

Publications of the Week
Cell Release during Perfusion Reflects Cold Ischemic Injury in Rat Livers

First Author: Reinier de Vries (pictured, center) | Senior Author: Shannon Tessier (pictured, fourth from left) | Nature Scientific Reports | Shriners Hospitals for Children, Harvard Medical School and Massachusetts General Hospital



The global shortage of donor organs has made it crucial to deeply understand and better predict donor liver viability. However, biomarkers that effectively assess viability of marginal grafts for organ transplantation are currently lacking. The authors showed that hepatocytes, sinusoidal endothelial, stellate, and liver-specific immune cells were released into perfusates from Lewis rat livers as a result of cold ischemia and machine perfusion. [Profile](#) | [Abstract](#)

Genome-Wide *In Vivo* CNS Screening Identifies Genes that Modify CNS Neuronal Survival and mHTT Toxicity

First Author: Mary Wertz | Senior Author: Mynam Heiman (pictured) | Neuron | Picower Institute for Learning and Memory and the Broad Institute



Unbiased *in vivo* genome-wide genetic screening is a powerful approach to elucidate new molecular mechanisms, but such screening has not been possible to perform in the mammalian central nervous system (CNS). The authors reported the results of the first genome-wide genetic screens in the CNS using both short hairpin RNA (shRNA) and CRISPR libraries. [Abstract](#)

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Awards
Sjöberg Prize Awarded for Decisive Discoveries About Cell Growth

The Royal Swedish Academy of Sciences



The Royal Swedish Academy of Sciences has awarded the Sjöberg Prize 2020 of one million US dollars to Drs. Michael Hall and David Sabatini (pictured) from MIT. The two researchers have radically changed ideas about cell growth, an important factor in the development of cancer. In doing so, they have laid the foundation for new forms of cancer treatment. [Read More](#)

Accelerating Careers in Cancer Research

Harvard Medical School



Six Harvard Medical School (HMS) Postdoctoral researchers, including Dr. Benjamin Stinson (pictured), have received awards from the Damon Runyon Cancer Research Foundation. Four of the HMS researchers are among six nationwide to receive a Damon Runyon-Dale F. Frey Award for Breakthrough Scientists, given to scientists who are most likely to make paradigm-shifting advances that transform the way cancer is prevented, diagnosed and treated. [Read More](#)

BIDMC's Elliot Chaikof, MD, PhD, Surgeon-in-Chief, to Serve on New National Academy of Medicine Committee

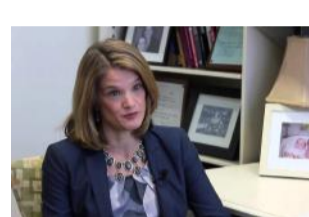
BIDMC News



Dr. Elliot Chaikof (pictured), Surgeon-in-Chief and Chair of Surgery at Beth Israel Deaconess Medical Center (BIDMC), has been selected to serve on the National Academy of Medicine's newly established Committee on Emerging Science, Technology and Innovation in Health and Medicine. The committee will assess the landscape of emerging scientific advances and technologies in health and medicine. [Read More](#)

Nancy Byatt Receives John C. MacQueen Lecture Award

UMass Med Now



The Association of Maternal & Child Health Programs has named UMass Medical School perinatal depression expert Dr. Nancy Byatt (pictured), as the recipient of the 2020 John C. MacQueen Lecture Award. The award recognizes innovation by individuals who have made exemplary contributions to maternal and child health issues. [Read More](#)

Massachusetts Nurse of 30 Years Named Medline's First "Works of Heart" Program Honoree

Medline Newsroom



Medline has announced the first honoree of its new "Works of Heart" program that honors healthcare workers across the country for their attention, compassion and dedication. Connie Crowley (pictured), a nurse with UMass Memorial Medical Center, was nominated by her daughter, Fallon, for her devotion to patients and going above and beyond to personalize their care. [Read More](#)

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Local News
International Collaboration Generates Most Complete Cancer Genome Map to Date

Broad Institute



An international team, including Dr. Gad Getz (pictured) of the Broad Institute, has completed the most comprehensive study of whole cancer genomes to date, significantly improving our fundamental understanding of cancer and indicating new directions for developing diagnostics and treatments. The discoveries are a big step towards a complete map of all major cancer-causing mutations in the genome. [Read More](#)

