

Publications of the Week

The E3 Ubiquitin Ligase Mechanism Specifying Targeted MicroRNA Degradation

First Authors: Jakob Farnung and Elena Slobodyanyuk (*pictured*) | Senior Author: David Bartel
Nature | Whitehead Institute, Howard Hughes Medical Institute, and MIT



MicroRNAs associate with Argonaute (AGO) proteins to form complexes that down-regulate target RNAs, including messenger RNAs from most human genes. Here, biochemical and cellular assays establish AGO binding and polyubiquitylation by the ZSWIM8–CUL3 E3 ligase as the key regulatory steps of target-directed miRNA degradation, and thereby define a unique cullin–RING E3 ligase class.

[Abstract](#) | [Press Release](#)

Inflammation Rewires the Enteric Nervous System Through Neurogenic Monocyte Recruitment

First Author: Sravya Kurapat (*pictured, right*) | Senior Author: Milena Bogunovic (*left*)
Journal of Experimental Medicine | UMass Chan Medical School



Proper organization of the enteric nervous system (ENS) is critical for normal gastrointestinal (GI) physiology. Inflammatory bowel disease disrupts key GI functions, including bowel motility. Here, researchers show that postinflammatory GI motility dysfunction arises from structural remodeling of the ENS, driven by a combination of neuronal loss and neurogenesis.

[Abstract](#) | [Press Release](#)

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Awards

Dr. Fen-Biao Gao Named Fellow of the American Association for the Advancement of Science

UMass Chan Medical School



Dr. Fen-Biao Gao (*pictured*) has been named a fellow of the American Association for the Advancement of Science (AAAS). Dr. Gao was elected for his “distinguished contributions to the field of disease-oriented neuroscience, particularly for advancing our understanding of disease pathogenesis in frontotemporal dementia,” according to the AAAS.

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Two Boston University Researchers Elected AAAS Fellows

The Brink

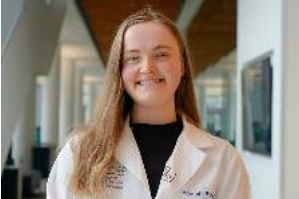


Drs. Alice Cronin-Golomb (*pictured, left*) and Plamen Ch. Ivanov (*right*) are newly minted fellow of the American Association for the Advancement of Science (AAAS), the world’s largest scientific society. “It’s a proud moment for Boston University (BU) and a reminder of the contributions our faculty make to advancing knowledge for the public good,” says BU Provost Gloria Waters.

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PhD Candidate Hannah Rogers Receives Grant to Study How Brain Integrates Food Cues to Drive Behavior

UMass Chan Medical School



Morningside Graduate School of Biomedical Sciences PhD candidate Hannah Rogers (*pictured*) has received a prestigious Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship from the National Institute for Neurological Disorders and Stroke. This will support her research on how the nervous system employs a class of signaling molecules called neuromodulatory neuropeptides to encode information about food availability.

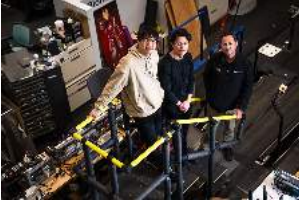
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Local News

Turning Muscles Into Motors Gives Static Organs New Life

McGovern Institute

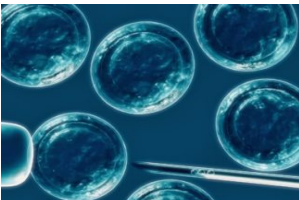


What if a technology could reanimate parts of the body that have lost their connection to the brain? MIT researchers Drs. Hyungeun Song, Guillermo Herrera-Arcos, and Hugh Herr (*pictured, left to right*) introduce a novel myoneural actuator that reprograms living muscles into fatigue-resistant, computer-controlled motors that can be implanted inside the body to restore movement in organs.

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Synthetic Biology Makes Fateful Decisions

Wyss Institute



Cellular differentiation and a division of labor are essential to living systems as distinct cell types performing specialized functions arise in defined proportions and spatial arrangements. Researchers at the Wyss Institute have reported a recombinase-based programmable platform for cell differentiation and proportion control.

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Alloy Therapeutics Enters Into Agreement to Advance Novel Antibody Discovery Platform

BusinessWire



Seattle-based biotech Alloy Therapeutics announced an agreement with AbbVie to develop a new antibody platform to discover potent, specific, and effective antibodies against targets that are difficult to address with current technologies. As part of the multi-year agreement, Alloy will receive an upfront payment, as well as an additional payment in connection with the delivery of the platform to AbbVie.

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Study Reveals Octopus Mating Arm Doubles as a Chemical Sensor

Harvard University Department of Molecular and Cellular Biology (MCB)



A new study from Dr. Pablo Villar del Rio (*pictured, right*) the MCB lab of Dr. Nicholas Bellono (*left*) reveals an unexpected sensory mechanism underlying octopus reproduction. They show that a specialized arm used for mating is also a finely tuned chemical sensing organ that enables animals to identify and engage appropriate mates, even in complete darkness.

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Ragon Institute Welcomes Inaugural FEMSA Fellows Jennie Ruelas Castillo and Jonathan Padilla Gómez

Ragon Institute



Drs. Jennie Ruelas Castillo (*pictured, left*) and Jonathan Padilla Gómez (*right*) as the inaugural recipients of the FEMSA Fellowship at the Ragon Institute. The fellowship supports postdoctoral researchers from Mexico in pursuing immunology research at the Ragon Institute. The FEMSA Fellowship is part of a broader partnership between the Ragon Institute and Tecnológico de Monterrey.

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How Bacteria Suppress Immune Defenses in Stubborn Wound Infections

MIT News



Chronic wound infections are notoriously difficult to manage because some bacteria, like *Enterococcus faecalis*, can actively interfere with the body’s immune defenses. Now, researchers at MIT have discovered how *E. faecalis* releases lactic acid to acidify its surroundings and suppresses the immune-cell signal needed to start a proper response to infection.

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Upcoming Events in Boston

April 17 9:00 AM	2026 Annual Microbiome Symposium Schwarzman College of Computing
April 25 8:00 AM	NOVA 2026 Harvard University
April 27 - 28 8:00 AM	Digital Healthcare Innovation Summit Seaport Hotel Boston
April 30 8:00 AM	USAIC’s 20th Annual BioPharma Summit The Newbury Boston Hotel
May 28 7:00 PM	AI and the Future of Cancer Treatments Museum of Science

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