



Publications of the Week

### Branched Chemically Modified Poly(A) Tails Enhance the Translation Capacity of mRNA

First Author: Hongyu Chen | Senior Author: Xiao Wang (pictured)  
Nature Biotechnology | Broad Institute, MIT, and Harvard University



Although messenger RNA (mRNA) has proved effective as a vaccine, its potential as a general therapeutic modality is limited by its instability and low translation capacity. To increase the duration and level of protein expression from mRNA, researchers designed and synthesized topologically and chemically modified mRNAs with multiple synthetic poly(A) tails. [Abstract](#) | [Press Release](#)

### Derivation and External Validation of a Simple Risk Score for Predicting Severe Acute Kidney Injury After Intravenous Cisplatin: Cohort Study

First Author: Shruti Gupta (pictured) | Senior Author: David Leaf  
The British Medical Journal | Brigham and Women's Hospital, Dana-Farber Cancer Institute, Harvard University, Beth Israel Deaconess Medical Center, and Massachusetts General Hospital



Researchers aimed to develop and externally validate a prediction model for severe cisplatin associated acute kidney injury (CP-AKI). This study found that a simple risk score based on readily available variables from patients receiving intravenous cisplatin could predict the risk of severe CP-AKI, the occurrence of which is strongly associated with death. [Abstract](#) | [Press Release](#)

### A Noncoding Regulatory Variant in *IKZF1* Increases Acute Lymphoblastic Leukemia Risk in Hispanic/Latino Children

First Author: Adam de Smith | Senior Author: Vijay Sankaran (pictured)  
Cell Genomics | Boston Children's Hospital, Dana-Farber Cancer Institute, Harvard Medical School, and Broad Institute



Hispanic/Latino children have the highest risk of acute lymphoblastic leukemia (ALL) in the US compared to other racial/ethnic groups, yet the basis of this remains incompletely understood. Through genetic fine-mapping analyses, researchers identified a new independent childhood ALL risk signal near *IKZF1* in self-reported Hispanic/Latino individuals. [Abstract](#) | [Press Release](#)

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Awards

### Researchers Awarded \$14 Million to Better Understand, Treat Genetic Lung Diseases

Boston University Chobanian & Avedisian School of Medicine



A team of researchers has been awarded a five-year, \$14 million grant from the NIH's National Heart, Lung, and Blood Institute for his research, "Developing Pluripotent Stem Cells to Model and Treat Lung Disease." The new award will fund four integrated labs headed by four physician-scientists: Drs. Darrell Kotton (pictured), Finn Hawkins, Andrew Wilson, and Kostas Alysandratos. [Read More](#)

### What Causes Osteoarthritis? BU Researchers Win \$46 Million Grant to Pursue Answers and Find New Treatments

The Brink



For researchers who study osteoarthritis, much of the focus has been on finding better ways to manage the pain rather than trying to prevent it from developing. Drs. David Felson (pictured, left) and Tuhina Neogi (right) are trying to understand what causes osteoarthritis to find ways to slow its onset and provide more effective and targeted treatments. They have received a five-year, \$46 million award to support their ongoing study. [Read More](#)

### Accelerating Cancer Research

Harvard Medical School



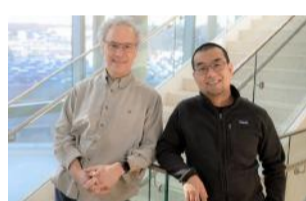
Eleven Harvard Medical School researchers have received awards from the Damon Runyon Cancer Research Foundation. The four-year Damon Runyon Fellowship encourages promising young scientists to pursue careers in cancer research by providing them with independent funding to investigate cancer causes, mechanisms, therapies, and prevention. One of the awardees is Dr. Brooke Huisman (pictured). [Read More](#)

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Local News

### UMass Chan Study Reveals New Details About Argonaute Syndromes, a Recently Identified Class of Neurodevelopmental Disorders

