

Publications of the Week

Identification of a Molecular Resistor That Controls UCP1-Independent Ca²⁺ Cycling Thermogenesis in Adipose Tissue

First Author: Christopher Auger | Senior Author: Shingo Kajimura *(pictured)*
Cell Metabolism | Beth Israel Deaconess Medical Center, Harvard Medical School, and Howard Hughes Medical Institute



Adipose tissue thermogenesis contributes to energy balance via mitochondrial uncoupling protein 1 (UCP1) and UCP1-independent pathways. Among UCP1-independent thermogenic mechanisms, one involves Ca²⁺ cycling via SERCA2b in adipose tissue. Here, researchers report that an endoplasmic reticulum membrane-anchored peptide, C4orf3, uncouples SERCA2b Ca²⁺ transport from its ATP hydrolysis, rendering the SERCA2b-C4orf3 complex exothermic. [Abstract](#)

Molecular Basis for Shifted Receptor Recognition by an Encephalitic Arbovirus

First Authors: Xiaoyi Fan and Wanyu Li | Senior Author: Jonathan Abraham *(pictured)*
Cell | Harvard Medical School, Brigham & Women's Hospital, Broad Institute, Howard Hughes Medical Institute, and Boston Children's Hospital



Western equine encephalitis virus (WEEV) is an arbovirus that historically caused large outbreaks of encephalitis throughout the Americas. To explain shifts in receptor dependencies and assess the risk of WEEV re-emergence, researchers determined cryoelectron microscopy structures of WEEV bound to human PCDH10, avian PCDH10, and human very-low-density lipoprotein receptor. [Abstract](#) | [Press Release](#)

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Awards

Dr. Vish Viswanath of Dana-Farber Cancer Institute Elected as Fellow of the American Association for the Advancement of Science

Dana-Farber Cancer Institute



Dr. K. "Vish" Viswanath *(pictured)*, Professor of Health Communication at Dana-Farber Cancer Institute and the Harvard T.H. Chan School of Public Health, has been named Fellow of the American Association for the Advancement of Science (AAAS). Election as an AAAS Fellow is a distinguished lifetime honor within the scientific community bestowed upon AAAS members by their peers. [Read More](#)

CMIT Clinical Scholar Receives Prestigious AGA Award

The Center for Microbiome Informatics & Therapeutics (CMIT)



Dr. Jason (Yanjia) Zhang *(pictured)* is a CMIT Clinical Scholar and Attending Physician in Boston Children's Hospital Division of Gastroenterology, Hepatology, and Nutrition Dr. Zhang was one of six recipients selected for the American Gastroenterological Association's (AGA) 2024 Research Scholar Awards for early career investigators. [Read More](#)

UMass Boston Biology Professor Liam Revell Named AAAS Honorary Fellow

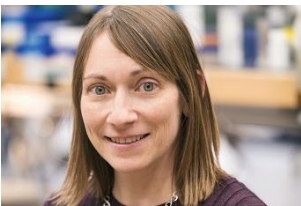
UMass Boston



The American Association for the Advancement of Science (AAAS), the foremost scientific institution in the United States and the world's largest general scientific society and publisher of the Science family of journals, has elected a UMass Boston biology professor to the newest class of AAAS Fellows. Dr. Liam Revell *(pictured)* joins a select group of scholars who have been recognized for their exceptional contributions to the advancement of science. [Read More](#)

Two HMS Faculty Elected Fellows of the American Association for the Advancement of Science

Harvard Medical School (HMS)



Two researchers from HMS have been elected fellows of the American Association for the Advancement of Science, one of the world's largest general scientific societies and publisher of the Science family of journals. Drs. Shingo Kajimura and Carla Kim *(pictured)* have earned this lifetime recognition which honors fellows' excellence in research and their service to the scientific community. [Read More](#)

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Local News

PhD Candidate Winnie Mkandawire, Impacted by Grief and Driven by Hope, Studies Disease Outbreak Modeling

