



Publications of the Week

Functional Chimeric mRNAs Encode Proteins in Mammalian Immunity

First Authors: Olivia Venezia and Harry Kane | Senior Author: Ruidihrf Jackson (pictured)
Nature | Harvard Medical School, Boston Children's Hospital, Broad Institute, Ragon Institute, Moderna, and MIT



mRNA isoform diversity is believed to originate through cis-splicing of pre-mRNA. Whether mRNA from distant genes can undergo trans-splicing to generate functionally relevant chimeric transcripts has remained unclear. Here, researchers develop a pipeline combining long-read direct RNA sequencing with non-targeted and targeted validation to identify chimeric transcripts in macrophages. [Abstract](#) | [Press Release](#)

Live-Cell Transcriptomics With Engineered Virus-Like Particles

First Authors: Mohamad Ali Najia (pictured), Anna Le, and Jacob Borrajo | Senior Author: Paul Blainey
Cell | Harvard Medical School, Boston Children's Hospital, and MIT



Transcriptomic profiling is widely applied to characterize cellular gene expression, yet existing approaches lyse cells and preclude direct analysis of transcriptional dynamics in the same sample over time. Researchers addressed this limitation by engineering mammalian cells to "self-report" their transcriptional states via mRNA export in virus-like particles. [Abstract](#) | [Press Release](#)

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Awards

Dang and Evavold Lab Postdoc Receives CRI Irvington Postdoctoral Fellowship

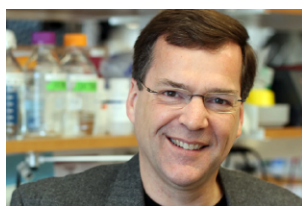
Ragon Institute



Dr. Mariano Auliero (pictured), a postdoctoral fellow at the Ragon Institute, has received a CRI Irvington Postdoctoral Fellowship from the Cancer Research Institute (CRI). The Irvington fellowship is one of the leading early-career awards in cancer immunology. It provides three years of support, mentorship, and professional development to postdoctoral scientists studying how the immune system recognizes and responds to cancer. [Read More](#)

Dr. Erik Sontheimer Named Chair of RNA Therapeutics Institute at UMass Chan

UMass Chan Medical School



Dr. Erik Sontheimer (pictured), the Pillar Chair in Biomedical Research, Professor and Vice Chair of RNA therapeutics, has been appointed Chair of the RNA Therapeutics Institute. Dr. Sontheimer came to UMass Chan in 2014 from a faculty position at Northwestern University. He earned his PhD from Yale University and completed postdoctoral training at the University of Chicago. [Read More](#)

Dr. Xiao Wang Receives 2027 Eli Lilly Award in Biological Chemistry

MIT Chemistry



Dr. Xiao Wang (pictured), the Thomas D. and Virginia Cabot Associate Professor of Chemistry and Core Member of the Broad Institute, has been selected as the recipient of the 2027 Eli Lilly Award in Biological Chemistry. The award was established to stimulate fundamental research in biological chemistry by scientists within 10 years of completing their postdoctoral training. [Read More](#)

Dr. Brandon Bastien Receives NIH Fellowship Award to Study Autism-Associated Genes in Zebrafish

UMass Chan Medical School



Postdoctoral fellow Dr. Brandon Bastien (pictured) is the recipient of a fellowship award from the National Institutes of Health (NIH) to support his work with zebrafish and research on genes linked to autism. "The goal of the project is to use zebrafish to model how autism-associated genes shared between humans and zebrafish affect the brain and behavior, with the hopes of identifying potential targets for future therapies," Dr. Bastien said. [Read More](#)

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Local News

Move Over, Lycopene. Tomatoes' Secret Sauce May Be Phytoene

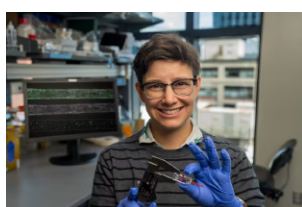
Tufts Now



For decades, the red pigment lycopene has been considered the tomato's star nutrient. But new research from Tufts University suggests that phytoene, a colorless precursor of lycopene, may also contribute to tomatoes' protective effects against a form of chronic fatty liver disease affecting up to 38% of U.S. adults. The study was published in *Molecular Nutrition & Food Science*. [Read More](#)

Dr. Jennifer (Jen) Bays on Building a Therapy to Repair Vascular Barriers

Wyss Institute



Dr. Jen Bays (pictured) studies how blood vessels maintain their barrier function and what happens when that barrier fails during diseases such as sepsis, acute respiratory distress syndrome, and other inflammatory conditions. Dr. Bays' work with THRIVE Validation Project team is focused on developing a first-in-class therapeutic designed to repair the vascular barrier by harnessing one of the signaling pathways used by cells in the body. [Read More](#)

New Approach to Gene Therapy Helps Smooth Road for People With Sickle Cell Disease

Boston Children's Hospital



Researchers at the Cancer and Blood Disorders Center have helped smooth the road to gene therapy for patients with sickle cell disease with an approach that can collect and manufacture enough stem cells much more efficiently. Drs. David Williams, John Manis, and Erica Esrick's (pictured) new process almost always harvests enough in a single hospital admission. [Read More](#)

Atlas of the Brain's Striatum Could Guide Researchers to New Drug Treatments

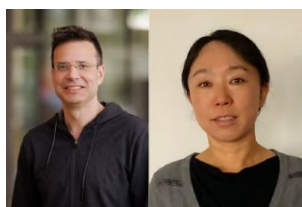
MIT News



MIT researchers have generated a new atlas of neurons found within the striatum of the brain, which is critical for cognitive and motor functions, using single-cell RNA sequencing among other techniques. "We see this as the foundation that will allow more studies in our Huntington's disease and opioid use disorder projects. We needed a roadmap of what is there," says Dr. Myriam Heiman (pictured). [Read More](#)

Study from Lichterfeld and Yu Labs Shows HIV Reservoirs are Visible to Immune System, Challenging Longstanding Assumptions

Ragon Institute



Cells known as the HIV reservoir are functionally the main reason HIV has no cure. Research from Dr. Mathias Lichterfeld (pictured, left) and Dr. Xu Yu (right) at the Ragon Institute shows that even after 20 years of treatment, the reservoir is under steady immune pressure from natural killer (NK) cells. NK cell-based immune therapies could represent promising approaches for an HIV cure. [Read More](#)

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Upcoming Events in Boston

October 2 8:30 AM	2nd Annual AI-Powered Innovation in Protein and Antibody Therapeutics Le Meridien Cambridge
October 6 - 7 9:00 AM	FASI 10: Catalyst for a Cure – The Food Allergy Science Innovation Summit Broad Institute
October 18 - 21 9:00 AM	The Medtech Conference 2026 Boston Convention and Exhibition Center
November 4 9:00 AM	Comparative Neuroscience: Lessons from Biodiversity Singleton Auditorium
November 19 - 20 8:00 AM	Pharma Partnering US Summit Hilton Boston Logan Airport

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Science Jobs in Boston

- Associate, QC Analytical**
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- Manufacturing Associate II, Process Development**
Moderna
- Medical Lab Scientist I, Overnight**
Boston Children's Hospital
- Research Lab Tech**
Mass General Brigham
- Research Study Technician**
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