UMass Chan Medical School



Research by Drs. Victor Ambros (pictured, left) and Ye Duan (right) provides new insights into a recently identified class of neurodevelopmental disorders called Argonaute syndromes. Drs. Ambros and Duan believe their new paper will help inform clinical and translational researchers in their pursuit of a treatment for this class of neurodevelopmental and autism-spectrum disorders. [Read More](#)

### STEMCELL Technologies Announces FDA De Novo Classification for Its EasySep™ CD138 Positive Selection Kit to Support Cancer Diagnostic Tests

STEMCELL Technologies



STEMCELL Technologies announced that its new EasySep™ Human Bone Marrow CD138 Positive Selection Kit has been granted de novo classification by the US Food and Drug Administration (FDA) as a first-of-its-kind in vitro diagnostic medical device for hematopoietic cell enrichment. The kit can be used to enrich plasma cells expressing the CD138 marker (CD138+ cells) from patient bone marrow samples. [Read More](#)

### #WhyScience Q&A: A Cell Biologist Now Helps Recent College Graduates Launch Their Scientific Careers

Broad Institute



At the Broad Institute of MIT and Harvard, Alex Navarro (pictured) helps young researchers envision their own paths to a scientific career as the senior program coordinator for the Broad Biomedical Post-baccalaureate Scholars (BBPS) program. The two-year program provides recent college graduates with support and guidance as they begin their first professional research positions at the Broad and prepare for graduate school in STEM fields. [Read More](#)

### CRISPR-Cas9 Genome Editing Treats Genetic Hearing Loss by Promoting Outer Hair Cell Survival

Massachusetts General Hospital



In *Nature*, Mass Eye and Ear researchers previously reported using CRISPR-Cas9-based genome editing to recover hearing in mouse models of human genetic deafness. Now, the team has shown that the delivery of CRISPR-Cas9 genome editing tools can be successfully used as a strategy to recover hearing in mice with dominant monogenic mutations in genes that affect the outer hair cell function or mutations affecting both inner and outer hair cells. [Read More](#)

### Beyond the Brain

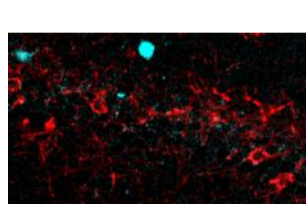
McGovern Institute



Guillermo Herrera-Arcos (pictured), a graduate student in Dr. Hugh Herr's lab, is developing an optical technology with the potential to restore movement in people with spinal cord injury or stroke. Herrera-Arcos and Dr. Herr's work is one way McGovern neuroscientists are working at the interface of brain and machine to enable better ways of understanding and treating injury and disease. [Read More](#)

### Plasticity and Place: Study Shows a Key Neural Mechanism of Remembering Locations

The Picower Institute



Knowing where you are is so important, the brain has special cells that dedicate themselves to the purpose. In a recent study in *Science*, a team of neuroscientists has demonstrated in live behaving animals a long-hypothesized mechanism that such "place cells" employ to refine that sense of location. The study shows that signaling by endocannabinoids is required. [Read More](#)

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### Upcoming Events in Boston

- April 2  
10:00 AM

**Decoding Nutrition Guidance: Navigating Confusion and Trustworthiness**  
Museum of Science
- April 3  
12:00 PM

**Careers in Biotech at Intellia Therapeutics**  
Intellia Therapeutics
- April 4  
4:00 PM

**TEDxEndicott College**  
Endicott College
- April 4  
5:30 PM

**Navigating the Academic Journey: Empowering Postdocs on the Path to Tenure Track Success**  
3 Blackfan St.
- April 7  
9:30 AM

**Annual MIT Microbiome Symposium 2023**  
MIT Media Lab

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### Science Jobs in Boston

- Scientist, Amplicon-seq Lead**  
Intellia Therapeutics
- Lab Coordinator**  
Northeastern University
- Laboratory Supervisor**  
Boston University
- Process Development Scientist**  
Garuda Therapeutics
- Field Application Scientist**  
CYTENA

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