

Publications of the Week

Bubble-Driven Cell Detachment

First Author: Bert Vandereydt (*pictured*) | Senior Author: Kripa Varanasi
Science Advances | MIT



On-demand cell detachment is of great importance in various applications in biosensitive environments. Existing methods such as enzymatic treatments and mechanical scraping are often time-consuming, labor-intensive, and harmful to cells. In this work, researchers demonstrate a method of detaching cells from substrates using electrochemical bubble generation without biocide generation.

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

Candida albicans Colonization Modulates Murine Ethanol Consumption and Behavioral Responses Through Elevation of Serum Prostaglandin E₂ and Impact on the Striatal Dopamine System

First Author: Andrew Day | Senior Author: Carol Kumamoto (*pictured*)
mBio | Tufts University



Candida albicans is a commensal yeast that is a common component of the gastrointestinal microbiome of humans. *C. albicans*-colonized mice are more susceptible to ethanol-induced motor coordination impairment, showing significant alterations to the behavioral effects of ethanol. This study identifies a member of the fungal microbiome that alters ethanol preference and demonstrates a role for prostaglandin E₂ signaling in these phenotypes. [Abstract](#) | [Press Release](#)

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Awards

UMass Chan Researcher Awarded NIH Grant to Advance Precision Medicine for Opioid Use Disorder and Mentor Emerging Scientists

UMass Chan Medical School



A new National Institutes of Health (NIH) award will help a UMass Chan Medical School physician-scientist expand her research into opioid use disorder while mentoring the next generation of clinical researchers. Dr. Stephanie Carreiro (*pictured*) has received a Midcareer Investigator Award in Patient-Oriented Research from the National Institute on Drug Abuse. [Read More](#)

Anastasiia Sukalskaia Awarded Swiss National Science Foundation Fellowship

Harvard University Department of Molecular and Cellular Biology (MCB)



Postdoctoral fellow Dr. Anastasiia Sukalskaia (*pictured*) has received a prestigious Swiss National Science Foundation Postdoc Mobility Fellowship, which will support her research in the lab of MCB's Nicholas Bellono on the sensory biology of starfish. Her project aims to identify the receptors starfish use to detect chemical cues from their prey. [Read More](#)

In Fruit Fly Eyes, UMass Boston Researcher Sees Potential Medical Discoveries

UMass Boston



Dr. Jens Rister (*pictured*), an Associate Professor in UMass Boston's Biology Department, has just been awarded more than \$1,700,000 in funding from the National Eye Institute to research a protein that guides the development of color vision in fruit flies. By learning more about the underlying mechanisms, Rister hopes to learn about human diseases such as Oculocutaneous Syndrome. [Read More](#)

Fernando Martinez Leading Nationwide DOD Clinical Study Targeting Idiopathic Pulmonary Fibrosis

UMass Chan Medical School



A UMass Chan Medical School pulmonology and biomedical research expert is helping lead a nationwide clinical study funded by the Department of Defense (DOD) targeting idiopathic pulmonary fibrosis. Dr. Fernando Martinez (*pictured*) is the principal investigator on a DOD-funded consortium project repurposing metformin, a drug commonly used to control sugar levels in people with type 2 diabetes, to treat patients with idiopathic pulmonary fibrosis. [Read More](#)

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Local News

Study Finds Circular RNA Helps Drive Brain Development

The Picower Institute



MIT neuroscientists show in a new study that loops of RNA can strongly influence how neurons build circuit connections, or synapses, during the development of the visual system in young mice. Dr. Kyle Jenks (*pictured*) and Dr. Mriganka Sur's lab found that when *circHomer1* is knocked down, the synapses, at least structurally, are not fully built. [Read More](#)

Broad-Bayer Collaboration Leads to Drug Candidate for a Hard-to-Treat Type of Lung Cancer

