



Publications of the Week

Perturb-Multimodal: A Platform for Pooled Genetic Screens with Imaging and Sequencing in Intact Mammalian Tissue

First Authors: Reuben Saunders and William Allen | Senior Authors: Jonathan Weissman and Xiaowei Zhuang (*pictured*)
Cell | Whitehead Institute, Harvard University, Massachusetts General Hospital, and MIT



Metazoan life requires the coordinated activities of thousands of genes in spatially organized cell types. Understanding the basis of tissue function requires approaches to dissect the genetic control of diverse cellular and tissue phenotypes *in vivo*. Here, researchers present Perturb-Multimodal, a paired imaging and sequencing method to construct large-scale, multimodal genotype-phenotype maps in tissues with pooled genetic perturbations. [Abstract](#) | [Press Release](#)

ZNF280A Links DNA Double-Strand Break Repair to Human 22q11.2 Distal Deletion Syndrome

First Author: Thomas Clarke | Senior Author: Raul Mostoslavsky (*pictured*)
Nature Cell Biology | Massachusetts General Hospital, Harvard Medical School, Broad Institute, and Boston University



DNA double-strand breaks (DSB) are among the most deleterious forms of DNA damage and, if unresolved, result in DNA mutations and chromosomal aberrations that can cause disease, including cancer. Here, using high-throughput microscopy coupled with a cDNA 'chromORFeome' library, researchers identified ZNF280A as an uncharacterized chromatin factor that is recruited to breaks and essential for DNA DSB repair. [Abstract](#) | [Press Release](#)

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Awards

Fred Hutch Announces Eight Recipients of 2025 Dr. Eddie Méndez Scholar Award

Fred Hutch



Fred Hutch Cancer Center announced eight recipients of the 2025 Dr. Eddie Méndez Scholar Award. The award honors outstanding achievements of early-career scientists studying cancer, infectious diseases, and basic sciences. Among this year's eight awardees from across the USA is Dr. Sarah Elisabeth Pierce (*pictured*) from the Broad Institute. [Read More](#)

Four from MIT Named 2025 Goldwater Scholars

MIT News



Four MIT rising seniors have been selected to receive a 2025 Barry Goldwater Scholarship: Avani Ahuja (*pictured, top left*) and Jacqueline Prawira (*bottom left*) in the School of Engineering, and Julianna Lian (*top right*) and Alex Tang (*bottom right*) from the School of Science. The Goldwater Scholarships have been conferred since 1989 by the Barry Goldwater Scholarship and Excellence in Education Foundation. [Read More](#)

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Local News

Octopuses Use Microbial Signals to Guide Complex Behaviors

Harvard University Department of Molecular and Cellular Biology (MCB)



A new study published in *Cell* from MCB's Dr. Nick Bellono (*pictured, left*) and lab members Drs. Rebecka Sepela (*center*) and Tessa Hautala (*right*) reveals that octopuses detect microbial cues on surfaces to distinguish prey and eggs from inanimate objects. This is an astonishing novel example of how animals can sense their environment through the invisible world of microbiomes. [Read More](#)

Virology Lab Probes the Dark Matter of Viral Genomes

Harvard Medical School



Dr. Shira Weingarten-Gabbay (*pictured*) leads the new Laboratory of Systems Virology, where her team works at the intersection of virology, immunology, and systems biology. Their goal is to better understand the inner workings of viruses and their interaction with the immune system and apply that understanding toward preventing current and future viral diseases. [Read More](#)

AFI Scientists Uncover How Human Cells Fight *Fusobacterium nucleatum*, a Key Oral Microbe Also Linked to Colon Cancer and Other Systemic Diseases

ADA Forsyth



A group of scientists at the ADA Forsyth Institute (AFI) led by Dr. Xuesong He (*pictured*) has identified a mechanism used by host cells to fight back against common oral bacteria *Fusobacterium nucleatum*. A microorganism implicated in periodontal disease, *F. nucleatum* is also associated with many other systemic conditions including colorectal cancer and pregnancy complications. [Read More](#)

The Immunology Podcast: “Immune Cell Manipulation” Featuring Dr. Rizwan Romee

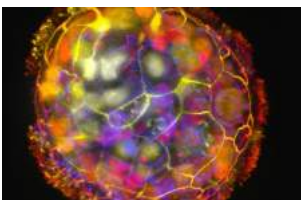
The Immunology Podcast



Dr. Rizwan Romee (*pictured*) is an Oncologist at the Dana-Farber Cancer Institute and Associate Professor at Harvard Medical School, where his research focuses on genetically manipulating NK cells to enhance their anti-tumor function. He sits down with the Immunology Podcast to talk about advances and challenges in engineering NK cells for cancer therapy. [Read More](#)

A Reset on the Cellular Aging Clock

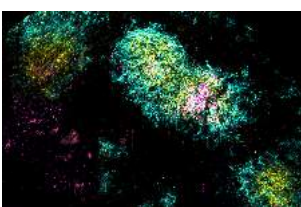
Tufts Now



Modern humans have existed for over 200,000 years, and each new generation has begun with a single cell—dividing, changing shape, and function, organizing into tissues, organs, and limbs. Researchers at Tufts have been on a quest to understand the code guiding individual cells to create the architecture of a human being, and to create a foundation for regenerative medicine. [Read More](#)

Supercharged Vaccine Could Offer Strong Protection with Just One Dose

MIT News



Researchers at MIT and the Scripps Research Institute have shown that they can generate a strong immune response to HIV with just one vaccine dose, by adding two powerful adjuvants—materials that help stimulate the immune system. In a study of mice, the researchers showed that this approach produced a much wider diversity of antibodies against an HIV antigen, compared to the vaccine given on its own or with just one of the adjuvants. [Read More](#)

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📅 Upcoming Events in Boston

July 10
6:00 PM

After Dark: Tangible
MIT Museum

August 5
4:30 PM

Fundraising Amid the Turmoil: Resilient Strategies for Health Innovators
Greenberg Traurig, LLP

August 14
6:00 PM

After Dark: AI & Discovery
MIT Museum

August 18 - 21
8:00 AM

The Bioprocessing Summit 2025
Omni Hotel Boston at the Seaport

September 18
9:00 AM

The 2025 Aging Brain Initiative Symposium: The Neuro-Immune Axis and the Aging Brain
Singleton Auditorium

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📁 Science Jobs in Boston

Post Doctoral Fellow, Cell Culture Development
Sanofi

Research Investigator, Cell Therapy
Takeda

Lead Research Tech, Center for Patient Derived Models
Dana-Farber Cancer Institute

Principal Biostatistician / Senior Principal Biostatistician
Novartis

Senior Principal Scientist, Discovery BioSciences
Bristol Myers Squibb

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