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Publications of the Week

Targeting PGLYRP1 Promotes Antitumor Immunity While Inhibiting Autoimmune Neuroinflammation

First Author: Alexandra Schnell | Senior Author: Vijay Kuchroo *(pictured)*
Nature Immunology | Broad Institute, Dana-Farber Cancer Institute, and Brigham and Women's Hospital

Co-inhibitory and checkpoint molecules suppress T cell function in the tumor microenvironment, thereby rendering T cells dysfunctional. Although immune checkpoint blockade is a successful treatment option for multiple human cancers, severe autoimmune-like adverse effects can limit its application. Here, researchers show that the gene encoding peptidoglycan recognition protein 1 (PGLYRP1) might be a promising target for cancer immunotherapy. **Abstract**

A Disordered Region Controls cBAF Activity via Condensation and Partner Recruitment

First Author: Ajinkya Patil | Senior Author: *Cigall Kadoch (pictured)*
Cell | Dana-Farber Cancer Institute, Harvard Medical School, Brigham and Women's Hospital, and the Broad Institute

Intrinsically disordered regions (IDRs) comprise 37%–50% of the human proteome and are especially enriched in nuclear proteins. Here, researchers identify IDR contributions to chromatin remodeling and explain how phase separation provides a mechanism through which both genomic localization and functional partner recruitment are achieved. **Abstract** | **Press Release**

A Mouse Model with High Clonal Barcode Diversity for Joint Lineage, Transcriptomic, and Epigenomic Profiling in Single Cells

First Author: Li Li | Senior Author: Fernando Camargo *(pictured)*
Cell | Boston Children's Hospital and Harvard University

Cellular lineage histories and their molecular states encode fundamental principles of tissue development and homeostasis. Current lineage-recording mouse models have insufficient barcode diversity and single-cell lineage coverage for profiling tissues composed of millions of cells. Here, researchers developed DARLIN, an inducible Cas9 barcoding mouse line that utilizes terminal deoxynucleotidyl transferase and 30 CRISPR target sites. **Abstract**

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Awards

Three Researchers from Massachusetts General Hospital Elected to the National Academy of Medicine

Massachusetts General Hospital

Massachusetts General Hospital researchers Drs. Jeannie Lee *(pictured)*, Maurizio Fava, and Rudolph Tanzi have been elected as members of the National Academy of Medicine (NAM) for their ongoing contributions to health and medicine and their sought-after expertise and leadership. Election to the NAM is considered one of the highest honors in health and medicine. **Read More**

Bradley Bernstein of Dana-Farber Elected to National Academy of Medicine

Dana-Farber Cancer Institute

Dr. Bradley Bernstein *(pictured)*, Chair of Cancer Biology at Dana-Farber Cancer Institute, has been elected to the National Academy of Medicine (NAM). New members to NAM are elected by current members through a process that recognizes individuals who have made major contributions to the advancement of the medical sciences, health care, and public health. **Read More**

Michael Lodato Selected for NIH Director's New Innovator Award

UMass Chan Medical School

Dr. Michael Lodato *(pictured)*, Assistant Professor of Molecular, Cell & Cancer Biology, has received a 2023 National Institutes of Health (NIH) Director's New Innovator Award from the NIH Common Fund's High-Risk, High-Reward Research program. Dr. Lodato's project focuses on how DNA damage during life results in permanent changes in the genome in cells of the human body, called somatic mutations. **Read More**

NIH Director's New Innovator Award 2023 Awardees

National Institutes of Health (NIH)

Dr. Ariel Furst *(pictured)* is the Paul M. Cook Career Development Assistant Professor of Chemical Engineering at MIT. She works at the intersection of biological, electrochemical, and materials engineering to develop equitable technologies to improve human and environmental health. Dr. Furst is one of the awardees for the NIH Director's New Innovator Award. **Read More**

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Local News

Staying Ahead of Virus Mutations

The Harvard Gazette

The COVID-19 pandemic seemed like a never-ending parade of SARS-CoV-2 variants, each equipped with new ways to evade the immune system, leaving the world bracing for what would come next. But what if there were a way to make predictions about new viral variants before they actually emerge? A new artificial intelligence tool developed by researchers at Harvard Medical School can do just that. **Read More**

He Was Named a MacArthur 'Genius' Fellow for Research on Gene Regulation, but Still Has Imposter Syndrome

STAT News

The youngest of this year's class of MacArthur "genius grant" fellows, Dr. Jason Buenrostro *(pictured)* was just a graduate student when he pioneered a technique that's become a mainstay for studying how cells regulate gene expression. Now, Dr. Buenrostro discusses about the challenges he faced trying to get a start in biological research, the applications of ATAC-Seq, and the technologies he hopes to work on in the future. **Read More**

Helping to Fill In Gaps in Urology Research for Female Patients

MIT Alumni

Dr. Nicole De Nisco *(pictured)* works with postmenopausal women who have been suffering from decades of recurring UTIs. As there was a big gap in the field, entering the field of urology was an opportunity to make new discoveries and find new ways to treat those recurring infections. Dr. De Nisco says she's in the minority, both as a woman studying urology and as someone studying diseases that affect female patients. **Read More**

CReM Celebrates 10th Anniversary as Pioneering Center for Stem Cell Research

Boston University Chobanian & Avedisian School of Medicine

In the decade since the Center for Regenerative Medicine (CReM) of Boston University and Boston Medical Center was established by co-founders Dr. Gustavo Mostoslavsky, Dr. Darrell Kotton *(pictured)*, and Dr. George Murphy, there has been a lot of untiring of knots on some of the world's most intractable diseases. "We have a slogan that reflects our mission – 'Advancing Science to Heal the World,'" said Kotton. **Read More**

#WhyIScience Q&A: A Research Scientist Uses Mass Spectrometry to Discover How Metabolites Affect Human Health

Broad Institute

Inspired at a young age to pursue science, Amy Deik *(pictured)* moved from the world of botany to genetics to analytical chemistry. In this #WhyIScience, Deik speaks about metabolomics and the intersectionality of being a woman of faith and a scientist. "I try to speak about science to people in a way that makes it understandable and therefore less scary," says Deik. **Read More**

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Interesting Articles

Rebuilding Public Trust in Science

The Brink

The COVID-19 pandemic has taught us many lessons about how not to communicate scientific information to a public audience. Boston University science communication scholars say it's crucial for higher ed institutions to incentivize public outreach efforts. Public trust (or lack thereof) in science plays a pivotal role in our individual and collective responses. **Read More**

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Upcoming Events in Boston

October 23 10:00 AM	**Cancer Disparities and Later Life: Aging and the Accumulation of Health Risks** Campus Center Auditorium
October 23 2:00 PM	**Virtual Open House with Open Scholarship and Research Data Services** Online
November 8 12:00 PM	**2023 Discover Brigham** Brigham & Women's Hospital
November 9 2:00 PM	**Sing for Science @ the MIT Museum** MIT Museum
November 9 6:00 PM	**Broad Discovery Series** Broad Institute & Online

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Other Science Jobs in Boston

Research Scientist I
Takeda

Molecular Sciences Group Lead
Dana-Farber Cancer Institute

Scientist, Discovery Biology
Karuna Therapeutics

Research Support Associate, Belcher Lab
MIT

Postdoctoral Associate, Sabeti Lab
Broad Institute

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Submit your articles and events by reaching out to us at **info@scienceinboston.com**.