Volume 7.41: October 20, 2025

Publications of the Week

Microglia-Astrocyte Crosstalk Regulates Synapse Remodeling via Wnt Signaling

First Author: Travis Faust *(pictured, right)* | Senior Author: Dorothy Schafer *(left)*
Cell | UMass Chan Medical School and Harvard Medical School

Astrocytes and microglia are emerging key regulators of activity-dependent synapse remodeling that engulf and remove synapses in response to changes in neural activity. Yet, the degree to which these cells communicate to coordinate this process remains an open question. Here, researchers use whisker removal in postnatal mice to induce activity-dependent synapse removal in the barrel cortex.
Abstract | Press Release

Programmable Promoter Editing for Precise Control of Transgene Expression

First Author: Sneha Kabaria *(pictured)* | Senior Author: Kate Galloway
Nature Biotechnology | MIT

Subtle changes in gene expression direct cells to distinct cellular states. Identifying and controlling dose-dependent transgenes require tools for precisely titrating expression. Here, researchers develop a highly modular, extensible framework called DIAL for building editable promoters that allow for fine-scale, heritable changes in transgene expression. **Abstract | Press Release**

View All Publications

Awards

Dana-Farber's Dr. Philip Kranzusch Receives 2025 Blavatnik National Award for Young Scientists

Dana-Farber Cancer Institute

Dr. Philip Kranzusch *(pictured)*, Professor of Cancer Immunology and Virology at Dana-Farber Cancer Institute, was one of three scientists awarded top honors at the 2025 Blavatnik National Awards for Young Scientists, a significant prize for early-career researchers. The award recognizes exceptional scientific achievement and innovation by U.S.-based researchers aged 42 and younger. **Read More**

UMass Chan Leads New $4.4 Million Study to Study Melanoma

UMass Chan Medical School

UMass Chan Medical School has received a five-year, $4.4 million grant from the National Cancer Institute to study how tiny molecules inside cells, called transfer RNAs, may drive the spread of melanoma, the deadliest form of skin cancer. The grant is led by Dr. Richard Gregory *(pictured)*, the Eleanor Eustis Farrington Chair in Cancer Research and Chair and Professor of Molecular, Cell, and Cancer Biology. **Read More**

Innovators at Work: Meet the 2025–2026 Neil and Anna Rasmussen Fellows

MIT Center for Microniome Informatics & Therapeutics

Helena Hu *(pictured, right)* and Ankit Basak *(left)* have been named as the 2025–2026 Neil and Anna Rasmussen Fellows. Hu studies the molecular interactions that shape the behavior of individual cells, which she sees as critical to understand larger-scale phenomena. Basak focuses on a central question in microbiome science: how do human cells recognize different microbes and distinguish whether they are friend or foe? **Read More**

2025 Drs. Ayeez and Shelena Lalji & Family Student Scholar for Repair and Regenerative Mechanisms in ALS Award

Sean M. Healey & AMG Center for ALS

The Sean M. Healey & AMG Center for ALS has announced that Cedric Böger *(pictured)*, a PhD student at the German Center for Neurodegenerative Diseases, has been awarded the 3rd annual Drs. Ayeez and Shelena Lalji & Family Student Scholar for Repair and Regenerative Mechanisms in ALS. The award was founded in 2023 in honor of Dr. Ayeez Lalji. **Read More**

W.M. Keck Foundation to Support Ringel Lab Research on Healthy Aging at MIT

Ragon Institute

A prestigious grant from the W.M. Keck Foundation to Assistant Professor Dr. Alison Ringel *(pictured)* will support groundbreaking healthy aging research at MIT. Ringel, also a Core Member of the Ragon Institute, will draw on her background in cancer immunology to create a more comprehensive biomedical understanding of the cause and possible treatments for aging-related decline. **Read More**

View All Awards

Local News

A Pioneering Effort in Patient-Partnered Cancer Research Enters a New Phase

Broad Institute

In 2015, an innovative research initiative called *Count Me In* launched to give every patient with cancer, no matter where they lived, a way to contribute directly to research and help accelerate advances that could one day lead to new treatments. Since then, the collaboration between the Broad Institute, the Dana-Farber Cancer Institute, and the Emerson Collective partnered with more than 12,000 people with cancer from across the U.S. and Canada. **Read More**

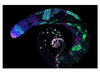
Zebrafish Study Reveals Hidden Dimensions of Attention

Harvard University Department of Molecular and Cellular Biology (MCB)

Why do we sometimes falter at even the simplest of tasks? A new study from the lab of MCB Professor Dr. Florian Engert *(pictured, left)* suggests that lapses in focus, rather than a lack of ability, may be the key driver. By analyzing the behavior of larval zebrafish, lab members Akila Muthukumar *(center)* and Kumaresh Krishnan *(right)* uncovered evidence of attentional "switching". **Read More**

One Lab's Detective Work Reveals Secrets of Our Immortal Cells

Whitehead Institute



Most cells in our body live and die. But the germline, the cells that produce eggs and sperm, must carry on forever. How the germline successfully produces the next generation is a long-studied question. *Research Threads* examines how answering one question uncovers more questions to be solved. In this installment, *Research Threads* follows the research of Whitehead Institute Member Dr. Yukiko Yamashita.
Read More

Broad Clinical Labs Sets New GUINNESS WORLD RECORDS™ Title for Fastest DNA Sequencing Technique

Broad Institute

Broad Clinical Labs, in collaboration with Roche Sequencing Solutions and Boston Children's Hospital, announced official recognition by Guinness World Records for achieving the fastest DNA sequencing technique to date. The team, led by Dr. Niall Lennon *(pictured)*, completed sequencing and analysis of the whole human genome in less than 4 hours, surpassing the previous benchmark of 5 hours and 2 minutes. **Read More**

View All Local News | Submit an Article

Upcoming Events in Boston

October 21 - 23 8:00 AM	**The 7th Annual Gene Therapy Analytical Development Summit** Hilton Boston Logan Airport
October 21 9:30 AM	**The Picower Institute Fall 2025 Symposium: "Circuits of Survival and Homeostasis"** Singleton Auditorium
October 23 5:00 PM	**2025 Oktoberfest Mixer** MassBioHub
October 28 - 30 8:00 AM	**The 7th Gene Therapy for CNS Summit** Hilton Boston Logan Airport
November 7 8:30 AM	**Broad Institute Machine Learning in Drug Discovery Symposium 2025** Broad Institute

View All Events | Submit an Event

Science Jobs in Boston

Laboratory Manager
Tufts University

Research Associate II, Stevens Lab
Broad Institute

Senior Scientist, Biomarker Development
Novartis

Research Scientist, Research Neurology
Brigham and Women's Hospital

Senior Associate Scientist, *In Vivo* Oncology Discovery
Bristol Myers Squibb

View 80 Other Science Jobs | Submit a Job

Submit your articles and events by reaching out to us at info@scienceinboston.com.

BROUGHT TO YOU BY

STEMCELL™ TECHNOLOGIES

STEMCELL Technologies
Products | Services

STEMCELL Science News
Free Weekly Updates on Your Field

The Stem Cell Podcast
Interviews and Updates on Stem Cell Science

SCIENCE IN THE CITY is an official mark of McMaster University and it is used and registered by STEMCELL Technologies Canada Inc. in Canada with the consent of McMaster University.