



Publications of the Week

Regulated GATA1 Expression as a Universal Gene Therapy for Diamond-Blackfan Anemia

First Author: Richard Voit | Senior Author: Vijay Sankaran (*pictured*)
Cell Stem Cell | Boston Children's Hospital, Harvard Medical School, Howard Hughes Medical Institute, Dana-Farber Cancer Institute, and the Broad Institute



More than 30 mutations cause Diamond-Blackfan anemia (DBA) through impaired ribosome function and lead to inefficient translation of the erythroid master regulator GATA1, providing a potential avenue for therapeutic intervention applicable to all patients with DBA, irrespective of the underlying genotype. Here, researchers report the development of a clinical-grade lentiviral gene therapy that achieves erythroid lineage-restricted expression of GATA1. [Profile](#) | [Abstract](#)

Somatic Mosaicism in Schizophrenia Brains Reveals Prenatal Mutational Processes

First Authors: Eduardo Maury, Attila Jones, and Vladimir Seplyarskiy | Senior Authors: Shamil Sunyaev, Andrew Chess, and Christopher Walsh (*pictured*)
Science | Brigham and Women's Hospital, Harvard Medical School, Boston Children's Hospital, and Broad Institute



Germline mutations modulate the risk of developing schizophrenia (SCZ). Much less is known about the role of mosaic somatic mutations in the context of SCZ. Deep (239x) whole-genome sequencing of brain neurons from 61 SCZ cases and 25 controls postmortem identified mutations occurring during prenatal neurogenesis. [Abstract](#) | [Press Release](#)

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Awards

David Flynn Honored by AAMC

Boston University Chobanian & Avedisian School of Medicine



David Flynn (*pictured*) has been selected as a recipient of the Academic Medicine Excellence in Reviewing Award by the Association of American Colleges (AAMC). Each year, the AAMC identifies volunteers who have consistently demonstrated excellence in the peer review process as measured by review quality, timeliness, and number of reviews completed in the year. [Read More](#)

Mass General Cancer Center Announces 2024 Recipients of Krantz Awards for Cancer Research

Massachusetts General Hospital



The Krantz Family Center for Cancer Research at the Mass General Cancer Center announced the selection of 19 scientists, including Dr. Priscilla Brastianos (*pictured*), who have been awarded a combined \$6 million in funding. These competitive awards were established to recognize the trailblazing efforts of Krantz Center scientists. [Read More](#)

2024 Kilachand Fund Awards Boost Projects Building Antivirus Platform, Improving Brain Imaging, and Fighting Antibiotic Resistance

The Brink



A multidisciplinary team from Boston University that hopes to pioneer a new tool for fighting future pandemics includes Drs. Alexander Green, Florian Douam, Wilson Wong, Ahmad (Mo) Khalil, and Mark Grinstaff (*pictured, left to right*). The Kilachand Fund award's support will allow the team to build out their novel way of modifying self-amplifying RNA, a breakthrough they've used to create a more effective COVID-19 vaccine. [Read More](#)

Whitehead Institute Member Sebastian Lourido Receives the 2024 William Trager Award

Whitehead Institute



The American Society of Tropical Medicine and Hygiene selected Whitehead Institute Member Dr. Sebastian Lourido (*pictured*) to receive its 2024 William Trager Award. The Trager Award recognizes scientists who have made substantial contributions to the study of basic parasitology through breakthroughs that have unlocked completely new areas of work. [Read More](#)

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Local News

Sauer & Davis Lab News Brief: Structures of Molecular Woodchippers Reveal Mechanism for Versatility

MIT Biology



Degradation is a crucial process for maintaining protein homeostasis by culling excess or damaged proteins whose components can then be recycled. New research from the Sauer and Davis Labs in the Department of Biology at MIT shows that conformational changes contribute to the specificity of "molecular woodchippers". Dr. Alireza Ghanbarpour (*pictured*) is the first author on all three papers. [Read More](#)

