

Publications of the Week

Enteric Neuronal Piezo1 Maintains Mechanical and Immunological Homeostasis by Sensing Force

First Authors: Zili Xie and Lillian Rose | Senior Authors: Hongzhen Hu and Ruaidhrí Jackson (*pictured*)
Cell | Harvard Medical School



The gastrointestinal (GI) tract experiences a myriad of mechanical forces while orchestrating digestion and barrier immunity. A central conductor of these processes is the enteric nervous system. However, how the ~500 million enteric neurons that reside in the GI tract sense and respond to force remains unknown. Herein, researchers establish that the mechanosensor *Piezo1* is functionally expressed in cholinergic enteric neurons. [Abstract](#) | [Press Release](#)

Functional Diversification of Dietary Plant Small Molecules by the Gut Microbiome

First Authors: Gavin Kuziel and Gabriel Lozano | Senior Author: Seth Rakoff-Nahoum (*pictured*)
Cell | Boston Children's Hospital, Harvard Medical School, Broad Institute, Whitehead Institute, and Northeastern University



Plants are composed of diverse secondary metabolites (PSMs), which are widely associated with human health. Whether and how the gut microbiome mediates such impacts of PSMs is poorly understood. Here, researchers show that discrete dietary and medicinal phenolic glycosides, abundant health-associated PSMs, are utilized by distinct members of the human gut microbiome. [Abstract](#) | [Press Release](#)

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Awards

CMIT Clinical Scientist Receives IBD Journal Award

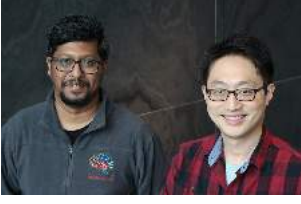
The Center for Microbiome Informatics & Therapeutics (CMIT)



CMIT's Dr. Marjolein Klaassen (*pictured*) was selected for the *Inflammatory Bowel Diseases* (IBD) journal's award for best basic science/translational article of 2024, for "Exploring the Predictive Value of Gut Microbiome Signatures for Therapy Intensification in Patients with Inflammatory Bowel Disease: A 10-year follow-up study." The paper shows that microbiome composition may be predictive of IBD patients' need for future intensification of their treatment regimens. [Read More](#)

Dulac Lab Postdocs Awarded Grants from NIH and Brain & Behavior Research Foundation

Harvard University Department of Molecular and Cellular Biology (MCB)



Two postdocs from the Dulac Lab at Harvard University MCB have recently been awarded fellowships. Dr. Changwoo Seo (*pictured, right*) was selected for an National Institutes of Health K99/R00 Pathway to Independence Award. Dr. Mostafizur Rahman (*left*) received a Young Investigator Grant from the Brain & Behavior Research Foundation. [Read More](#)

MIT Affiliates Named 2024 AAAS Fellows

MIT Chemistry



Six current MIT affiliates and 27 additional MIT alumni have been elected as fellows of the American Association for the Advancement of Science (AAAS). Among the awardees is Dr. Noubar Afeyan (*pictured*). He was named an AAAS Fellow "for outstanding leadership in biotechnology, in particular mRNA therapeutics, and for advocacy for recognition of the contributions of immigrants to economic and scientific progress." [Read More](#)

Dr. Gloria Choi Earns Samsung Ho-Am Prize for Medicine

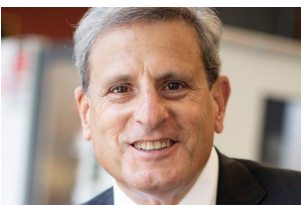
The Picower Institute



The Ho-Am Foundation has selected Dr. Gloria Choi (*pictured*), Associate Professor in The Picower Institute for Learning and Memory and the Department of Brain and Cognitive Sciences at MIT, to receive the 2025 Samsung Ho-Am Prize for Medicine. Dr. Choi's research focuses on neuroimmunology, the study of the bilateral communication between the immune and central nervous systems. [Read More](#)

BU's Dr. Kenneth Lutchen Named AAAS Fellow

The Brink



Dr. Kenneth Lutchen (*pictured*) from Boston University has been named an American Association for the Advancement of Science (AAAS) Fellow. A panel of Lutchen's peers elected him a fellow to formally recognize his "seminal work in modeling structure-function relationships in the lung, and for developing new paradigms for mechanical ventilation." [Read More](#)

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Local News

Engineers Develop a Better Way to Deliver Long-Lasting Drugs

MIT News



MIT engineers have devised a new way to deliver certain drugs in higher doses with less pain, by injecting them as a suspension of tiny crystals. Once under the skin, the crystals assemble into a drug "depot" that could last for months or years, eliminating the need for frequent drug injections. This approach could prove useful for delivering long-lasting contraceptives or other drugs that need to be given for extended periods of time. [Read More](#)

FDA Approves Dual-Action Drug for Patients with Previously Treated Advanced Neuroendocrine Tumors, Backed by Dana-Farber Research

Dana-Farber Cancer Institute



Cabozantinib, an oral tyrosine kinase inhibitor, has been approved by the U.S. Food and Drug Administration (FDA) for the treatment of patients with previously treated advanced neuroendocrine tumors. This represents a new standard of care therapy for this patient population. The FDA approval was based on results from the CABINET study, a phase 3 pivotal trial led by Dr. Jennifer Chan (*pictured*). [Read More](#)

Dr. Sandy Elmehrath on Closing the Gender Health Gap by Driving Progress in Endometriosis Management and Care

Wyss Institute



Dr. Sandy Elmehrath (*pictured*) is all too familiar with the consequences of the gender health gap. Her great-aunt endured many years of pain from stomach cancer, only to be diagnosed after it was too late to treat. Knowing that stories like this are too common, Dr. Elmehrath decided to design and customize drug delivery platforms to address diagnostic and therapeutic challenges in women's health, starting with endometriosis. [Read More](#)

Probing the Mysteries of the Aging Brain

Harvard Medical School



In July 2024, Dr. Michael Segel (*pictured*) became an Assistant Professor at the Blavatnik Institute. He has come full circle, working back on the ground floor of the same building where, as a high school summer intern, he once washed test tubes and moved liquids from bench to bench. Today, Dr. Segel works towards therapeutically modifying the cells of the aging brain. [Read More](#)

Building Bridges Between Denmark-Based and Broad Researchers

The Broad Institute



The Novo Nordisk Foundation Center for Genomic Mechanisms of Disease is forging connections between Danish scientists and researchers at the Broad Institute. Researchers like Maddie Murphy (*pictured*) are a part of the collaboration to build computational models that predict which specific stretches of DNA called enhancers regulate which genes — and in which cell types. [Read More](#)

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📅 Upcoming Events in Boston

April 8

2:00 PM

AI: Advancing Foundational Biology

Whitehead Institute for Biomedical Research

May 4

8:00 AM

2025 AAPS National Biotechnology Conference

The Westin Boston Seaport District

May 12

8:00 AM

PEGS Protein & Antibody Engineering Summit

Omni Hotel Boston at the Seaport

May 28

8:00 AM

3rd Gene Therapy Potency Assay Summit

Revere Hotel Boston Common

June 9

8:00 AM

Precision in Drug Discovery & Preclinical Summit Boston

Revere Hotel Boston Common

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🏢 Science Jobs in Boston

Postdoctoral Research Fellow

Beth Israel Deaconess Medical Center

Senior Scientist, Antibody Discovery

Sanofi

Research Associate, Human Nutrition Research Center on Aging

Tufts University

Research Investigator, Cell Therapy

Takeda

Research Technician

Dana-Farber Cancer Institute

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