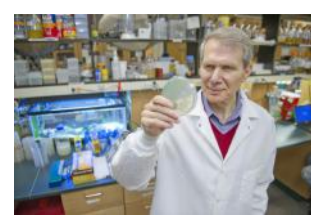


Publications of the Week

A New Antibiotic Selectively Kills Gram-Negative Pathogens

First Author: Yu Imai | Senior Author: Kim Lewis *(pictured)*
 Nature | Northeastern University



The current need for novel antibiotics is especially acute for drug-resistant gram-negative pathogens. These microorganisms have a highly restrictive permeability barrier, which limits the penetration of most compounds. The authors report a new antibiotic that they name darobactin, from a screen of *Photorhabdus* isolates. The compound is active against important gram-negative pathogens both *in vitro* and in animal models of infection. [Abstract](#)

Delivering Genes across the Blood-Brain Barrier: LY6A, a Novel Cellular Receptor for Aav-PHP.B Capsids

First Author: Qin Huang | Senior Author: Benjamin Deverman *(pictured)*
 PLOS One | The Broad Institute



The engineered AAV-PHP.B family of adeno-associated virus efficiently delivers genes throughout the mouse central nervous system (CNS). The authors sought to elucidate the host factors responsible for the CNS tropism of the AAV-PHP.B vectors. Leveraging CNS tropism differences across 13 mouse strains, they systematically determined a set of genetic variants that segregate with the permissivity phenotype, and rapidly identified LY6A as an essential receptor for the AAV-PHP.B vectors. [Abstract](#)

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Spotlight

Personalized Cardiac Precision Medicine with Dr. Rameen Shakur!



Dr. Rameen Shakur *(pictured)*, is an academic cardiologist, biologist and personalized medicine researcher, the Janson Fellow in Cardiology and Personalized Medicine at the Koch Institute at MIT, and the Founder of Cambridge Heartwear Ltd. His academic research focuses on modeling and understanding cardiac development using iPSCs. We sat down with Dr. Shakur to discuss his work in cardiac personalized and precision medicine, as well as his overall views of the field. [Read More](#)

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Awards

Emelia Benjamin, MD, Honored by the AHA

BU School of Medicine



Dr. Emelia J. Benjamin *(pictured)*, Professor of Medicine in the section of Cardiovascular Medicine at the Boston University School of Medicine, has received two prestigious awards from the American Heart Association (AHA), the 2019 Laennec Clinician/Educator Lecture and the 2019 Distinguished Achievement award from the Council on Genomic and Precision Medicine. [Read More](#)

Tom Delbanco, MD, MACP, to Receive National Award from American College of Physicians

BIDMC News



Dr. Tom Delbanco *(pictured)*, the John F. Keane & Family Professor of Medicine at Beth Israel Deaconess Medical Center and Harvard Medical School, will receive the John Phillips Memorial Award from the American College of Physicians. Established in 1929, the award recognizes outstanding, lifetime work in clinical medicine that has been innovative and/or had a regional or national impact. [Read More](#)

Dana-Farber Cancer Institute Researcher Awarded Funding from Chan Zuckerberg Initiative for Open Source Software Project

Dana-Farber Cancer Research Institute



Dana-Farber Cancer Institute's Dr. Heng Li *(pictured)*, Assistant Professor of Biostatistics and Computational Biology in the Department of Data Sciences, has received funding from the Chan Zuckerberg Initiative (CZI) to support open source software projects that are essential to biomedical research. CZI has announced \$5 million in funding for these grants to support software maintenance, growth, development, and community engagement for over 40 critical open source tools. [Read More](#)

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Local News

Where We Get Our Sense of Direction

Harvard Gazette



If you've ever woken up in the middle of the night to go to the bathroom and stumbled around in the dark, you've experienced the effects of inadequately calibrated neurons. A similar process occurs in fruit flies, which use so-called compass neurons to keep track of the orientation of their heads and body. Harvard Medical School neuroscientists have now decoded how visual cues can rapidly reorganize the activity of these compass neurons to maintain an accurate sense of direction. [Read More](#)

FDA Gives Early OK to Aynlyam Rare Disease Drug

Aynlyam Pharmaceuticals



Aynlyam Pharmaceuticals is well on its way to a goal of releasing a new drug each year through 2022, after receiving Food and Drug Administration (FDA) approval for a new gene-silencing treatment. The FDA approved Aynlyam's new product Givlaari, which silences the gene behind a rare metabolic disease. The decision came more than two months ahead of the agency's original February 4, 2020 deadline. The drug will cost approximately \$575,000 annually. [Read More](#)

