



Publications of the Week

### Proteolthargy Is a Pathogenic Mechanism in Chronic Disease

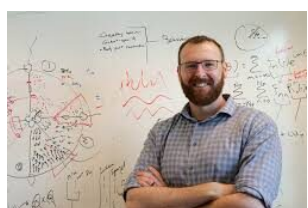
First Authors: Alessandra Dall'Agnese (pictured), Ming Zheng, and Shannon Moreno | Senior Authors: Tong Ihn Lee and Richard Young  
Cell | Whitehead Institute, Ragon Institute, Massachusetts General Hospital, and MIT



The pathogenic mechanisms of many diseases are well understood at the molecular level, but there are prevalent syndromes associated with pathogenic signaling where understanding is more limited. Here, researchers report that pathogenic signaling suppresses the mobility of a spectrum of proteins that play essential roles in cellular functions known to be dysregulated in these chronic diseases. [Abstract](#) | [Press Release](#)

### Jellyfish for the Study of Nervous System Evolution and Function

First Author: Karen Cunningham | Senior Authors: David Anderson and Brandon Weissbourd (pictured)  
Current Opinion in Neurobiology | Howard Hughes Medical Institute, Picower Institute, and MIT



Jellyfish behaviors arise from decentralized, regenerative nervous systems composed of body parts that generate the appropriate part-specific behaviors autonomously following excision. Here, researchers discuss the organization of jellyfish nervous systems and opportunities afforded by the recent development of a genetically tractable jellyfish model for systems and evolutionary neuroscience. [Abstract](#)

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Awards

### Drs. Florian Douam and Jessica Fetterman Receive Smith Family Foundation's Odyssey Award

Boston University Chobanian & Avedisian School of Medicine



Two junior faculty members have been awarded Smith Family Foundation's Odyssey Awards. Dr. Florian Douam (pictured), Assistant Professor of Virology, Immunology, and Microbiology, and Dr. Jessica Fetterman, Assistant Professor of Medicine, will each receive two-year, \$400,000 grants to pursue pilot projects in their respective fields. [Read More](#)

### Introducing the 2024-2025 Convergence Scholars

Koch Institute



The Koch Institute for Integrative Cancer Research at MIT is pleased to announce the 2024-2025 class of Convergence Scholars. This year's class includes: Drs. Yuang Chen (pictured, left), Jose Ortiz (second from left), Amy Lee (third from left), Meaghan McGearry (center), Zhengpeng (Jason) Wan (second from right), and Ranjan Mishra (right). [Read More](#)

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Local News

### West Nile, Zika, Coronavirus: This BU Researcher Is Taking On Some of the World's Most Serious Viruses—and He Plans to Win

The Brink



Since 2020, Dr. Mohsan Saeed (pictured) and his colleagues became focused almost exclusively on SARS-CoV-2. By 2022, they'd published nearly 30 research papers, most of them directly related to some aspect of the pandemic. Dr. Saeed's research has the potential to save thousands of lives. Now, his next focus is stopping mosquitoes from spreading disease. [Read More](#)

### Injected Microbubbles Could Be a Safe Way to Deliver Emergency Oxygen

Boston Children's Hospital



For years, researchers and clinicians have been trying to find a way to rapidly deliver oxygen to patients when traditional means of oxygenation are difficult or ineffective during critical moments of cardiac or respiratory arrest. After 15 years of research, Boston Children's researchers believe they have developed a safe and effective oxygen delivery method for those emergencies: injectable oxygen carried into the bloodstream by a rapidly dissolving gas microbubble. [Read More](#)

### Research Spotlight: Understanding Rare Genetic Variants That Cause Diabetes

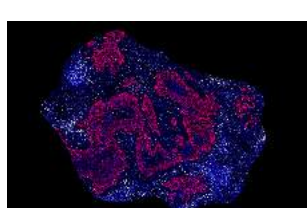
Massachusetts General Hospital



For patients suspected of having monogenic diabetes, identifying the mutation and the causal gene is very important but also very challenging. In a new study, researchers created a very large dataset of rare genetic variants and their association with diabetes, which can help distinguish those variants more likely to cause monogenic diabetes vs those that are benign. [Read More](#)

### A Blueprint for Better Cancer Immunotherapies

MIT News



Immune checkpoint blockade therapies can be very effective against some cancers by helping the immune system recognize cancer cells that are masquerading as healthy cells. By examining antigen architectures, MIT researchers built a therapeutic cancer vaccine that may improve tumor response to immune checkpoint blockade treatments. [Read More](#)

### A Universal Gene Therapy for Diamond-Blackfan Anemia Is Poised for Clinical Trials

Harvard Medical School



Efforts to develop a gene therapy for Diamond-Blackfan anemia (DBA) have been hampered by the fact that at least 30 different genetic mutations can cause the disorder. A team led by Dr. Vijay Sankaran (pictured) at Harvard Medical School has now cleared that obstacle by developing a universal gene therapy for DBA, one designed to correct the bone marrow defect no matter the patient's specific mutation. [Read More](#)

### Scientists Create First Blueprint of Entire Mouse Gut

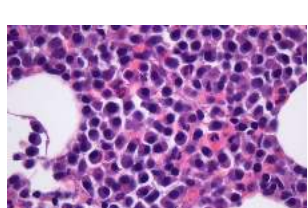
Harvard Medical School



Dr. Ramnik Xavier (pictured) at the Broad Institute and his team have analyzed the entire mouse intestine, creating a map of gene expression and cell behavior by location in response to various perturbations such as microbiome changes, inflammation, and circadian rhythms. The findings showcase the remarkable adaptability and resilience of the intestine. [Read More](#)

### Early Detection and Interception Research Shows Promise

Dana-Farber Cancer Institute



Dana-Farber Cancer Institute investigators are leading three separate studies with encouraging results related to the early detection and interception of multiple myeloma. One study is the development of a tool called PANGEA 2.0 that improves stratification of patients with smoldering multiple myeloma based on their risk of progression to overt multiple myeloma. [Read More](#)

### Whitehead Institute Builds Scientific Bridges to Advance Human Health

Whitehead Institute



Since its inception, the Whitehead Institute has driven groundbreaking discoveries in the basic biology of health and disease while training the next generation of biomedical innovators. Recently, its mission of improving human health gained new momentum as the Whitehead Institute united the vibrant research ecosystems on either side of the Charles River. [Read More](#)

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### Upcoming Events in Boston

- December 17 12:00 PM **BWH Cancer Research Symposium**  
Brigham & Women's Hospital
- January 11 1:00 PM **Science, Technology, & Ethics in the Real World**  
Building 16
- January 15 8:00 AM **8th Annual Neurophotonics Center Symposium**  
Boston University
- January 16 10:00 AM **AI, Health Equity, and Ethics Symposium**  
1 Main St.
- January 27 2:30 PM **Beyond the Lab: Journey from Scientist to Founder**  
MIT Media Lab

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### Science Jobs in Boston

- Research Scientist I**  
MIT
- Research Fellow, Hollenhorst Lab**  
Brigham & Women's Hospital
- Research Technician, Monaco Lab**  
Tufts University
- Research Scientist II**  
Ragon Institute
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