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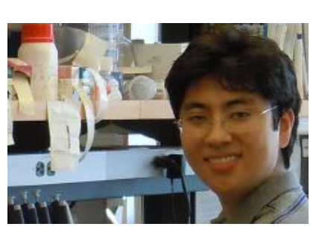
Publications of the Week

The Role of IL-6 in Hyperlipidemia Induced Accelerated Rejection

First Author: Linus Williams *(pictured)* | Senior Author: John Iacomini
American Journal of Transplantation | Tufts University School of Medicine and Tufts Medical Center



Hyperlipidemia induces accelerated rejection of cardiac allografts and resistance to tolerance induction using costimulatory molecule blockade in mice due in part to anti-donor T helper 17 responses and reduced regulatory T cell function. The authors examined the role of interleukin (IL)-6 in hyperlipidemia-induced accelerated rejection and resistance to tolerance. **Abstract**

The Cell Adhesion Molecule TMIGD1 Binds to Moesin and Regulates Tubulin Acetylation and Cell Migration

First Author: Nader Rahimi *(pictured)* | Senior Author: Catherine Costello
Journal of Biomedical Science | Boston University School of Medicine

The cell adhesion molecule transmembrane and immunoglobulin domain containing 1 (TMIGD1) is a novel tumor suppressor that plays important roles in regulating cell-cell adhesion, cell proliferation, and the cell cycle. TMIGD1 binds to the ERM family proteins moesin and ezrin, and an evolutionarily conserved RRKK motif on the carboxyl terminus of TMIGD1 mediates the interaction of TMIGD1 with the N-terminal ERM domains of moesin and ezrin. **Abstract**

View All Publications

Awards

Flaminia Catteruccia Named Howard Hughes Medical Institute Investigator

Harvard T. H. Chan School of Public Health

The Howard Hughes Medical Institute (HHMI) has named Dr. Flaminia Catteruccia *(pictured)*, Professor of Immunology and Infectious Diseases at Harvard T.H. Chan School of Public Health, as one of 33 new HHMI investigators. HHMI will provide Catteruccia with about $9 million in support, including salary, benefits, and a research budget, over a seven-year term. **Read More**

HHMI Honors Five Broad Researchers

Broad Institute

Five members of the Broad Institute of MIT and Harvard are among the 33 biomedical researchers nationwide who will become Howard Hughes Medical Institute (HHMI) investigators this fall. Drs. Emily Balskus *(pictured)*, Cassandra Extavour, Sun Hur, Cigall Kadoch, and Shingo Kajimura will receive long-term, flexible funding from HHMI, providing them the freedom to move their research forward in creative and new directions. **Read More**

Congratulations to the Department of Medicine's 2021 Transformative Scholars

Bench Press

The Transformative Scholars Program in the Department of Medicine at Massachusetts General Hospital was established to support talented physician-scientists in taking on critical challenges facing health and health care today. Dr. Russell Goodman *(pictured)* received an award from the program. His research seeks to understand how changes in hepatic metabolism lead to different forms of liver disease, with a particular focus on alcohol-related liver disease. **Read More**

Awards & Recognitions: September 2021

Harvard Medical School (HMS)

Dr. Anna Greka *(pictured)*, HMS Associate Professor of Medicine at Brigham and Women's, was one of ten individuals named by the National Academy of Medicine to the class of 2021 Emerging Leaders in Health and Medicine Scholars, which recognizes early- to mid-career professionals. Dr. Greka's scientific work is centered on understanding membrane proteins and fundamental mechanisms of disrupted cellular homeostasis. **Read More**

Chemical Engineering Meets Cancer Immunotherapy

MIT News

Sachin Bhagchandani *(pictured)*, a graduate student in the Department of Chemical Engineering currently working at the Koch Institute for Integrative Cancer Research, has won the National Cancer Institute Predoctoral to Postdoctoral Fellow Transition (F99/K00) Award. Bhagchandani is the first student at MIT to receive the award. The fellowship is given to outstanding graduate students with high potential and interest in becoming independent cancer researchers. **Read More**

Five Dana-Farber Cancer Institute Faculty Members Are Inducted in the 2021 Giants of Cancer Care®

Dana-Farber Cancer Institute

Five Dana-Farber Cancer Institute faculty members are inductees of the 2021 Giants of Cancer Care® program. Drs. Toni Choueiri *(pictured)*, Pasi Jänne, Matthew Meyerson, Paul Richardson, and Richard Stone are among the 14 inductees selected to join the prestigious 2021 class. Dr. Choueiri is the Director of the Lank Center for Genitourinary Oncology at Dana-Farber Brigham Cancer Center and the Co-Leader of the Kidney Cancer Program at Dana-Farber/Harvard Cancer Center. **Read More**

Joseph Mizgerd Named Jerome S. Brody Professor of Pulmonary Medicine

Boston University School of Medicine

Dr. Joseph Mizgerd *(pictured)* was named the inaugural Jerome S. Brody Professor of Pulmonary Medicine in a ceremony held both in-person and over Zoom. Dr. Mizgerd is the Director of the Boston University Pulmonary Center and Professor of Medicine, Microbiology, and Biochemistry. His work focuses on immunology in the lung and its influence on acute lower respiratory tract infections. **Read More**

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Local News

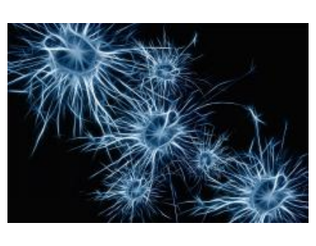
New Bionics Center Established at MIT with $24 Million Gift

