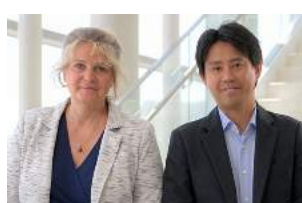




Publications of the Week

### Enhancing siRNA Efficacy *In Vivo* with Extended Nucleic Acid Backbones

First Author: Ken Yamada (*pictured, right*) | Senior Author: Anastasia Khvorova (*left*)  
 Nature Biotechnology | UMass Chan Medical School, Harvard Medical School, and Mass General Institute for Neurodegenerative Disease



To improve oligonucleotide stabilization, researchers report the discovery, synthesis, and characterization of extended nucleic acid (exNA) consisting of a methylene insertion between the 5'-C and 5'-OH of a nucleoside. The improved efficacy and durability imparted by exNA may enable therapeutic interventions in extrahepatic tissues, both with siRNA and with other oligonucleotides such as CRISPR guide RNA, antisense oligonucleotides, mRNA and tRNA. [Abstract](#) | [Press Release](#)

### Loss of *Kmt2c* or *Kmt2d* Drives Brain Metastasis via KDM6A-Dependent Upregulation of MMP3

First Author: Marco Seehawer | Senior Author: Kornelia Polyak (*pictured*)  
 Nature Cell Biology | Dana-Farber Cancer Institute, Brigham and Women's Hospital, Harvard Medical School, and the Broad Institute



*KMT2C* and *KMT2D*, encoding histone H3 lysine 4 methyltransferases, are among the most commonly mutated genes in triple-negative breast cancer (TNBC). However, how these mutations may shape epigenomic and transcriptomic landscapes to promote tumorigenesis is largely unknown. Here, researchers describe that deletion of *Kmt2c* or *Kmt2d* in non-metastatic murine models of TNBC drives metastasis, especially to the brain. [Abstract](#) | [Press Release](#)

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Awards

### Dr. Mehrdad Jazayeri Selected as an HHMI Investigator

McGovern Institute



The Howard Hughes Medical Institute (HHMI) has named McGovern Institute's Dr. Mehrdad Jazayeri (*pictured*) as an HHMI investigator — a group of visionary scientists who HHMI will support with more than \$300 million over the next seven years. Support from HHMI is intended to give its investigators the time and resources they need to push the boundaries of the biological sciences. [Read More](#)

### Dr. Gene-Wei Li Named 2024 HHMI Investigator

MIT Biology



The Howard Hughes Medical Institute (HHMI) has named McGovern Institute's Dr. Gene-Wei Li (*pictured*) as an HHMI investigator. With the support he'll receive as an HHMI Investigator, Dr. Li will explore how genomes are sculpted to allow lifeforms to survive in a competitive environment to improve our molecular understandings of life. [Read More](#)

### Ragon Postdoc Awarded Prestigious NIH K99 Pathway to Independence Award

Ragon Institute



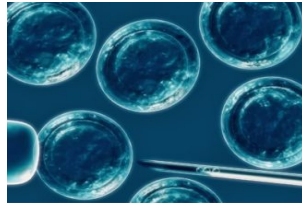
The Ragon Institute recognizes Dr. Upasana Das Adhikari (*pictured*), a Postdoctoral Fellow in the Kwon Lab, with the prestigious K99 Pathway to Independence Award by the National Institutes of Health (NIH). This highly competitive award identifies trainees with strong potential to become independent scientists and supports them through this critical transition. [Read More](#)

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Local News

### Advanced 'Parkinson's in a Dish' Model Accelerates Brain Disease Research

Brigham and Women's Hospital



Researchers at Brigham and Women's Hospital have developed a model that rapidly converts stem cells to brain cells with protein structures characteristic of Parkinson's disease, enabling the study of the condition's unique and highly variable disease pathology in a petri dish. The study details how the model can one day be used to develop personalized diagnostic and treatment methods for Parkinson's disease. [Read More](#)

### MIT School of Science Launches Center for Sustainability Science and Strategy

MIT News



The MIT School of Science launches the Center for Sustainability Science and Strategy to improve understanding of sustainability challenges. "As critical challenges such as climate, health, energy, and food security increasingly affect people's lives around the world, decision-makers need a better understanding of the earth in its full complexity" says Professor Noelle Selin (*pictured*) will serve as the Center's inaugural faculty Director. [Read More](#)

### Which Strains of Tuberculosis Are the Most Infectious?

Harvard Medical School



For some forms of tuberculosis, the chances that an exposed person will get infected depend on whether the individual and the bacteria share a hometown, according to a new study led by Harvard Medical School scientists. This study provides the first hard evidence that have led scientists to suspect that pathogen, place, and human host collide in a distinctive interplay that influences infection risk and fuels differences in susceptibility to infection. [Read More](#)

### Alex Shalek Appointed Director of IMES at MIT

Ragon Institute



Ragon faculty member Dr. Alex Shalek (*pictured*) has been appointed as the new Director of the Institute for Medical Engineering and Science (IMES) at MIT. Dr. Shalek joined the Ragon Institute a decade ago. His innovative work spans genomics, chemical biology, and nanotechnology, focusing on understanding and engineering human immune responses in tissues. [Read More](#)

### Clarissa May Babila on Using "Packages" from Cells to Diagnose Brain Diseases

Wyss Institute



Clarissa May Babila working with extracellular vesicles, or EVs, which are basically small packets of information that cells release, almost like sending a package in the mail. These "packages" can contain proteins, RNA, and DNA. Learn more about her work in the Humans of the Wyss series which features members of the Wyss community discussing their work, the influences that shape them as professionals, and their collaborations. [Read More](#)

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### Upcoming Events in Boston

- Aug. 19 - 22  
8:00 AM

**The Bioprocessing Summit 2024**  
Sheraton Hotel
- Sept. 18  
8:30 AM

**The 2025 Aging Brain Initiative Symposium: The Neuro-Immune Axis and the Aging Brain**  
Singleton Auditorium
- Sept. 23  
8:00 AM

**2024 Rosamund Stone Zander Translational Neuroscience Center Symposium**  
Joseph B. Martin Conference Center
- Sept. 23 - 25  
9:00 AM

**The Biotech Event Accelerating Fresh Ideas, Partnerships, and Opportunities**  
Hynes Convention and Exhibition Center
- Sept. 24 - 25  
9:00 AM

**Kuggie Vallee Distinguished Lectures and Workshops**  
Singleton Auditorium

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### Science Jobs in Boston

- Senior Scientist I**  
Nova Biomedical Corporation
- Science Communications Intern**  
Mass General Research Institute
- Postdoctoral Associate, Buenrostro Lab**  
Broad Institute
- In Vivo Research Scientist**  
Sanofi
- Research Support Associate II, McRose Lab**  
MIT

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