

Publications of the Week

Cortical Somatostatin Interneuron Subtypes Form Cell-Type-Specific Circuits

First Authors: Sherry Jingjing Wu and Elaine Sevier | Senior Author: Gord Fishell *(pictured)*
Neuron | Harvard Medical School and the Broad Institute



The authors designed a series of genetic strategies to target the breadth of somatostatin interneuron subtypes and found that each subtype possesses a unique laminar organization and stereotyped axonal projection pattern. They examined the afferent and efferent connectivity of three subtypes and demonstrated that they possess selective connectivity with intratelecephalic or pyramidal tract neurons. [Abstract](#)

Mapping Lesion-Related Epilepsy to a Human Brain Network

First Author: Frederic Schaper | Senior Author: Michael Fox *(pictured)*
JAMA Neurology | Brigham and Women's



This case-control study used lesion location and network mapping to identify the brain regions and networks associated with epilepsy in a discovery data set of patients with poststroke epilepsy and control patients with stroke. The findings indicate that lesion-related epilepsy mapped to a brain network that could help identify patients at risk of epilepsy after a brain lesion and guide brain stimulation therapies. [Abstract](#) | [Press Release](#)

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Awards

Carolyn Kraus Receives Competitive Ruth L. Kirschstein Award

UMass Chan Medical School



Carolyn Kraus *(pictured)*, a PhD candidate in the Morningside Graduate School of Biomedical Sciences Interdisciplinary Graduate Program, has received a Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship from the National Institute of Arthritis and Musculoskeletal and Skin Diseases to study how CRISPR/Cas9 tools can be used to develop a therapeutic for Duchenne muscular dystrophy. [Read More](#)

Jane Park Places First in the NERM 2023 Postdoctoral Scholar Poster Competition

MIT Chemistry



Dr. Jane Park *(pictured)*, a Postdoctoral Researcher, was awarded the first place prize in the Northeast Regional Meeting (NERM) of the American Chemical Society's 2023 Postdoctoral Scholar Poster Competition. Dr. Park was awarded for her presentation, "The use of a pentaphosphorylating reagent to prepare nucleoside hexa- and heptaphosphates: Experimental and computational studies for their interaction with the RNase A". [Read More](#)

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Local News

Researchers Uncover a New CRISPR-Like System in Animals That Can Edit the Human Genome

MIT News



A team of researchers led by Dr. Feng Zhang *(pictured)* at the McGovern Institute for Brain Research at MIT and the Broad Institute of MIT and Harvard has uncovered the first programmable RNA-guided system in eukaryotes — organisms that include fungi, plants, and animals. They showed that Fanzor proteins use RNA as a guide to target DNA precisely, and that Fanzors can be reprogrammed to edit the genome of human cells. [Read More](#)

Finding a Way to Help Newborns Who Can't Immediately Have Heart Treatment

Boston Children's



Newborns with complex congenital heart defects and pulmonary overcirculation often need treatment as soon as possible. To address this challenge, Boston Children's heart specialists including Dr. Nicola Maschietto *(pictured)* leaned into technological innovation, their experience, and a perseverance that would ultimately confirm their belief that even the highest-risk cases are not out of reach. [Read More](#)

Chemists Discover Why Photosynthetic Light-Harvesting Is So Efficient

MIT News



A new study from MIT chemists with Dr. Gabriela Schlau-Cohen *(pictured)* offers a potential explanation for how proteins of the light-harvesting complex, also called the antenna, achieve that high efficiency. They were able to measure the energy transfer between light-harvesting proteins, allowing them to discover that the disorganized arrangement of these proteins boosts the efficiency of the energy transduction. [Read More](#)

Taming Vaccine Data: Joann Arce, PhD

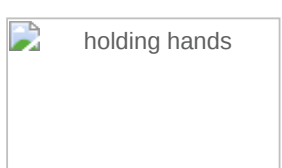
Boston Children's Hospital



Dr. Joann Arce *(pictured)* is a data tamer — corralling and wrangling vast quantities of data to extract insights on how our immune systems react to vaccines and infections. Her work is paving a path toward smarter, more potent vaccines. Arce wields several superpowers: bioinformatics and "big data," systems biology, or analysis of whole biological systems; and the burgeoning science of "omics," which catalogs the different molecules produced by cells or organisms. [Read More](#)

Navigating the Mental Health Toll of Prostate Cancer and Its Side Effects

Dana-Farber Cancer Institute



Although early detection and treatment advances have significantly improved survival rates for patients with prostate cancer, the majority will face some form of sexual health side effect. Addressing these physical and emotional side effects is a priority for care teams at Dana-Farber. But longstanding cultural barriers can often keep men from discussing sensitive issues like these or seeking out professional mental health. [Read More](#)

Making Invisible Therapy Targets Visible

McGovern Institute



The lab of Dr. Edward Boyden has developed a powerful technology called Expansion Revealing that makes visible molecular structures that were previously too hidden to be seen with even the most powerful microscopes. "This technology can be used to answer a lot of biological questions about dysfunction in synaptic proteins, which are involved in neurodegenerative diseases," says Dr. Jinyoung Kang *(pictured)*. [Read More](#)

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Upcoming Events in Boston

- July 11 - 13
9:00 AM **4th RNA Editing Summit**
Hilton Boston Logan Airport
- July 13 - 16
9:00 AM **Protein Society 37th Annual Symposium**
The Westin Boston Seaport District
- July 19
4:00 PM **Christmas in July — MassBioHub Open House**
MassBioHub
- July 20
1:00 PM **2023 MassBio Diversity, Equity, and Inclusion Conference**
MassBioHub and Online
- July 26 - 28
1:00 PM **3rd mRNA-Based Therapeutics Summit**
The Westin Boston Seaport District

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Science Jobs in Boston

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- Principal Scientist, Translational Modeling & Simulation**
Novartis
- Associate Director, Medical Information Content**
Moderna
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Sanofi
- Research Assistant III, Immunology**
Harvard Medical School

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