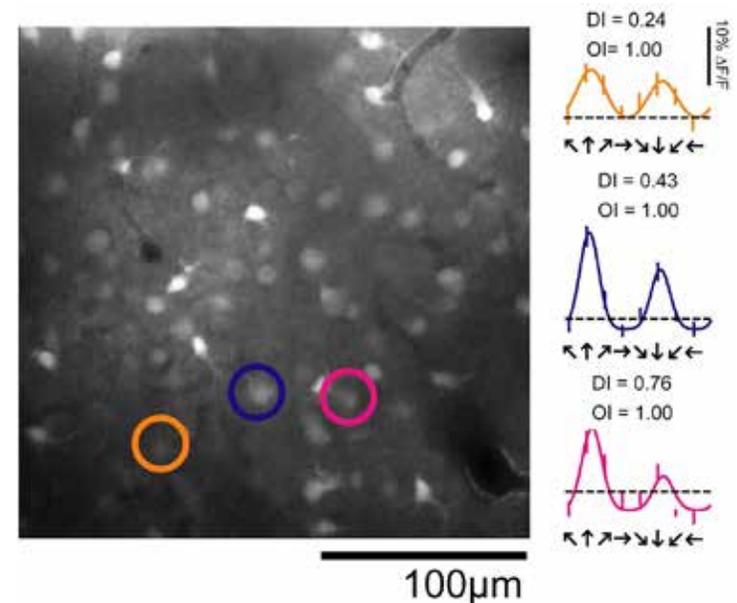
## **NDI Cloud: Revolutionizing Neuroscience Research**

Professor Van Hooser’s instrumental role in the NDI Cloud project, developing from his engagement with the I-Corps™ program, shows a transformative step in neuroscience research. NDI Cloud is designed to enhance how neuroscience data is analyzed and shared. By offering a standardized, accessible platform for data analysis, NDI Cloud deconstructs the barriers that traditionally appear in research development, fostering a more integrated and efficient scientific community.

In neuroscience, researchers face significant challenges when sharing and working with each other’s data. This is because their experiments often use specialized and varied equipment, capturing and storing data in various ways. Scientists struggle to combine and analyze data because every lab’s data differs in format and structure. Hence, an innovative tool called the Neuroscience Data Interface (NDI) has been developed to tackle this issue. NDI works as a universal translator that helps different data sets speak the same language. It doesn’t require researchers to change how they collect data; instead, it provides a common ground for accessing and analyzing data from various sources. By simplifying how data is accessed and analyzed, NDI could significantly boost progress in neuroscience research, making it more integrated and collaborative.

“The idea is that people can go and look at other people’s data, but obtain it in a format that they can immediately use. So, the details of the organization are the same, from dataset to dataset, once you know how to read one, you know how to read them all.”

Professor Van Hooser’s work exemplifies the power of curiosity, collaborative spirit, and cross-disciplinary engagement for the Brandeis community and beyond. His story, particularly his partnership with Audri and their contribution to the NDI Cloud project, is an inspiration, demonstrating how blending different knowledge areas can lead to exciting discoveries and practical solutions that deepen our understanding and enhance human well-being.



