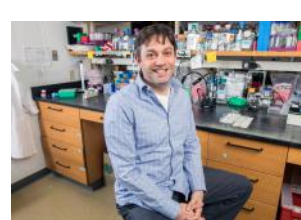


**Publications of the Week**
**A Brainstem Circuit for Nausea Suppression**

 First Author: Chuchu Zhang | Senior Author: Stephen Liberles *(pictured)*  
 Cell Reports | Harvard Medical School


Nausea is a discomforting sensation of gut malaise that remains a major clinical challenge. Several visceral poisons induce nausea through the area postrema, a sensory circumventricular organ that detects bloodborne factors. The authors use genetic approaches based on an area postrema cell atlas to reveal inhibitory neurons that counteract nausea-associated poison responses. [Abstract](#)

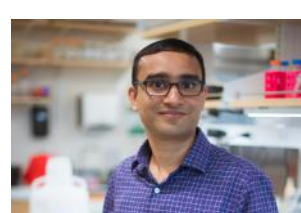
**Context-Specific Polycomb Mechanisms in Development**

 First Author: Jongmin Kim | Senior Author: Robert Kingston *(pictured)*  
 Nature Reviews Genetics | Massachusetts General Hospital and Harvard Medical School


Polycomb group (PcG) proteins are crucial chromatin regulators that maintain repression of lineage-inappropriate genes and are therefore required for stable cell fate. Recent advances show that PcG proteins form distinct multi-protein complexes in various cellular environments, such as in early development, adult tissue maintenance, and cancer. [Abstract](#)

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**Awards**
**Jain Named as Pew Scholar in Biomedical Sciences**

Whitehead Institute



The Pew Charitable Trusts has selected Whitehead Institute Member Dr. Ankur Jain *(pictured)* to be a 2022 Pew Scholar in the Biomedical Sciences. The Pew program provides funding to young investigators of outstanding promise who work in areas of science relevant to the advancement of human health. The Jain lab studies how biomolecules in a cell self-organize. [Read More](#)

**From the Lab to Your Life**

The Brink



Each year, BU Technology Development helps to fast-track promising new efforts by providing up to \$75,000 to a few select projects. Dr. Béla Suki *(pictured)* received funding for his project to model lungs by mounting several thin slices of lung on a flexible membrane attached to a frame. When the device is activated, this frame moves constantly up and down, stretching the membrane and the tissue, which mimics real breathing. [Read More](#)

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**Local News**
**Researchers Discover Mechanism Linking Mutations in the 'Dark Matter' of the Genome to Cancer**

Dana-Farber Cancer Institute



Many sections of the non-coding region of the human genome play a key role in regulating gene activity. But the relationship between non-coding mutations and cancer risk has been a mystery. New research sheds light on that mystery, providing clues that may link mutations to epigenetic changes, and may point to potential drug targets to reduce risk for people born with certain genetic mutations. [Read More](#)

**Novel CRISPR Screen Revealed Loss of Genes in the Interferon Gamma Receptor Signaling Pathway**

Massachusetts General Hospital



Liquid and solid tumors differ in their interactions with chimeric antigen receptor (CAR) T cells. In glioblastoma and other solid cancers, the interferon gamma signaling pathway is required for CAR T cell mediated killing. Dr. Marcela Maus *(pictured)* lab showed that enhancing the interferon signaling pathway represents a potential new treatment strategy for CAR T cell immunotherapy in solid tumors. [Read More](#)

**Nikolaos Dimitrakakis on Artificial Bone Marrow and Teamwork**

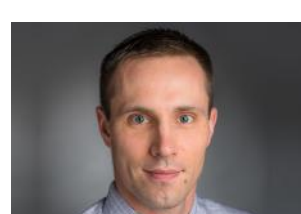
Wyss Institute



Nikolaos (Niko) Dimitrakakis *(pictured)* places a great importance on teamwork, which he learned from playing sports while growing up in Greece. Currently, he is developing a bone marrow click cryogel that would help boost the T cell regeneration in people whose bone marrow is damaged due to treatment for leukemia and myeloma or defective due to other congenital immunodeficiencies, autoimmune diseases, and impaired immune surveillance disorders. [Read More](#)

