

Publications of the Week

Pro-Inflammatory P2Y14 Receptor Inhibition Protects against Ischemic Acute Kidney Injury in Mice

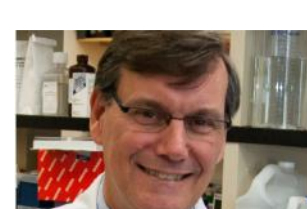
First Author: Maria Agustina Battstone | Senior Author: Sylvie Breton (pictured)
The Journal of Clinical Investigation | Massachusetts General Hospital and Harvard Medical School



Ischemic acute kidney injury, a complication that frequently occurs in hospital settings, is often associated with hemodynamic compromise, sepsis, cardiac surgery or exposure to nephrotoxicants. Using a murine renal ischemia-reperfusion injury (IRI) model, the authors have shown that intercalated cells rapidly adopted a pro-inflammatory phenotype post-IRI. [Abstract](#)

Merkel Cell Polyomavirus Activates ISD1-Mediated Blockade of Non-Canonical BAF to Regulate Transformation and Tumorigenesis

First Author: Donglim Esther Park | Senior Author: James DeCaprio (pictured)
Nature Cell Biology | Harvard University, Dana-Farber Cancer Institute, Brigham and Women's Hospital and Constellation Pharmaceuticals



Merkel cell carcinoma — a neuroendocrine cancer of the skin — is caused by the integration of Merkel cell polyomavirus and persistent expression of large T antigen and small T antigen. The authors report that small T antigen in complex with MYCL and the EP400 complex activates the expression of LSD1 (KDM1A), ROR2 and INSM1 to repress gene expression by the lineage transcription factor ATOH1. [Abstract](#)

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Awards

Three from MIT Awarded 2020 Guggenheim Fellowships

McGovern Institute



MIT faculty members Sabine Iatridou, Jonathan Gruber, and Rebecca Saxe (pictured) are among 175 scientists, artists, and scholars awarded 2020 fellowships from the John Simon Guggenheim Foundation. Since 1925, the foundation has granted more than \$375 million in fellowships to over 18,000 individuals, including Nobel laureates, Fields medalists, poets laureates, and winners of the Pulitzer Prize, among other internationally recognized honors. [Read More](#)

Harvard Medical School Graduate Students Receive Soros Fellowships for New Americans

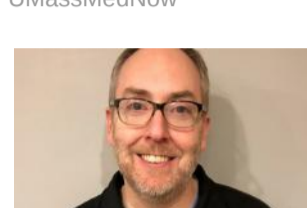
Harvard Medical School



Two MD and three MD/PhD candidates at Harvard Medical School are among 30 U.S. graduate school students to receive 2020 Paul and Daisy Soros Fellowships for New Americans, a program for immigrants and children of immigrants. Shyam Akula (pictured, left), Jin K. Park (second from right) and Wendy Sun (right) are pursuing their MD/PhDs. Jason Wang and Mark Nagy (second from left) are pursuing their MD. [Read More](#)

Cole Haynes Receives Prestigious NIH Merit Award for Research on Mitochondria Repair

UMassMedNow



Dr. Cole Haynes (pictured), Professor of Molecular, Cell and Cancer Biology at UMass Med School, has received a Method to Extend Research in Time (MERIT) award from the National Institute on Aging for his research on repair and regeneration of mitochondria dysfunction, a mechanism associated with age-related diseases such as Parkinson's and Alzheimer's. [Read More](#)

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Local News

Making Headway on COVID-19 Research

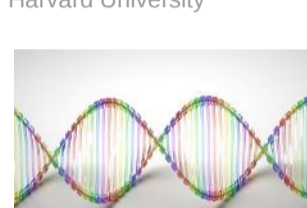
BU School of Medicine



First things first: in order to take out an enemy, you've got to be able to see the enemy. But how do you "see" a seemingly invisible invader like SARS-CoV-2? Dr. Robert Davey's (pictured) team at Boston University's National Emerging Infectious Diseases Laboratories has found a way to light up the SARS-CoV-2 virus using glowing antibodies, making it possible to detect the virus as it infects laboratory cell cultures. [Read More](#)

Evolution Can Quickly Change Cells' Deepest Foundations

Harvard University



Researchers at Harvard University's Department of Molecular and Cellular Biology have shown how evolution can quickly and reproducibly change conserved features involved in the maintenance of genomes in response to constitutive problems affecting DNA replication. To study this, the authors perturbed DNA replication by removing the CTF4 gene from budding yeast, which encodes an important protein for DNA replication. [Read More](#)

Researchers Achieve Remote Control of Hormone Release

MIT News



Abnormal levels of stress hormones such as adrenaline and cortisol are linked to a variety of mental health disorders, including depression and posttraumatic stress disorder. Dr. Polina Anikeeva's (pictured) team at MIT has devised a way to remotely control the release of these hormones from the adrenal gland, using magnetic nanoparticles. [Read More](#)

Through the Storm

Harvard Medical School



Every new case of COVID-19 intensifies the need to better understand the novel coronavirus, SARS-CoV-2, and how to treat the disease that it causes. Researchers and physician-scientists at Harvard and its affiliated hospitals and research institutes have rallied to the cause, playing central roles in everything from frontline clinical care and epidemiological modeling to vaccine and therapeutic development. [Read More](#)