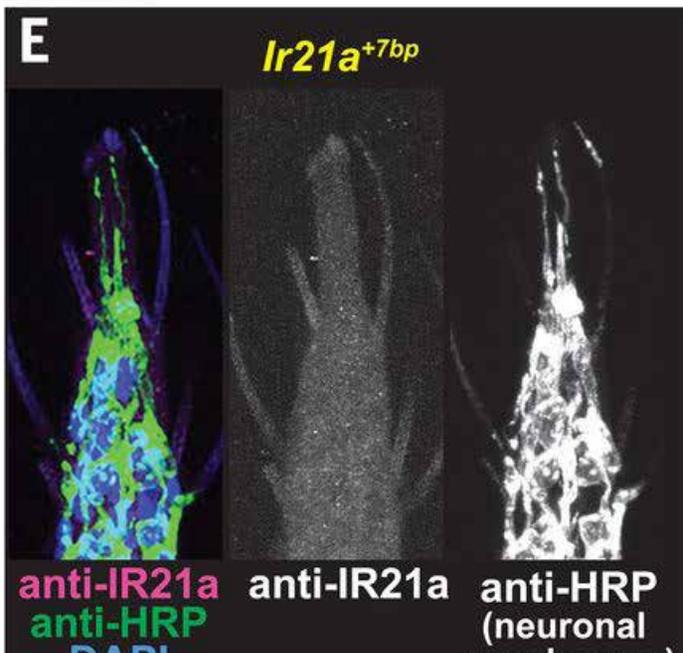
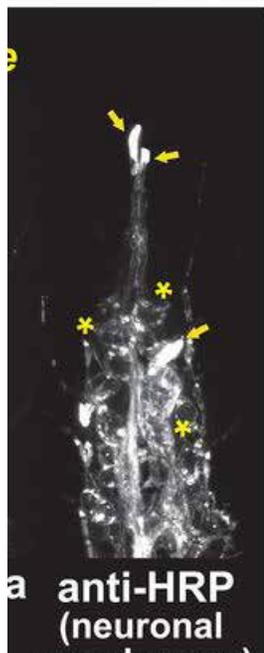
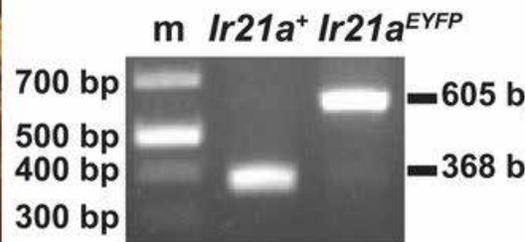
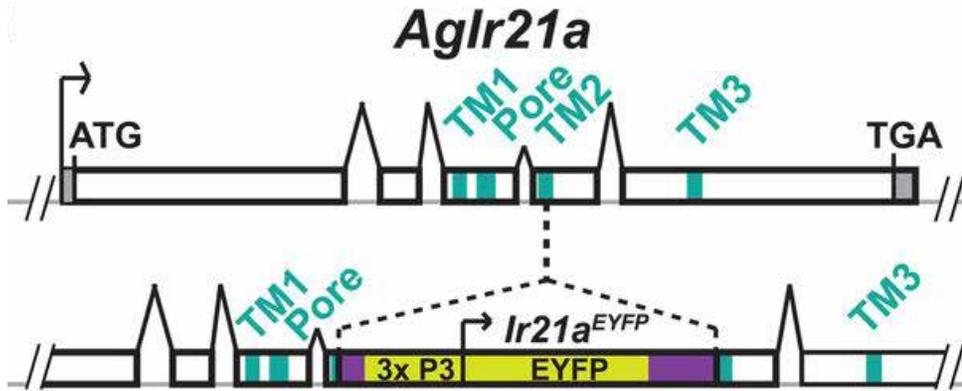
**Left:** field of cells in mammalian visual cortex labeled with the calcium dye Oregon Green BAPTA-1 AM. **Right:** Responses of 3 single cells to visual stimuli moving in the indicated directions. The cells exhibit varying degrees of motion selectivity (low to high from left to right). From Li/Van Hooser et al., 2008.

# Reducing Mosquitoes and Other Pests Without Pesticide

**Brandeis Professor Paul Garrity and his team have developed a new method of pest control that can limit the health and agricultural impact of insects and is also kind to our planet.**

This approach not only mitigates the ecological and health impacts of pests but also preserves vital ecosystem roles like pollination. The technology marries the traditional Sterile Insect Technique (SIT) with modern CRISPR gene-editing in order to make SIT more efficient, effective, and scalable. SIT is a method where sterile male insects are released into the wild. Even though they compete for mates, they can't produce any offspring thereby crashing the population as most female mosquitoes mate only once in their lifetime. This means fewer pests over time, and in some cases, they can even eliminate them entirely. This breakthrough has already shown promise with fruit flies and mosquitoes, and it could change the game in how we handle pests and protect our crops and health.