MIT News

With the establishment of the new K. Lisa Yang Center for Bionics, MIT is pushing forward the development and deployment of enabling technologies that communicate directly with the nervous system to mitigate a broad range of disabilities. The center is funded by a $24 million gift to MIT's McGovern Institute for Brain Research from philanthropist Lisa Yang *(pictured)*, a former investment banker committed to advocacy for individuals with visible and invisible disabilities. **Read More**

The Origin of Two Neuron Types Reveals How Some Cellular Diversity Emerges in the Brain

Broad Institute



Inside our brains lives a myriad of cell types that support complex human thought — from our ability to make memories and decisions, to our capacity for smell, taste, movement, and communication. Scientists do not yet fully understand how this critical cellular diversity arises as the brain grows and develops. Now, researchers at the Broad Institute of MIT and Harvard and the Flatiron Institute have shown how two key cell types in the brain's cortex arise from a single progenitor in mice. **Read More**

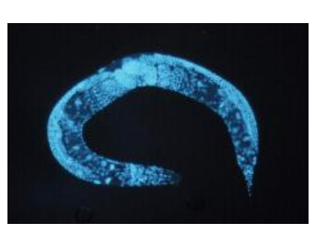
Predicting Influenza Virus Evolution in a Human Lung Airway Chip

Wyss Institute

A team in the Bioinspired Therapeutics & Diagnostics Platform led by Founding Director Dr. Donald Ingber at Harvard's Wyss Institute for Biologically Inspired Engineering has used their microfluidic human Lung Airway-on-a-Chip culture device to mimic influenza viral evolution during human-to-human transmissions, and demonstrate the appearance of influenza virus variants that evolve to escape attack with antiviral drugs. **Read More**

Samuel, Zhen, and Venkatachalam Labs Observe *C. elegans* Brain in Action

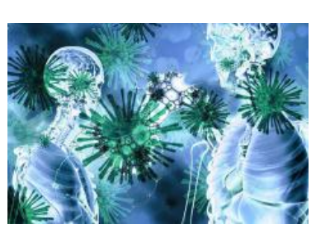
Harvard University Department of Molecular and Cellular Biology



Small transparent animals like zebrafish and *C. elegans* have long been heralded for their accessibility to optical methods to manipulate and monitor neuronal function. A major shift in these approaches occurred when fast microscopes and efficient data analysis began to allow whole-brain imaging. Several years ago, researchers in Dr. Aravi Samuel's lab and their collaborators started building the tools needed for whole-brain imaging in *C. elegans.* **Read More**

Deep Learning Helps Predict New Drug Combinations to Fight COVID-19

MIT Computer Science & Artificial Intelligence Lab



The existential threat of COVID-19 has highlighted an acute need to develop working therapeutics against emerging health threats. Scientists from MIT's Computer Science and Artificial Intelligence Laboratory and the Jameel Clinic for Machine Learning and Health asked: how can we identify the right synergistic drug combinations for the rapidly spreading SARS-CoV-2? **Read More**

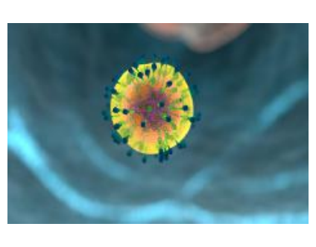
Biologists Identify New Targets for Cancer Vaccines

MIT News

Over the past decade, scientists have been exploring vaccination as a way to help fight cancer. These experimental cancer vaccines are designed to stimulate the body's own immune system to destroy a tumor. In a new finding that may help researchers decide what proteins to include in cancer vaccines, MIT researchers have found that vaccinating against certain cancer proteins can boost the overall T cell response and help to shrink tumors in mice. **Read More**

Immune Escape

Brigham and Women's Hospital



Cancers in different tissue types develop unique genetic mechanisms to avoid discovery and destruction by the immune system, suggests a new study in mice by scientists at Harvard Medical School, Brigham and Women's Hospital, and Dana-Farber Cancer Center. The findings could explain why some cancer types respond to current immunotherapies while others do not. **Read More**

Researchers Set Sights on New Ovarian Cancer Treatment Strategies

Dana-Farber Cancer Institute

Despite breakthrough treatments for high-grade serous ovarian cancer, about 80 percent of patients relapse within two years. Dana-Farber scientists are pursuing multiple avenues of research that may improve outcomes. "A number of patients develop progressive disease at a later point, potentially indicating that a subset of the cells were not sensitive to the initial chemotherapy and survived to later develop into a recurrent cancer," says Dr. Elizabeth Stover *(pictured)*, a Dana-Farber oncologist. **Read More**

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Upcoming Events in Boston

September 28 8:45 AM	**Perturbations, Therapeutics, and Machine Learning** Online
September 28 4:00 PM	**The Genetics of Opioid Addiction: What We Know, What We Are Learning** Online
September 30 4:00 PM	**Industry Career Chat with Flare Therapeutics** Online
October 1 2:00 PM	**Finding Funding in the Neurosciences: Meet the McKnight Endowment Fund** Online
October 12 6:00 AM	**Picower Institute Fall 2021 Symposium | Dendrites: Molecules, Structure, and Function** Online

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TCR^2 Therapeutics

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Cygnal Therapeutics

Research Scientist, Structural Biology Core Facility
MIT

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