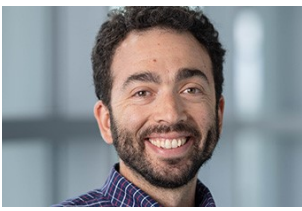




Publications of the Week

Mutations in Mitochondrial Ferredoxin FDX2 Suppress Frataxin Deficiency

First Author: Joshua Meisel (*pictured*) | Senior Authors: Gary Ruvkun and Vamsi Mootha
Nature | Massachusetts General Hospital, Harvard Medical School, Broad Institute, Howard Hughes Medical Institute, and Brandeis University



Frataxin is a key component of an ancient, mitochondrial iron–sulfur cluster biosynthetic machinery. Yeast, *Caenorhabditis elegans*, and human cells can tolerate loss of frataxin when grown in 'permissive' low oxygen tensions. Here, researchers conducted an unbiased, genome-scale forward genetic screen in *C. elegans* leveraging permissive and non-permissive oxygen tensions to discover suppressor mutations that bypass the need for frataxin. [Abstract](#) | [Press Release](#)

The Specificity and Structure of DNA Cross-Linking by the Gut Bacterial Genotoxin Colibactin

First Authors: Erik Carlson and Raphael Haslecker | Senior Author: Emily Balskus (*pictured*)
Science | Harvard University, Howard Hughes Medical Institute, Broad Institute, and MIT



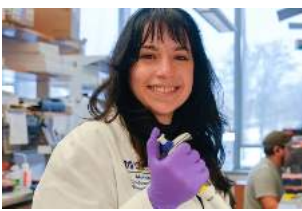
Colibactin is a chemically unstable genotoxic gut bacterial natural product that is linked to colorectal cancer. This study reveals the specificity and structure of the colibactin-DNA interstrand cross-links by combining mass spectrometry and nuclear magnetic resonance. These findings reveal a strategy for DNA alkylation distinctive among natural products. [Abstract](#) | [Press Release](#)

[View All Publications](#)

Awards

PhD Candidate Emily Sholi Receives Grant to Study Pathogens' Impact on Ribosomes

UMass Chan Medical School



PhD candidate Emily Sholi (*pictured*) has received a prestigious Ruth L. Kirschstein Predoctoral Individual National Research Service Award from the National Heart, Lung, and Blood Institute. This will help further her ribosome research, using cryogenic electron microscopy methods to understand how pathogens such as pneumonia-causing *Pseudomonas aeruginosa* inhibit host ribosomes. [Read More](#)

MCB Postdoc Xueyang Dong Awarded Cancer Research Institute Postdoctoral Fellowship

Harvard University Department of Molecular and Cellular Biology (MCB)



Dr. Xueyang Dong (*pictured*), a postdoctoral researcher in the Nagashima lab, has been selected for a prestigious Cancer Research Institute Postdoctoral Fellowship. The three-year award will support Dr. Dong's ambitious project to uncover how the immune system recognizes gut bacteria, and how those interactions might be leveraged to improve cancer immunotherapy. [Read More](#)

Dr. Sara Tolaney Honored with AACR's Outstanding Investigator Award for Breast Cancer Research

Dana-Farber Cancer Institute



Dr. Sara Tolaney (*pictured*) is the recipient of the 2025 American Association for Cancer Research (AACR) Outstanding Investigator Award for Breast Cancer Research. This award was established to honor an investigator whose novel and significant work has had or may have a far-reaching impact on the etiology, detection, diagnosis, treatment, or prevention of breast cancer. [Read More](#)

Drs. David Dosa and Andrew Tapper Named to Newly Established Endowed Chairs

UMass Chan Medical School



The University of Massachusetts Board of Trustees voted to approve the establishment of the Meyers Chair in Geriatric Medicine and the Brudnick Family Chair in Neuropsychiatry. Drs. David Michael Dosa (*pictured, left*) and Andrew Tapper (*right*) were named as the inaugural recipients of each newly established chair, respectively. [Read More](#)