UMass Chan Medical School



Motivated by the loss of friends and family when she was a child, PhD candidate Winnie Mkandawire *(pictured)* is advancing the study of infectious disease modeling in the Department of Genomics & Computational Biology at UMass Chan Medical School. Mkandawire's research in the Colubri lab focuses on improving how scientists study and respond to disease outbreaks. [Read More](#)

Beyond Animals: Revolutionizing Drug Discovery with Human-Relevant Models

Wyss Institute



The average new drug requires over 15 years and \$2 billion in funding to traverse the journey from discovery to full approval. The first portion of the journey, among the riskiest and most scientifically complex portions, involves extensive testing. But a tidal shift is underway. *In vivo* models are being complemented by more sophisticated *in vitro* and computational preclinical models that can substantially reduce the cost and timeline of early-stage drug development. [Read More](#)

Looking Under the Hood at the Brain's Language System

McGovern Institute



Dr. Evelina Fedorenko's *(pictured)* early work helped to identify the precise locations of the brain's language-processing regions, and she has been building on that work to generate insight into how different neuronal populations in those regions implement linguistic computations. Among some of the more recent directions, she is exploring how the brain's language-processing regions develop early in life. [Read More](#)

A Simple Animal's Response to Sickness Highlights the Nervous System's Surprising Degrees of Flexibility

The Picower Institute



Whether you are a person about town or a worm in a dish, life can throw all kinds of circumstances your way. What you need is a nervous system flexible enough to cope. In a new study, MIT neuroscientists show how even a simple animal, *C. elegans*, can switch many gears in its brain to muster an adaptive response to a deadly infection. [Read More](#)

Molecules That Fight Infection Also Act on the Brain, Inducing Anxiety or Sociability

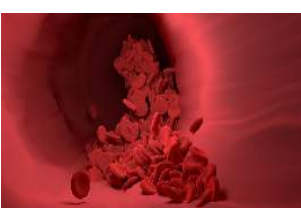
MIT News



Immune molecules called cytokines play important roles in the body's defense against infection, helping to control inflammation and coordinating the responses of other immune cells. A growing body of evidence suggests that some of these molecules also influence the brain, leading to behavioral changes during illness. Two new studies led by Drs. Gloria Choi *(pictured)* and Jun Huh focused on a cytokine called IL-17, now add to that evidence. [Read More](#)

Could the Falcine Sinus Hold the Key to Vein of Galen Outcomes?

Boston Children's Hospital



A Boston Children's Hospital study uncovers how fetal MRI could be a game-changer in predicting outcomes for infants born with vein of Galen malformations. The study, focused on the width of the falcine sinus — the fetal structure that channels blood from the malformation back to the normal venous sinuses of the brain and, from there, to the rest of the circulation. [Read More](#)

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Upcoming Events in Boston

May 4 - 7 8:00 AM	2025 AAPS National Biotechnology Conference The Westin Boston Seaport District
May 12 - 16 8:00 AM	PEGS Protein & Antibody Engineering Summit Omni Hotel Boston at the Seaport
May 28 - 29 8:00 AM	3rd Gene Therapy Potency Assay Summit Revere Hotel Boston Common
June 9 - 10 8:00 AM	Precision in Drug Discovery & Preclinical Summit Boston Revere Hotel Boston Common
June 25 - 27 8:00 AM	2025 RNA Therapeutics: From Concept to Clinic UMass Medical School

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Science Jobs in Boston

Vertex Fall 2025 Co-Op, CGT Research Gene Editing Research Vertex
Summer Research Internship, The Benderson Family Heart Center Boston Children's Hospital
Research Associate I Sanofi
Postdoctoral Research Fellow Beth Israel Deaconess Medical Center
Toxicology Research Scientist Novartis

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Article: **To Postdoc or Not to Postdoc?**
Decision-Making Tips



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