BIDMC Enrolling Patients in Clinical Trials Evaluating Existing Drug as Treatment for Severe COVID-19

Beth Israel Deaconess Medical Center



Physician-scientists at Beth Israel Deaconess Medical Center (BIDMC) are enrolling patients in a clinical trial to evaluate a potential treatment of patients with COVID-19. Part of a multi-site investigation, the trial is evaluating the safety and efficacy of sarilumab, a biologic medication already approved for adults with moderately to severely active rheumatoid arthritis, for the treatment of COVID-19. [Read More](#)

The (Evolutionary) Success Story of ABC Transporters

Harvard University



A central question in molecular evolution is how evolution changes the sequence of these family members to produce new molecular functions. In the labs of Rachelle Gaudet (pictured, right) and Andrew Murray (left), Sriram Srikant (center) sought to answer this question by combining the expertise of the two labs in protein biochemistry and evolutionary genetics. [Read More](#)

'Faster Protection with Less Material'

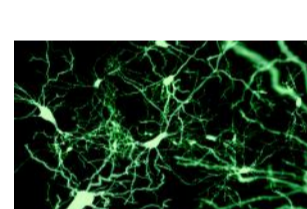
The Harvard Gazette



In this Coronavirus Update series with the Harvard Office of Technology Development, researchers at Harvard Medical School have suggested that further research and development on a class of molecules called bisphosphonates might turbocharge a vaccine against SARS-CoV-2, the novel coronavirus, and help bring immunity to huge populations more quickly. [Read More](#)

Study of Lipid Metabolism in Neurons May Offer Therapeutic Possibilities for Neurodegenerative Diseases

Harvard T.H. Chan School of Public Health



Disrupting the production of a class of lipids known as sphingolipids in neurons improved symptoms of neurodegeneration and increased survival in a mouse model, according to new research from the Harvard T.H. Chan School of Public Health and Howard Hughes Medical Institute. The findings could help in the development of therapies for a range of neurodegenerative diseases. [Read More](#)

Massive Study Reveals How "Hypermutated" Malignant Brain Tumors with Many Mutations Escape Chemotherapy and Immunotherapy

Dana-Farber Cancer Institute



A new study from Dana-Farber Cancer Institute has shown that malignant brain tumors, known as gliomas, generally don't respond to immunotherapy drugs even when the tumor cells are "hypermutated" — having thousands of DNA mutations that, in other kinds of cancer, provoke the immune system into an attack mode. [Read More](#)

Human Immunomics Initiative will Decode Immune System, Speed New Vaccines

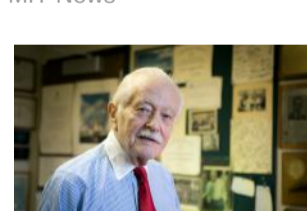
Harvard T.H. Chan School of Public Health



The Harvard T.H. Chan School of Public Health and the Human Vaccines Project have announced the Human Immunomics Initiative (HII), a joint project that aims to revolutionize the understanding of the human immune system and accelerate the creation of effective vaccines, diagnostics, and treatments. HII will develop artificial intelligence-powered models of immunity that can be used to accelerate the design and testing of vaccines and therapeutics for a wide range of diseases. [Read More](#)

Professor Emeritus Arnold Demain, a Pioneer in the Development of Antibiotics, Dies at 92

MIT News



Dr. Arnold Lester Demain (pictured), Professor Emeritus of Biology at MIT, passed away on April 3rd at the age of 92 from complications due to COVID-19. He was just shy of celebrating his 93rd birthday. Demain advanced the field of fermentation biology, and made major contributions to the study of antibiotics like penicillin, cephalosporin, and beta-lactam. [Read More](#)

How the Body Battles COVID-19

TuftsNow



In this interview, immunologist Pilar Alcaide (pictured), the Kenneth and JoAnn G. Wellner Professor at Tufts University School of Medicine, talks about aging and immunity, why obesity can make COVID-19 more lethal, and a dangerous immune reaction called a cytokine storm that is claiming the lives of some coronavirus patients. [Read More](#)

With Single Genetic Changes, Drug-Resistant Bacteria Become Even More Dangerous

Broad Institute



Researchers at the Broad Institute, Brigham and Women's Hospital and Massachusetts General Hospital have discovered that single mutations in the genome of the ST258 strain of *K. pneumoniae* can alter the bacterium's protective coating, or capsule, in unexpected ways, allowing the virus to spread more easily to other organs or, surprisingly, to hide out within a patient's cells and evade destruction by the immune system or drugs. [Read More](#)

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Upcoming Events in Boston

April 21 11:00 AM	COVID-19: Community Conversations – Boston University Online
April 22 1:00 PM	STAT Digital Event: Antiviral Treatments. What Are the Odds? Online
April 28 5:00 PM	Broad@15 Talk Series: The Human Cell Atlas: 'Google Maps' to Navigate the Human Body Online
April 29 11:00 AM	2020 Virtual Grant Writing Series Online
April 30 4:00 PM	MIT Alumni Research Slam: Course 7 Online

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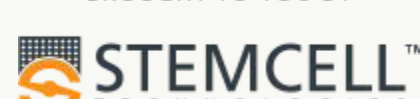
Science Jobs in Boston

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