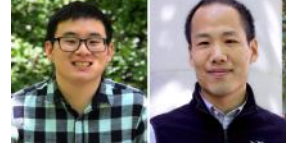


Publications of the Week

Base Editor Scanning Charts the DNMT3A Activity Landscape

First Author: Nicholas Lue (*pictured, left*) | Senior Author: Brian Liu (*right*)
 Nature Chemical Biology | Harvard University and the Broad Institute



DNA methylation is critical for regulating gene expression, necessitating its accurate placement by enzymes such as the DNA methyltransferase, DNMT3A. The authors integrate base editing with a DNA methylation reporter to perform *in situ* mutational scanning of DNMT3A in cells. They identify mutations throughout the protein that perturb function, including ones at an interdomain interface that block allosteric activation. [Profile](#) | [Abstract](#)

Programmable Eukaryotic Protein Synthesis with RNA Sensors by Harnessing ADAR

First Authors: Kaiyi Jiang, Jeremy Koob, Xi Dawn Chen, Rohan Krajieski, and Yifan Zhang | Senior Authors: Jonathan Gootenberg, Fei Chen, and Omar Abudayyeh (*pictured*)
 Nature Biotechnology | McGovern Institute, Broad Institute, Harvard University, and MIT



Programmable approaches to sense and respond to the presence of specific RNAs in biological systems have broad applications in research, diagnostics, and therapeutics. The authors engineer a programmable RNA-sensing technology, reprogrammable adenosine deaminases acting on RNA (ADAR) sensors, which harnesses RNA editing by ADAR to gate translation of a cargo protein by the presence of endogenous RNA transcripts. [Abstract](#) | [Press Release](#)

[View All Publications](#) ➔

Awards

Brandon DeKosky Receives the 2022 James S. Huston Antibody Science Talent Award

Ragon Institute



Congratulations to Dr. Brandon DeKosky (*pictured*), the 2022 James S. Huston Antibody Science Talent Award recipient! This award is given annually by the Antibody Society to an early career researcher who has made important contributions to antibody science. Dr. DeKosky and his lab have developed a suite of high-throughput single-cell platforms for large-scale analyses of adaptive immunity. [Read More](#)

[View All Awards](#) ➔

Local News

Blavatnik Harvard Life Lab Longwood Opens

Harvard Medical School



Those who gathered for the grand opening of the Blavatnik Harvard Life Lab Longwood were there not just to admire a new state-of-the-art research facility, but to celebrate the promise of biomedical science to transform health and well-being for all. The 10,000-square-foot space houses wet and dry labs and includes offices and collaborative workspaces designed to nurture nascent biotechnology and life science enterprises. [Read More](#)

Artificial Intelligence Approach May Help Identify Melanoma Survivors Who Face a High Risk of Cancer Recurrence

Massachusetts General Hospital



Most deaths from melanoma — the most lethal form of skin cancer — occur in patients who were initially diagnosed with early-stage melanoma and then later experienced a recurrence that is typically not detected until it has spread or metastasized. A team led by investigators at Massachusetts General Hospital recently developed an artificial intelligence-based method to predict which patients are most likely to experience a recurrence and are therefore expected to benefit from aggressive treatment. [Read More](#)

Study Urges Caution When Comparing Neural Networks to the Brain

MIT News



Neural networks, a type of computing system loosely modeled on the organization of the human brain, form the basis of many artificial intelligence systems. In the field of neuroscience, researchers often use neural networks to try to model the same kind of tasks that the brain performs, in hopes that the models could suggest new hypotheses regarding how the brain itself performs those tasks. However, a group of researchers at MIT is urging that more caution should be taken when interpreting these models. [Read More](#)

A Career in Biochemistry Unfolds

MIT News



Rita Anoh's (*pictured*) first exposure to college-level research was not something she recognized as a path she could follow. While in high school, the daughter of Anoh's Advanced Placement biology teacher presented a poster to her class about what she was working on in graduate school. "At the time, actually, it did not click to me what she was presenting," Anoh laughs. "Because I didn't know that you could do research as such, I just didn't put it together." [Read More](#)

New Clues into a Serious Neurodegenerative Disease

Harvard Medical School



Dementia encompasses a range of neurodegenerative conditions that lead to memory loss and cognitive deficiencies and affect some 55 million people worldwide. Yet despite its prevalence, there are few effective treatments, in part because scientists still don't understand how exactly dementia arises on a cellular and molecular level. A team led by Drs. Wade Harper (*pictured*), Tobias Walther, and Robert Farese Jr. has made progress in unraveling the mechanism underlying a type of dementia that strikes early in life. [Read More](#)

A New Control System for Synthetic Genes

MIT News



Using an approach based on CRISPR proteins, MIT researchers in Dr. Timothy Lu's (*pictured*) lab have developed a new way to precisely control the amount of a particular protein that is produced in mammalian cells. This technique could be used to finely tune the production of useful proteins, such as the monoclonal antibodies used to treat cancer and other diseases, or other aspects of cellular behavior. [Read More](#)

Through the Magnifying Glass: The Metabolism Unit

Bench Press



The Metabolism Unit within the Division of Endocrinology in the Department of Medicine at Mass General is led by Dr. Steven Grinspoon (*pictured*). They study rare diseases in people to discover important ways in which fat may be regulated in the general population. For example, they recently found certain genes that may result in the body producing less healthy fat, which accumulates in the liver and other unusual tissues and is more inflamed. [Read More](#)

New Method Uncovers Strong Effects of Copy Number Variation in the Genome on Human Health

Broad Institute



Copy number variants (CNVs) are regions of the genome that are duplicated or deleted in some individuals, and are a common type of gene-disabling mutation. A team of researchers at the Broad Institute, Brigham and Women's Hospital, and Harvard Medical School has developed a computational method that detected 15 million CNVs in the UK Biobank — six times more than previous analyses of the same data. [Read More](#)

[View All Articles](#) ➔ | [Submit an Article](#) ➔

📅 Upcoming Events in Boston

November 15
8:00 AM **Understanding How the Inflation Reduction Act Impacts the Ecosystem**
MassBioHub & Online

November 15
5:30 PM **Women's Health, Women Leaders: A Conversation with Paula Johnson, President, Wellesley College**
Whitehead Institute

November 16
10:00 AM **Dana-Farber's Center for BRCA and Related Genes Scientific Symposium**
Dana-Farber Cancer Institute & Online

November 17–19
9:00 AM **ISSCR Boston International Symposium**
Boston Marriott Cambridge

November 17
5:30 PM **Young Professional Networking Workshop & Reception**
MassBioHub

[View All Events](#) ➔ | [Submit an Event](#) ➔

🏢 Science Jobs in Boston

Senior Program Associate, Science in the City
STEMCELL Technologies

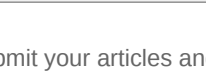
Research Associate/Senior Research Associate, Translational Research
Voyager Therapeutics

CNS *In Vivo* Manager
Sana Biotechnology


Research Technician I, Cancer Center
Massachusetts General Hospital

Research Assistant I
Harvard Medical School

[View 54 Other Science Jobs](#) ➔ | [Submit a Job](#) ➔



Win an Award Toward an Upcoming Cell or Gene Therapy Conference



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

BROUGHT TO YOU BY



STEMCELL Technologies

[Products](#) | [Services](#)

STEMCELL Science News

[Free Weekly Updates on Your Field](#)

The Stem Cell Podcast

[Interviews and Updates on Stem Cell Science](#)