SCIENCE in BOSTON

STEMCELL TECHNOLOGIES

Volume 5.42: October 30, 2023

Publications of the Week

Clinical Trial Links Oncolytic Immunoactivation to Survival in Glioblastoma

First Author: Alexander Ling *(pictured)* | Senior Author: Antonio Chiocca
Nature | Brigham and Women's Hospital, Dana-Farber Cancer Institute, and the Broad Institute

Immunotherapy failures can result from the highly suppressive tumour microenvironment that characterizes aggressive forms of cancer such as recurrent glioblastoma (rGBM). Researchers report the results of a first-in-human phase I trial in 41 patients with rGBM who were injected with an oncolytic herpes virus. This provides a biological rationale for use of this oncolytic modality in cancers that are otherwise unresponsive to immunotherapy. **Abstract | Press Release**

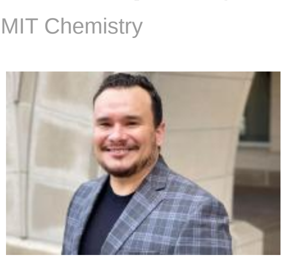
Carcinogen Exposure Enhances Cancer Immunogenicity by Blocking the Development of an Immunosuppressive Tumor Microenvironment

First Authors: Mei Huang | Senior Author: Shadmehr Demehri *(pictured)*
The Journal of Clinical Investigation | Massachusetts General Hospital and Harvard Medical School

Carcinogen exposure is strongly associated with enhanced cancer immunogenicity. However, the neoantigen-independent immunological impact of carcinogen exposure on cancer is unknown. Here, researchers demonstrate that chemical carcinogen-exposed cancer cells fail to establish an immunosuppressive tumor microenvironment, resulting in their T cell–mediated rejection *in vivo*.
Abstract | Press Release

Allelic Chromatin Structure Precedes Imprinted Expression of *Kcnk9* During Neurogenesis

First Author: Daniel Loftus | Senior Author: Amanda Whipple *(pictured)*
Genes & Development | Harvard University



There are still many unknowns when it comes to the mechanisms by which differentially methylated regions lead to differences in allelic expression across broad stretches of chromatin. This work provides a high-resolution map of imprinted chromatin structure and demonstrates that chromatin state established in early development can promote imprinted expression upon differentiation.
Abstract | Press Release

View All Publications

Awards

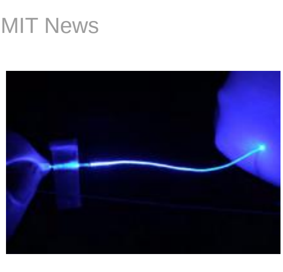
Guadalupe Hayes-Mota Named One of 2023's PharmaVoice 100

MIT Chemistry

Guadalupe Hayes-Mota *(pictured)* has been selected as one of 2023's PharmaVoice 100, a group of influential and devoted leaders lifting the pillars of the industry to new heights. "PharmaVoice 100 leaders… often go above and beyond to break new ground in science, push for better access, strive to advance DEI within and outside their companies, and mentor the next generation of leaders," wrote PharmaVoice in a press release announcing the honorees. **Read More**

Ten Harvard Medical School Researchers Elected to National Academy of Medicine

Harvard Medical School



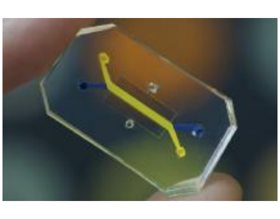
Ten researchers from Harvard Medical School, including Dr. Jeannie Lee *(pictured)*, have been elected members of the National Academy of Medicine (NAM). Membership is extended to individuals who have made major contributions to advancing medical science, health care, or public health. Election to the NAM is considered one of the highest honors in health and medicine. **Read More**

View All Awards

Local News

Soft Optical Fibers Block Pain While Moving and Stretching with the Body

MIT News



Scientists have a new tool to precisely illuminate the roots of nerve pain. Engineers at MIT have developed soft and implantable fibers that can deliver light to major nerves through the body. When these nerves are genetically manipulated to respond to light, the fibers can send pulses of light to the nerves to inhibit pain. The optical fibers are flexible and stretch with the body. **Read More**

Wyss Institute at Harvard University Wins BARDA Contract to Leverage Human Organ Chips to Advance Knowledge and Drug Discovery for Broad Range of Health Security Threats

Wyss Institute

The Biomedical Advanced Research and Development Authority (BARDA) has partnered with the Wyss Institute at Harvard University to support the Institute in advancing its human Organ Chip platform and drug discovery capabilities. This will help to better understand the illness and injuries that result from a broad range of health threats, including high doses of radiation, as well as predicting and evaluating potential treatments. **Read More**

