

Volume 8.43: November 2, 2026

Publications of the Week

Genome-Wide CRISPR Screen Reveals That Wnt Signaling Regulates Lipid Accumulation in APOE4 Oligodendrocytes

First Author: Leyla Anne Akay *(pictured)* | Senior Author: Li-Hueo Tsai
Cell Stem Cell | Harvard Medical School, Broad Institute, Boston University, and MIT



APOE4 is the strongest genetic risk factor for late-onset Alzheimer's disease, yet the cellular mechanisms linking APOE variants to disease risk remain unclear. Researchers identified decreased Wnt signaling and overactive glycogen synthase kinase-3 beta as key regulators of lipid-droplet accumulation in human-induced pluripotent stem cell-derived oligodendrocytes. **Abstract | Press Release**

Synthetic Reconstitution of Planar Polarity Initiation Reveals Principles of Symmetry Breaking Across Scales

First Author: Leah Wallach *(pictured)* | Senior Author: Pulin Li
Proceedings of the National Academy of Sciences | Whitehead Institute and MIT



Planar cell polarity (PCP) is a key module controlling tissue morphogenesis and organization. How tissues break symmetry to initiate PCP remains unknown. By reconstituting polarity initiation *ex vivo* using engineered epithelial cells, researchers found that collective migration acts as the symmetry-breaking cue, inducing front–back enrichment of CELSR junctions and establishing aligned multicellular CELSR polarity. **Abstract | Press Release**

View All Publications

Awards

Dr. Terence Flotte Elected to National Academy of Medicine

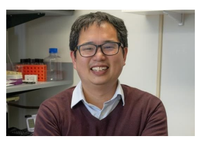
UMass Chan Medical School



Dr. Terence Flotte *(pictured)*, Provost and Dean of the T.H. Chan School of Medicine, has been selected as a member of the National Academy of Medicine for his significant contributions to medicine and science. An internationally recognized pioneer in gene therapy, Dr. Flotte focuses on treatments for rare genetic diseases such as cystic fibrosis, alpha-1 antitrypsin deficiency, and Tay-Sachs disease. **Read More**

Developing a New Vaccine and Therapies to Fight Lyme Disease

Tufts Now



A team led by Dr. Yi-Pin Lin *(pictured)* has received a $4 million National Institutes of Health grant to advance development of a Lyme disease vaccine and new therapies for early infection. The research builds on a previous study showing that an engineered version of a protein called CspZ generated a strong immune response and protected mice against *Borrelia burgdorferi*, the bacterium that causes Lyme disease. **Read More**

UMass Chan Postdocs Earn Fellowship Awards for Research On Down Syndrome, Polycystic Kidney Disease

UMass Chan Medical School



Two UMass Chan Medical School postdoctoral researchers are among a small group of recipients of a highly competitive fellowship award supporting postdocs and physician-scientists in the mid to late stages of their research training in Massachusetts. Drs. Flaviane Silva *(pictured, right)* and Anna Moyer *(left)* are among the cohort of eight 2026 Charles A. King Trust Postdoctoral Fellowship Program awardees. **Read More**

View All Awards

Local News

Symposium Highlights MIT's Wide Range of Innovations for Aging Brain Health

MIT News



From its beginning in 2015, the premise of MIT's Aging Brain Initiative (ABI) has been that neurodegenerative diseases such as Alzheimer's are complex, "system-wide" breakdowns that will require advances of many kinds from many sources to address. The six talks at the ABI's symposium "Innovations for the Aging Brain" illustrated what that's come to mean at MIT, as scientists and engineers described their latest work to improve health for the aging brain. **Read More**

Nearly 75% of Former NFL Players Had Brain Disease CTE, According to New Boston University–Led Study

The Brink



In a new study, researchers estimate that nearly 75% of all NFL players who died between 2008 and 2023 had signs of the neurodegenerative disease chronic traumatic encephalopathy (CTE). "Providing a precise estimate for the prevalence of CTE among deceased NFL players helps define the scale of the problem and informs priorities for the potential current and future medical needs of this community," says Julia Gallini *(pictured)*, the study's lead author. **Read More**

Broad-Developed Technology Powers an Ultra-Sensitive Blood Test for Cancer DNA

Broad Institute



When Dr. Viktor Adalsteinsson *(pictured)* joined the Broad Institute's Cancer Program just over a decade ago, his goal was to improve cancer care through new innovations in cancer diagnostics. Years of collaborative work from Dr. Adalsteinsson and his team have now culminated in a technology that is at the core of a next-generation test launched for clinical use: Oncodetect. **Read More**

Making Room to Explore

McGovern Institute



At MIT's McGovern Institute for Brain Research, Dr. Fan Wang *(pictured)* tackles innovative research every day. Her work centers on a fundamental question in neuroscience: How does the brain interact with the body to shape our sensations, emotions, and actions? Dr. Wang and the students in her lab study the neural circuits underlying experiences such as touch and pain. **Read More**

Implantable Device Uses Ultrasound to Improve Drug Delivery to the Brain

MIT News



Patients with glioblastoma, an aggressive type of brain tumor, usually undergo surgery to remove the tumor. However, it's difficult for surgeons to remove all of the cancer cells, and the tumor often recurs. MIT researchers led by Dr. Canan Dagdeviren *(pictured)* have now designed an implantable drug-delivery device that they hope could help prevent recurrence of glioblastoma. Their device contains a reservoir that can release drugs over an extended period. **Read More**

View All Local News | Submit an Article

Upcoming Events in Boston

November 4 — 9:00 AM
Comparative Neuroscience: Lessons from Biodiversity
Singleton Auditorium

November 5 — 6:00 PM
Living Water: A Lo-TEK Experience
MIT Museum

November 6 — 8:00 AM
The Activated Egg Symposium
MIT Endicott House

November 12 — 6:00 PM
After Dark: Decoding Whales and Dolphins
MIT Museum

November 17-18 — 8:00 AM
AI in Healthcare & Pharma Summit
The Hilton Boston Park Plaza

View All Events | Submit an Event

Science Jobs in Boston

Clinical Research Coordinator, Ebrahimi-Fakhari Lab
Boston Children's

Specialist, Quality Control
Moderna

Clinical Research Coordinator, Breast Oncology Clinical Trials
Dana-Farber Cancer Institute

Investigation Specialist I
Pfizer

Research Assistant, Department of Comparative Pathobiology
Tufts University

View 93 Other Science Jobs | Submit a Job

Learn to confidently apply the ISSCR Standards for Research to your human pluripotent stem cell based projects with this new, free on-demand course, co-developed by the International Society for Stem Cell Research (ISSCR) and STEMCELL Technologies.

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 Regular Updates on Your Field

The Stem Cell Podcast
Interviews and Updates on Stem Cell Science

{!$organization.Address}
Unsubscribe **here**.

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.