

Publications of the Week

Cellular and Molecular Basis of *Pf*Coronin Function in Artemisinin Resistance in *Plasmodium falciparum*

First Author: Imran Ullah | Senior Author: Dyann Wirth (*pictured*)
Nature Communications | Boston Children's Hospital and Harvard University



Artemisinin combination therapies are central to malaria control, but their efficacy is threatened by the emergence of resistant *Plasmodium falciparum* strains. While the role of *Pf*kelch13 mutations is well established, mutations in *Pf*coronin have also been implicated in treatment failure, revealing layers of resistance complexity. Here, researchers define the cellular mechanism of *Pf*coronin-mediated artemisinin resistance. [Abstract](#) | [Press Release](#)

GCL Pruning of PIP3 Establishes the Soma-Germline Boundary

First Author: Mariyah Saiduddin | Senior Author: Ruth Lehmann (*pictured*)
Journal of Cell Biology | Whitehead Institute and MIT



Primordial germ cells (PGCs) are the first cells specified in the *Drosophila* embryo and are precursors to the germline. Their formation requires suppression of somatic fates. Here, researchers combine optogenetic Ras activation and Ras effector loop mutants to show that Ras suppresses PGC formation independently of the canonical Raf/MEK/ERK pathway. [Abstract](#) | [Press Release](#)

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Awards

Dr. Read Pukkila-Worley Receives \$3 Million NIH Award for Research on Bacterial Pathogenesis

UMass Chan Medical School



Dr. Read Pukkila-Worley (*pictured*) is the recipient of a five-year, \$3 million award from the National Institutes of Health (NIH). This award will support his research on understanding how bacteria cause infectious disease and how host cells have evolved mechanisms to survey for the presence of an active infection to activate innate immunity. [Read More](#)

MCB Junior Fellow Wins Two Prestigious Evolutionary Science Awards—First Dual Honor in 25 Years

Harvard University Department of Molecular and Cellular Biology (MCB)



Wendy Valencia-Montoya (*pictured*), a Junior Fellow in the Harvard Society of Fellows affiliated with the Bellono lab, has been awarded two of the most coveted honors in evolutionary biology for early-career scientists. Valencia-Montoya is the 2026 awardee of the Theodosius Dobzhansky Prize by the Society for the Study of Evolution and the John Maynard Smith Prize by the European Society for Evolutionary Biology. [Read More](#)

BU-Led Framingham Heart Study Brain Aging Program Receives \$31.5 Million Funding Renewal

The Brink



A Boston University (BU)-led research effort to advance our understanding and treatment of brain aging and Alzheimer's disease has received a \$31.5 million renewal of its funding. The Framingham Heart Study Brain Aging Program is one of the nation's leading investigations into cognitive decline. Drs. Lindsay Farrer and Rhoda Au (*pictured*) are copincipal investigators on the project. [Read More](#)

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Local News

Combining AI With Laboratory Evolution Yields Improved Proteins

Broad Institute



Broad Institute researchers have discovered that starting the laboratory evolution of proteins with more stable, AI-designed proteins leads to better results than starting with natural proteins. Their finding, published in a proof-of-concept study by Dr. David Liu's (*pictured*) lab in *Nature*, could change the way scientists engineer proteins for medicine and other applications. [Read More](#)

A New Director

The Picower Institute



On July 1, Dr. Myriam Heiman (*pictured*) took the reins of the Picower Institute for Learning and Memory from Dr. Li-Huei Tsai, who served in the role for over 1+ years. Dr. Heiman's research employs several advanced technologies and techniques to investigate why certain types of cells in specific brain regions are particularly pivotal and vulnerable in diseases such as Huntington's disease, Parkinson's disease, schizophrenia, and addiction. [Read More](#)

MIT and Broad Institute Researchers Break Diffraction Barrier in Super-Resolution Microscopy

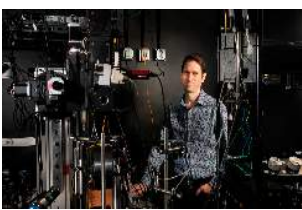
MIT Chemistry



Researchers in Dr. Sam Peng's (*pictured*) lab have developed a groundbreaking super-resolution imaging platform called U-STORM (Upconversion enabled Stochastic Optical Reconstruction Microscopy). This new technology allows scientists to visualize molecular structures with sub-Ångström-level localization precision while drastically simplifying the imaging process. [Read More](#)

BIDMC Investigators' New Tool Tracks the Brain's Chemical Signals in Real Time

Beth Israel Deaconess Medical Center (BIDMC)



Scientists know surprisingly little about how neurotransmitters like dopamine and oxytocin work at the same time to determine the activity of neurons. Dr. Mark Andermann (*pictured*) and his lab have developed a new approach called Multiplexed Optical Recording of Sensors on a micro-Endoscope (MORSE) to provide what may be the most comprehensive real-time view yet of the brain's changing chemical environment. [Read More](#)

Cancer Dependency Map Now Includes Next-Generation 3D Cancer Models

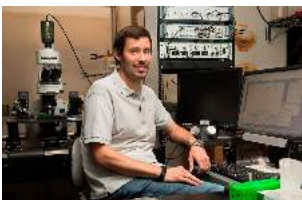
Broad Institute



For nearly a decade, the Cancer Dependency Map (DepMap) at the Broad Institute has helped scientists uncover new cancer dependencies — the genetic changes some cancers need to thrive that can potentially be targeted by new cancer drugs. Now the DepMap researchers led by Dr. Francisca Vazquez (*pictured*) have expanded the DepMap resource to include nearly 150 cancer organoid models. [Read More](#)

Common Neuroscience Sensors Sometimes Get Their Signals Crossed

Harvard Medical School



New tools have allowed scientists to focus increasingly on systems in which neuromodulators communicate with many different cells over longer time frames. Researchers led by Dr. Pascal Kaeser (*pictured*) are now reporting that fluorescent sensors commonly used in this research can mix up two neuromodulators: dopamine and norepinephrine. [Read More](#)

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Upcoming Events in Boston

August 13

7:00 PM

Poetry Night – Where Science Speaks in Verse

Museum of Science

August 17

9:00 AM

Exploring Cell Types with the Allen Institute

McGovern Institute for Brain Research at MIT

October 6 - 7

9:00 AM

FASI 10: Catalyst for a Cure – The Food Allergy Science Innovation Summit

Broad Institute

October 18 - 21

8:00 AM

The Medtech Conference 2026

Boston Convention and Exhibition Center

November 4

9:00 AM

Comparative Neuroscience: Lessons from Biodiversity

Singleton Auditorium

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Science Jobs in Boston

Research Technician

Tufts University

Research Scientist

Mass General Brigham

Research Assistant II

Beth Israel Deaconess Medical Center

Scientist I/II, mRNA Translation Dynamics

Lila Sciences

QC Analyst 1

Landmark Bio

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