An Uncomfortable Truth: How Stigma and a Lack of Funding Has Set Back Research and Treatments for Vulvovaginal Disorders

Bench Press

The world of medicine has made remarkable strides in diagnosing and treating various health conditions, but when it comes to many women's health issues, progress is lacking. Why is it so hard for women to seek and obtain treatment for issues related to sexual and reproductive health? Mass General Physician-Investigator Dr. Caroline Mitchell *(pictured)* speaks about the many obstacles to treatment and how she is working to advance the field. **Read More**

Bringing Equity to Genomic Sequencing in Newborns: BabySeq 2.0

Boston Children's Hospital

Today, nearly 900 disorders caused by a single gene are known to be treatable. Yet the recommended "heel stick" testing for newborns only covers about 60 inherited, treatable disorders, and many individual states screen for fewer. What if newborns could instead have their entire genome sequenced at birth, with the results shared and acted on as appropriate? That was the premise behind the original BabySeq study. **Read More**

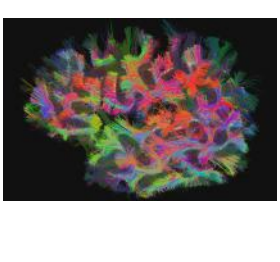
Dual-Action Drug Produces Positive Results in Patients with Advanced Neuroendocrine Tumors

Dana-Farber Cancer Institute

A drug that simultaneously strikes cancer cells' growth circuits and pipeline to the bloodstream produced encouraging results in a clinical trial involving patients with advanced neuroendocrine tumors, according to a study led by Dana-Farber Cancer Institute investigators, including Dr. Jennifer Chan *(pictured)*. Patients treated with the drug, cabozantinib, survived significantly longer with no worsening of their disease than patients who received a placebo. **Read More**

A Multifunctional Tool for Cognitive Neuroscience

The Picower Institute



A team of researchers at MIT's McGovern and Picower Institutes has advanced the clinical potential of a thin, flexible fiber designed to simultaneously monitor and manipulate neural activity at targeted sites in the brain. This technology was a collaborative effort between the groups of McGovern Institute Investigator Dr. Polina Anikeeva and Picower Institute Investigators Dr. Emery Brown *(pictured)* and Dr. Earl Miller. **Read More**

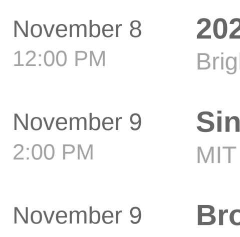
Cellular Atlas Guides New Understanding of Brain

The Harvard Gazette

By combining noninvasive imaging techniques, investigators have created a comprehensive cellular atlas of a region of the human brain known as Broca's area, which is an area critical for producing language. The new technology will provide insights into the presence and spread of pathologic changes that occur in neurodegenerative illnesses such as epilepsy, autism, and Alzheimer's disease.
Read More

The Wyss Institute and Northpond Ventures' Relationship Is Moving Full Steam Ahead

The Wyss Institute



Impressed by the Wyss Institute's track record of producing investment-worthy innovations in the biotech space, Northpond approached with a proposal: could they fund the Institute's research directly to help its budding entrepreneurs navigate the gauntlet of startup formation and get their groundbreaking inventions to market faster? The alliance between the Wyss Institute and Northpond Ventures has created a new model for investing in early-stage research. **Read More**

View All Local News | **Submit an Article**

Upcoming Events in Boston

November 8 12:00 PM	**2023 Discover Brigham – Poster Session** Brigham & Women's Hospital
November 9 2:00 PM	**Sing for Science at the MIT Museum** MIT Museum
November 9 6:00 PM	**Broad Discovery Series** Broad Institute & Online
November 11 6:30 PM	**High Hopes Gala** SoWa Power Station
November 16-17 9:00 AM	**Liquid Biopsy: Beyond Cell-Free Tumor DNA** Koch Institute for Integrative Cancer Research

View All Events

Other Science Jobs in Boston

Science Writer, School of Medicine, Microbiology
Boston University

Assistant Professor, Biochemistry
University of Massachusetts

Postdoctoral Research Associate, Antibiotic Discovery
Northeastern University

Research Lab Tech 2, DOM Infectious Disease
Brigham & Women's Hospital

Staff Scientist I
Beth Israel Deaconess Medical Center

View 55 Other Science Jobs

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

BROUGHT TO YOU BY

STEMCELL TECHNOLOGIES