Broad Institute



An alliance of scientists at the Broad Institute and Bayer Pharmaceuticals has developed a drug candidate, sevabertinib, that could be a new treatment for a group of lung cancer patients who have few options today. In a new study published in *Cancer Discovery*, the team co-led by Dr. Matthew Meyerson (*pictured*) described their efforts to develop sevabertinib. [Read More](#)

Blood Test Guides Post-Surgical Immunotherapy for Muscle-Invasive Bladder Cancer

Dana-Farber Cancer Institute



The Dana-Farber-co-led phase 3 IMvigor011 trial results show that periodic ctDNA screening after surgery can help guide a decision to begin adjuvant immunotherapy. "By selecting patients based on ctDNA, we see a benefit not only for disease-free survival but also for overall survival with atezolizumab," says co-principal investigator Dr. Joaquim Bellmunt (*pictured*). [Read More](#)

Ragon–Scripps Collaboration Shows Single mRNA Shot Can Start Several HIV-Blocking Antibody Paths at Once

Ragon Institute



A new study co-led by Dr. Facundo Batista's (*pictured*) lab at the Ragon Institute and Scripps/IAVI shows that a single mRNA-based vaccine mix can jump-start the early steps toward several promising HIV-fighting antibodies at the same time. Because HIV is extremely diverse, a successful vaccine would likely need to train the immune system along multiple routes, not just one. [Read More](#)

Ep. 307: “Vascular Biology” Featuring Dr. Juan Melero-Martin

The Stem Cell Podcast



Dr. Juan Melero-Martin (*pictured*) is an Associate Professor and the Endowed Chair in Cardiac Surgery at Boston Children's Hospital. On this episode of the Stem Cell Podcast, he discusses how his lab uses bioengineering principles to understand how vascular networks are formed, and the mechanisms by which the vasculature modulates the engraftment and activity of various human stem cells. [Read More](#)

Barczak Lab Leads Study Showing Omicron Subvariants Shed Virus for Similar Periods and Symptoms Alone Do Not Signal Safety

Ragon Institute



A new study by Drs. Julie Boucau (*pictured, left*) and Amy Barczak (*right*) followed people with mild COVID-19 to see whether newer Omicron subvariants behave differently over time. Despite ongoing viral evolution, the team found core features—how much viral nucleic acid is found in the nose and how long people shed live virus—were broadly similar across the BA.1x, BA.2x, BA.4/5x, XBB.x, and JN.x subvariants. [Read More](#)

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Upcoming Events in Boston

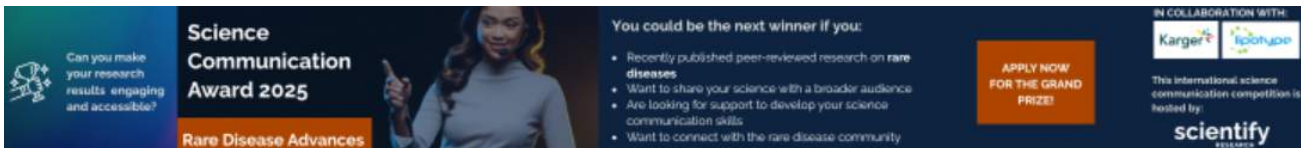
November 7 8:30 AM	Broad Institute Machine Learning in Drug Discovery Symposium 2025 Broad Institute
November 20 8:00 AM	2025 R&D Reimagined MassBioHub
December 11 - 12 9:00 AM	Boston International Symposium: Accelerating PSC-Derived Cell Therapies Hyatt Regency Cambridge
December 11 4:30 PM	Better Together Ragon Institute
December 3 5:00 PM	MassBioHub 2025 Annual Holiday Party Mixer 100 Technology Square

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Science Jobs in Boston

- Scientist**
AstraZeneca
- Research Associate II, Center for Human Brain Variation**
Broad Institute
- Technical Associate I, Desimone Lab**
McGovern Institute for Brain Research
- Postdoctoral Fellow**
Mass General Brigham
- Associate Scientist/Scientist, Protein Science**
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