For more than 50 years, SIT has been used to keep both plant and animal pests at bay, reducing both pest-driven crop failures and the prevalence of deadly diseases such as malaria. However, the current technique uses irradiation of male mosquitos to make them sterile. This technique doesn't ensure 100% sterility and a large population of irradiated mosquitoes can't compete with wild-type males in the environment. Prof Garrity's team has improved upon this idea by using CRISPR,



a highly precise way to edit genes, to make these sterile male insects. By tweaking a few genes here and there, they've made it easier to modify insect genes to code for sterility. Fluorescence-based sorting of the sterile male population ensures it's more effective and there's no chance of any genetically-altered mosquitoes escaping in the wild.

The insects are otherwise healthy, so they can still be food for amphibians and other animals that eat insects, and still play other roles in ecosystems, such as pollinating plants (yes, mosquitoes are pollinators, and this technology doesn't interfere with this role). CRISPR-enabled SIT reduces the number of unwanted pests without using harmful chemicals. This method can be used to reduce/crash the local population of agricultural pests temporarily to enhance crop yield or to eliminate a disease vector or an invasive species permanently in the environment.

Prof Paul Garrity and his team's goal is to help the agritech and public health sectors reduce pest populations without harming the environment. By integrating CRISPR, the method marks a significant improvement over traditional SIT methods. The technique presents a groundbreaking shift in sustainable agriculture and disease control, promising a future where pest management is both effective and harmonious with nature. Brandeis is actively seeking licensing partners for this technology.

**Reducing harmful insects such as mosquitoes impacts public health globally. Prof Garrity and his team are working on pesticide-free ways to control mosquitoes and other insects that harm people, animals, or crops.**



**Prof Paul Garrity** and his lab are working on ways to reduce pests using genetic techniques.

# Where are they now?

**Our teams continue to innovate once they graduate from our programs. Catch up with some recent Brandeis Innovation teams on what they are doing today.**



National I-Corps participants and 2022 and I-Corps Sprout grant recipients NDI Cloud, led by **Prof Stephen Van Hooser** with I-Corps fellow **Audri Bhowmick '23** showcased their work at the annual global conference for neurology, Neuro. They continue to work on their data platform that allows scientists working on neurological diseases such as Parkinson's, Alzheimer's, and ALS to share and analyze their datasets better, for faster progress towards new treatments.



GreenLabs Recycling, created by **David Waterman, PhD '18**, and **Brenda Lemos PhD '19**, is growing its impact in reducing the impact of laboratory research on the environment. The recycler of plastic waste from labs has signed contracts with major research institutes across New England, recycling several tons of plastic a year. Emerging from the Sprout and I-Corps programs in 2018, the organization makes it easier for universities and companies to reduce the environmental footprint of their labs.



GreenChoice, 2017 SparkTank winners, founded by **Galen Karlan-Mason MBA '18**, has pivoted to a business to business (B2B) model, helping the grocery industry with making healthy and climate-conscious shopping easy. Their consumer app was rated one of the “top 3 best apps for good” by Google in 2020. With their continued focus on industry data, their database currently offers easy access to 100 plus regulatory-compliant dietary, wellness and values attributes, as well as climate labels and health and sustainability ratings on over half a million foods.



Farmer Foodie, which won grant funding via SparkTank in 2022, is expanding sales of their dairy- and gluten-free Cashew Parm products in the northeast. Founded by **Ali Elliott, Heller MBA and MA '22**, Farmer Foodie's vegan cheese products are now available in 63 Big Y stores and several specialty grocery stores. Ali participated in the 2022 MassChallenge cohort, as well as winning the WeWork + Oatly Sustainability Changemakers Business prize in 2022, and winning spots in top commercial accelerator programs such as the Santander Cultivate Small Business program in 2024.