Math Models Add Up to Improved Cancer Immunotherapy

Mass General News



By creating mathematical models that represent the complex interactions within the tumor microenvironment, researchers at Massachusetts General Hospital can now predict how tumors may respond to immunotherapy, and how adding other anti-cancer drugs could lead to improved treatment. In addition, the models suggest that the relative health of a tumor's blood supply could predict how that tumor will respond to immunotherapy. [Read More](#)

Brain Links to Embryonic Immunity, Guiding Response of the "Troops" that Battle Infections

Tufts Now



Biologists at Tufts University have discovered that the brains of developing embryos provide signals to a nascent immune system that help it ward off infections and significantly improve the embryo's ability to survive a bacterial challenge. Using frog embryos, which continue to develop with their brains removed, the researchers have found that embryos without a brain were not able to marshal the forces of immune cells to an injury or infection site. [Read More](#)

Chemists Unveil the Structure of an Influenza B Protein

MIT News



A team of MIT chemists has discovered the structure of a key influenza protein, a finding that could help researchers design drugs that block the protein and prevent the virus from spreading. The protein, known as BM2, is a proton channel that controls acidity within the virus, helping it to release its genetic material inside infected cells. [Read More](#)

Hidden Hearing Loss Revealed

Harvard Gazette



A pair of biomarkers of brain function — one that represents listening effort, and another that measures the ability to process rapid changes in frequencies — may help explain why a person with normal hearing may struggle to follow conversations in noisy environments, according to a new study led by Harvard Medical School researchers at Massachusetts Eye and Ear. [Read More](#)

Researchers Describe Unique Genetic Identity of Primordial Lung Progenitors

BU School of Medicine



For the first time, researchers have described the genetic program behind primordial lung progenitors—embryonic cells that give rise to all the cells that form the lining of the respiratory system after birth. They believe this study has long-term implications for the treatment of diseases affecting the respiratory system, such as chronic obstructive pulmonary disease, alpha-1 antitrypsin deficiency and cystic fibrosis. [Read More](#)

Genetic Screen Offers New Drug Targets for Huntington's Disease

MIT Picower Institute



Using a type of genetic screen that had previously been impossible in the mammalian brain, MIT neuroscientists have identified hundreds of genes that are necessary for neuron survival. They also used the same approach to identify genes that protect against the toxic effects of a mutant protein that causes Huntington's disease. [Read More](#)

Here's How Two Local Biotechs Plan to Have a Coronavirus Vaccine within Just a Few Months

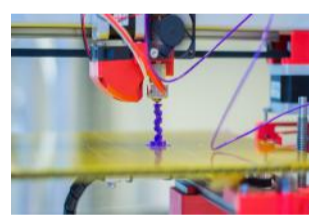
Boston Business Journal



It generally takes years for a biopharma company to develop, test and bring a drug to market. But two local companies are hoping to develop a vaccine for the most recent strain of coronavirus much more quickly than that, thanks to what one executive describes as "smart risk-taking" and new science. Scientists at Cambridge-based Moderna and CureVac AG, which has U.S. headquarters in Boston, are currently working on potential vaccines for the virus. [Read More](#)

Smart Insulin Patch Could Revolutionize Diabetes Treatments

BioSpace



A smart insulin device under development could revolutionize how glucose levels are monitored in diabetes patients and deliver insulin doses when necessary. In a collaborative effort, researchers from Massachusetts Institute of Technology are working on an adhesive patch, about the size of a quarter, and are planning to take their device and move it into human studies soon. [Read More](#)

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Upcoming Events in Boston

February 25 6:00 AM	Leading the Change to Continuous Manufacturing Of Small Molecules Ragon Auditorium
February 26 3:00 PM	8th Neurodegenerative Drug Development Summit Hyatt Regency Boston
February 27 9:00 AM	AI Powered Drug Discovery and Manufacturing Conference 2020 MIT Samberg Conference Center
February 28 10:00 AM	2020 Rare Disease Day Omni Parker House
March 9 8:00 AM	Environmental Health Risk: Analysis and Applications Harvard T.H. Chan School of Public Health

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IDENTIFYING GENETIC VARIANTS IN iPSCs

Webinar by Dr. Florian Merkle

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