Keytruda Researcher Launches Cancer-Focused Werewolf Therapeutics with \$56M

Boston Business Journal



One of the researchers behind Merck's blockbuster cancer drug Keytruda has launched a new startup with the aim of expanding the drug industry's ability to leverage the immune system against cancer. Werewolf Therapeutics has emerged from stealth mode with \$56 million from MPM Capital, the Longwood Fund and others. It joins a competitive world of drug startups hoping to boost immune cells' ability to fight cancer. But Werewolf hopes to stand out with a targeted attack system. [Read More](#)

Novo Ventures and Broad Institute of MIT and Harvard Launch Drug Discovery "Greenhouse" to Drive Creation of Innovative New Therapies

Broad Institute



Novo Ventures and the Broad Institute have announced the launch of the Novo Broad Greenhouse, a joint initiative to discover and propel transformative new therapies from academic science into the clinic. To drive the development of the next generation of molecular medicines, it unites three core ingredients, deep basic science expertise from academia, world class drug-discovery capabilities from the Broad Institute, and a sustainable funding base and therapeutics development expertise from Novo Holdings. [Read More](#)

Predicting Sudden Cardiac Death

Harvard Gazette



Each year, sudden cardiac death affects 220,000 U.S. adults, most of whom have no prior symptoms of a heart issue. By identifying rare DNA variants that substantially increase risk of sudden cardiac death, researchers led by Dr. Amit Khera *(pictured)* at Massachusetts General Hospital and colleagues at the Broad Institute have laid the foundation for efforts to identify individuals who could benefit from prevention strategies before they experience symptoms. [Read More](#)

Technique Identifies T Cells Primed for Certain Allergies or Infections

MIT News



When your immune system is exposed to a vaccine, an allergen, or an infectious microbe, subsets of T cells that can recognize a foreign intruder leap into action. Some of these T cells are primed to kill infected cells, while others serve as memory cells that keep watch in case the invader reappears. MIT researchers, including Dr. Alex Shalek *(pictured)*, have now devised a way to identify T cells that share a particular target, as part of a process called high-throughput single-cell RNA sequencing. [Read More](#)

Bayer and Dewpoint Therapeutics Partner to Research New Treatments for Cardiovascular and Gynecological Diseases

Bayer



Bayer and Dewpoint Therapeutics, a biotechnology company with sites in Boston and Dresden, Germany, have announced an option, research and license agreement worth up to USD 100 million. The partnership will leverage Dewpoint's proprietary platform for biomolecular condensates and Bayer's small molecule compound library to develop new treatments for cardiovascular and gynecological diseases. [Read More](#)

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Interesting Articles

Trump Plan Would Limit Research Used to Protect Public Health

Harvard TH Chan School of Public Health



A new proposal from the Trump Administration would prohibit the Environmental Protection Agency from using certain types of data to help create public health regulations, thus undermining the science that underpins important government policies that protect health. Under the proposal, the raw data used in epidemiological studies would have to be made public. But most studies that look at how environmental hazards harm health are based on confidential medical data. [Read More](#)

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Upcoming Events in Boston

- December 4, 5:00 PM: **Life after PhD: A Panel and Networking Night for Life Science PhDs** | STEMCELL Technologies
- December 8, 8:00 AM: **Jingle Bell Run** | The Arthritis Foundation
- December 10, 10:00 AM: **Engaging with Pharma Partners** | University of Massachusetts
- December 11, 8:00 AM: **Developing Innovative Leaders in Biotech** | Harvard University
- December 11, 5:30 PM: **Women in Bio: 2019 Annual Wine & Chocolate Holiday Party** | Women in Bio

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- Scientific Inside Sales Representative (Cambridge, MA)** | STEMCELL Technologies
- Associate Product Manager, Hematology (Vancouver, BC)** | STEMCELL Technologies
- Scientist, Hematopoietic Stem and Progenitor Cell Biology (Vancouver, BC)** | STEMCELL Technologies
- Scientist, Pulmonary (Vancouver, BC)** | STEMCELL Technologies

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Other Science Jobs in Boston

- Senior Manager, CMC Project Management, Late Stage** | Aynlyam
- Senior Scientist, Protein and Antibody Production and Characterization** | Sanofi
- Director, Intellectual Property, Biologics** | Vertex
- Senior Associate/Associate Principal** | Charles River Associates
- Drug Product Development Scientist** | Astellas

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