Ancient DNA Challenges Stories Told About Pompeii Victims

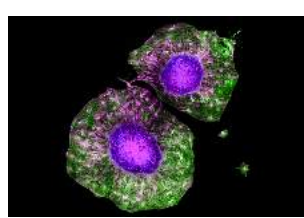
Harvard Medical School



An international team led by scientists at Harvard Medical School analyzed DNA from the remains of five people who died in the eruption of Mt. Vesuvius in 79 CE and were cast in plaster nearly two millennia later. Researchers retrieved the DNA in conjunction with the Archaeological Park of Pompeii during restoration of 86 damaged casts in 2015. The results reveal that some of the stories told for decades are not as simple as originally believed. [Read More](#)

When Muscles Work Out, They Help Neurons to Grow, a New Study Shows

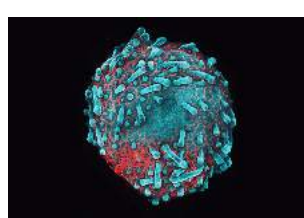
MIT News



There's no doubt that exercise does a body good. Regular activity not only strengthens muscles but can bolster our bones, blood vessels, and immune system. Now, MIT engineers have found that exercise can also have benefits at the level of individual neurons. They observed that when muscles contract during exercise, they release a soup of biochemical signals called myokines. [Read More](#)

Skin Organoid Could Guide New Treatments for Skin Conditions, Hair Loss

Boston Children's Hospital



What does it take to build healthy skin? Two research groups converged on this question from different angles. They've now produced the most detailed view to date of the cell types and cell collaborations that go into creating our body's largest organ. The research could have many applications — from growing new skin to preventing scarring after surgery to regenerating hair after hair loss. [Read More](#)

First Clinical Trial of "Memory Like" Natural Killer Cells in Ovarian Cancer Opens at Dana-Farber

Dana-Farber Cancer Institute



Drs. Rebecca Porter (*pictured*) and Rizwan Romee are opening a new clinical trial to evaluate a novel type of immune cellular therapy in patients with recurrent, platinum resistant ovarian cancer. The new study is one of the first in the US to test the safety, tolerability, and antitumor activity of "memory like" natural killer cells in ovarian cancer. [Read More](#)

Dr. Gozde Basara on Engineering Safer Solutions for Cancer Survivors

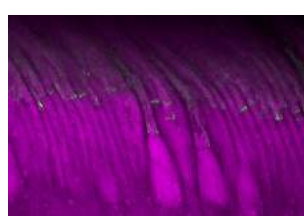
Wyss Institute



Dr. Gozde Basara (*pictured*) has never shied away from learning something new. Her latest endeavour? Developing a technology to help cancer survivors safely feel whole again following mastectomies. As part of the ReConstruct team, she's refining a way to make vascularized tissue from a patient's cells for safer reconstruction surgeries. [Read More](#)

Second Gene Therapy Shows Promise for Syndrome Involving Blindness and Deafness

Harvard Medical School



Harvard Medical School researchers have taken another decisive step in their efforts to develop a gene therapy for people with Usher syndrome type 1F, a rare condition that causes deafness and progressive blindness. A new way of delivering a corrected version of the faulty gene that causes Usher syndrome — *PCDH15* — restored hearing in mouse models and showed potential in retinal organoids and nonhuman primates for improving vision. [Read More](#)

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📅 Upcoming Events in Boston

- December 3 1:00 PM **DF/HCC Celebration of Early Career Investigators in Cancer Research**
Dana Farber Cancer Institute
- December 3 5:30 PM **Lights, Camera, Action**
Koch Institute for Integrative Cancer Research
- December 9 4:00 PM **Symposium on Biodiversity and Non-Traditional Model Organisms with Dr. Nipam Patel, Director of the Marine Biological Laboratory**
Singleton Auditorium
- December 17 12:00 PM **BWH Cancer Research Symposium**
Brigham & Women's Hospital
- January 11 1:00 PM **Science, Technology, & Ethics in the Real World**
Building 16

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📁 Science Jobs in Boston

- Postdoctoral Research Fellow**
Northeastern University
- Research Scientist II, Biology of Adversity Project**
The Broad Institute
- Research Student**
Beth Israel Deaconess Medical Center
- Research Assistant I**
Harvard Medical School
- Scientist, Scientific Data**
Eli Lilly and Company

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