Project Insulin, the brainchild of **Eric Moyal, MA '18, MBA '22**, continues to make inroads on its mission to make insulin affordable for all patients. The 2022 SparkTank winners were recently featured in the Boston Globe for their work. They have participated in numerous commercial pitch events and incubators, most recently winning \$10,000 at the Social Enterprise Greenhouse Rhode Island Impact Business Showcase.



Onye, the 2021 SparkTank-winning app created by **Emmanuel Obasuyi, BA '12, MS '15**, continues to make inroads in the Nigeria market with their data interoperable solution for healthcare providers.



Polify, a SparkTank winner founded in 2020, was designed to make healthcare a more simple process for students. Founded by **Ben Pockros MD/MBA '22** and **Jacob Radparvar MD/MBA '22**, the two used Spark funding to create a mobile app for students. To learn more, visit [www.polifymedical.com](http://www.polifymedical.com). Ben is now a urology resident at the University of Michigan and Jacob is now a plastic surgery resident at UC Irvine Medical Center.

# 75<sup>th</sup> Anniversary



**The New England Associates of Brandeis University** L to R Front: Abraham Shapiro, George Alpert, Albert Einstein, Ralph Lazrus, Norman Rabb in back: Sidney Rabinowitz, James J. Axelrod, Barnett Gofdon, Robert Cable, Yoland Markson and Irving Usen, March 8, 1947.

Since its founding, Brandeis University has been a pioneer in higher education, championing academic excellence, critical thinking and social justice. Brandeis University was founded in 1948 by the American Jewish community as a nonsectarian university committed to open inquiry. During Brandeis' 75th anniversary, the time is opportune to reflect on innovation and the role it has played in shaping the university's identity and impact.

Brandeis Innovation is a hub where interdisciplinary research meets entrepreneurial expertise. Founded in

1997, it initially aimed to evaluate new technologies at Brandeis for licensing opportunities, bringing potential funding to the university. Known then as the Office of Technology Licensing (OTL), it also assisted researchers with technology development and commercialization.

In 2015, recognizing OTL's value, philanthropist Alan Hassenfeld, H'20, funded its expansion through the Hassenfeld Family Foundation, creating the innovation center now known as Brandeis Innovation. It includes OTL and the Virtual Incubator, offering resources and training to Brandeis

faculty, staff, students, and alumni.

OTL's early success came with the development of Smart Balance, a heart-healthy butter alternative created in 1996 by professor emeritus KC Hayes and senior research scientist Dan Perlman '68. Another significant achievement was the development of hemophilia treatments Alprolix and Elocbate by a team including associate professor Neil Simister, approved by the FDA in 2014 and generating substantial licensing revenue.

The Sprout program, launched by OTL in 2011, funds Brandeis researchers in exploring their ideas' commercial potential. "Without Sprout, we couldn't have done it," says David Waterman, GSAS PhD'18, founder of the waste management startup GreenLabs.

In 2017, the National Science Foundation designated Brandeis Innovation as a site for its I-Corps program, helping research teams assess

their inventions' market potential.

A third resource, the Spark program, supports early-stage startup development with training, mentorship, and funding, leading to a SparkTank competition. Spark has aided startups across various industries, including the Farmer Foodie and GreenChoice, an ethical-shopping app that won a Google innovation award in 2020.

Looking ahead, Brandeis Innovation aims to establish an Innovation Bridge Fund for later-stage support to inventors and entrepreneurs who first received funding through Sprout, I-Corps, or Spark, continuing to offer invaluable guidance and support.

"It's not enough to have a great idea," says Joanne Nicholson, professor at the Heller School and inventor of WorkingWell, a platform aiding neurodivergent employees. "You need a path to market with the right tools, and Brandeis Innovation provided that."

# Cultivating a Community Through Innovation





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