**Exploiting a Vulnerability in an Aggressive Leukemia**

Boston Children's Hospital



Survival has improved greatly in children with acute lymphocytic leukemia (ALL). But a certain form of ALL that occurs mostly in babies is still very lethal, with a survival rate below 50 percent: B cell acute lymphoblastic leukemia with rearrangements of the mixed lineage leukemia gene. "Something about the biology of this type of leukemia is very peculiar," says Dr. Grant Rowe *(pictured)*. [Read More](#)

**Nanoparticle Sensor Can Distinguish Between Viral and Bacterial Pneumonia**

MIT News



MIT researchers have designed a sensor that can distinguish between viral and bacterial pneumonia infections, which they hope will help doctors to choose the appropriate treatment. "The challenge is that there are a lot of different pathogens that can lead to different kinds of pneumonia, and even with the most extensive and advanced testing, the specific pathogen causing someone's disease can't be identified in about half of patients," says Dr. Sangeeta Bhatia *(pictured)*. [Read More](#)

**Meet a Whitehead Postdoc: Arash Latifkar**

Whitehead Institute



Dr. Arash Latifkar *(pictured)* is a postdoc in Whitehead Institute Member Dr. David Bartel's lab studying RNA viruses to learn more about the lifecycle of RNA. He is broadly interested in RNA metabolism. Viruses, especially those like coronaviruses that use RNA molecules instead of DNA molecules as their genetic material, are a good model to learn about the RNA lifecycle. [Read More](#)

**Researchers Identify a Brain Circuit for Addiction Remission**

Brigham and Women's Hospital



Using a new technique known as lesion network mapping, researchers at Brigham and Women's Hospital have mapped addiction remission to entire brain circuits rather than specific brain regions, pointing to new targets for treatment. "By looking beyond individual brain regions and, instead, at the brain circuit, we have found targets for addiction remission and are eager to rigorously test them through clinical trials," said Dr. Michael Fox *(pictured)*. [Read More](#)

**New CRISPR-Based Map Ties Every Human Gene to Its Function**

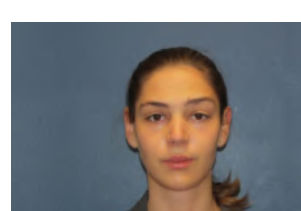
MIT News



The Human Genome Project was an ambitious initiative to sequence every piece of human DNA. The project drew together collaborators from research institutions around the world, including MIT's Whitehead Institute for Biomedical Research, and was finally completed in 2003. Now, over two decades later, MIT Professor Dr. Jonathan Weissman *(pictured)* and colleagues have gone beyond the sequence to present the first comprehensive functional map of genes that are expressed in human cells. [Read More](#)

**An Astrophysicist in a Biomedical Universe**

MIT News



An astrophysicist by training, Magdalena Allen *(pictured)* completed her undergraduate degree at the University of California at Berkeley. She then spent a year interning at physics research labs around the country, including the Fermi National Accelerator Lab, the Brookhaven National Lab, and the Marshall Space Flight Center at NASA. She now works at the intersection of physics and medical research. [Read More](#)

**Breakthrough Finding Could Yield Benefits for Patients with Diabetes**

Beth Israel Deaconess Medical Center



Endocrinologists in Dr. Barbara Kahn's *(pictured)* group at Beth Israel Deaconess Medical Center have identified a key enzyme in the synthesis of a new class of lipids that are made in human tissues and have beneficial effects on insulin sensitivity, blood sugar control, and other metabolic-related parameters in humans and mice. [Read More](#)

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**Upcoming Events in Boston**

|                       |  |
|-----------------------|--|
| June 22–24<br>1:00 PM | <b>2022 RNA Therapeutics Symposium: From Concept to Clinic</b><br>Online   |
| June 23<br>5:30 PM    | <b>MassBio Young Professionals Kick-Off Event</b><br>Castle Island Brewery   |
| June 27<br>12:00 PM   | <b>Brigham Research Appreciation Celebration</b><br>Brigham & Women's Hospital   |
| June 29<br>3:00 PM    | <b>NCI SBIR Workshop for Massachusetts Biotech Innovators: Learn About NCI's Translational Funding Opportunities!</b><br>MassBioHub & Online |
| July 6–8<br>9:00 AM   | <b>2022 International Summer School &amp; Genome Architecture and Function Workshop</b><br>Boston Marriott Cambridge                         |

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