Dr. Nancy Kleckner Recognized for Pioneering Work in Chromosome Dynamics

Harvard University Department of Molecular and Cellular Biology



Dr. Nancy Kleckner (*pictured*), the Herchel Smith Professor of Molecular Biology, has been awarded the 2025 Charles E. Helmstetter Prize Lifetime Achievement Award in recognition of her groundbreaking research on bacterial chromosome dynamics and their role in coordinating the cell cycle. Her lab seeks to understand how bacterial cells reliably execute one round of DNA replication, sister chromosome separation, and cell division during each cell cycle. [Read More](#)

[View All Awards](#)

Local News

First-in-Human Clinical Trial of Personalized, Biomaterial-Based Cancer Vaccine Demonstrates Feasibility, Safety, and Immune Activation

Wyss Institute



The first-in-human phase I clinical trial assessing the feasibility and safety of WDVAX, an immunostimulatory biomaterial-based cancer vaccine, was concluded with positive outcomes. The novel vaccine concept originated in the laboratory of Wyss Founding Core Faculty member Dr. David Mooney (*pictured*). The trial was initiated in 2013 by the Wyss Institute and the Dana-Farber Cancer Institute and was led by Dr. Stephen Hodi. [Read More](#)

RNA Editing Study Finds Many Ways for Neurons to Diversify

MIT News



All starting from the same DNA, neurons ultimately take on individual characteristics in the brain and body. Differences in which genes they transcribe into RNA help determine which type of neuron they become, and from there, a new MIT study shows, individual cells edit a selection of sites in those RNA transcripts. The study was led by Drs. Troy Littleton (*pictured, left*) and Andres Crane (*right*). [Read More](#)

Batista Lab Study Shows B Cells Must Clear Damaged Mitochondria by Autophagy to Produce Antibodies

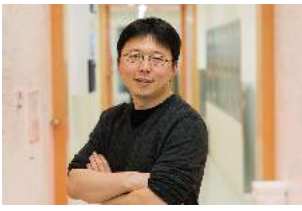
Ragon Institute



A new study from the Batista lab at the Ragon Institute, published in the *Journal of Experimental Medicine*, reveals that B cells depend on a cellular cleanup process to successfully transform into the plasma cells that produce protective antibodies. Dr. Liling Xu (*pictured*), a senior research scientist in the Batista lab, is first author on the paper. [Read More](#)

New Study Suggests a Way to Rejuvenate the Immune System

McGovern Institute



As people age, their immune system function declines. T cell populations become smaller and can't react to pathogens as quickly, making people more susceptible to a variety of infections. To try to overcome that decline, researchers led by Dr. Feng Zhang (*pictured*) at MIT and the Broad Institute have found a way to temporarily program cells in the liver to improve T cell function. [Read More](#)

[View All Local News](#) | [Submit an Article](#)

Upcoming Events in Boston

- | | |
|--------------------------|--|
| January 21
6:00 PM | The Biology of Time: From Embryos to Aging Cells
MIT Museum |
| January 22
9:00 AM | Chemical Advances in Biomaterials and Therapeutics
Northeastern University |
| February 25
1:30 PM | 11th Annual Rare Disease Day Event
Broad Institute |
| February 28
1:00 PM | SpaceTime TeaTime
MIT Museum |
| March 18 - 19
8:00 AM | OPT Congress 2026
Seaport Hotel Boston |

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

Science Jobs in Boston

- Senior Field Service Engineer**
STEMCELL Technologies
- Research Technician 1**
Boston University
- Associate Scientist, Pilot Plant**
Bristol Myers Squibb
- Research Technician**
Dana-Farber Cancer Institute
- Technical Associate I, Yaffe Lab**
MIT

[View 72 Other Science Jobs](#) | [Submit a Job](#)

Advanced Intestinal and Hepatic Organoids

Webinar by Riya Sharma

WATCH NOW

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