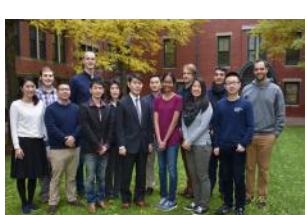


**Publications of the Week**
**Increased Mitochondrial Calcium Levels Associated with Neuronal Death in a Mouse Model of Alzheimer's Disease**

 First Author: Maria Calvo-Rodriguez (*front row, 2<sup>nd</sup> from left*) | Senior Author: Brian Bacskai (*back row, 2<sup>nd</sup> from left*)  
 Nature Communications | Massachusetts General Hospital and Harvard Medical School


Amyloid beta (A $\beta$ ) causes cytosolic Ca<sup>2+</sup> overload, but the effects of A $\beta$  on mitochondrial Ca<sup>2+</sup> levels in Alzheimer's disease remain unclear. Using a ratiometric Ca<sup>2+</sup> indicator targeted to neuronal mitochondria and intravital multiphoton microscopy, the authors found increased mitochondrial Ca<sup>2+</sup> levels associated with plaque deposition and neuronal death in a transgenic mouse model of cerebral  $\beta$ -amyloidosis. [Profile](#) | [Abstract](#)

**Proteomic and Biological Profiling of Extracellular Vesicles from Alzheimer's Disease Human Brain Tissues**

 First Author: Satoshi Muraoka (*pictured front, fourth from left*) | Senior Author: Tsuneya Ikezu (*eighth from right*)  
 Alzheimer's & Dementia | Boston University School of Medicine


Extracellular vesicles (EVs) from human Alzheimer's disease (AD) biospecimens contain amyloid beta peptide and tau. While AD EVs are known to affect brain disease pathobiology, their biochemical and molecular characterizations remain ill defined. Differentially expressed EV proteins were assessed by quantitative proteomics and machine learning. [Profile](#) | [Abstract](#)

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**Awards**
**Harvard-Led Initiative Awards Over \$16.5 Million to Support 62 COVID-19 Research Projects**

Harvard Medical School



To address the most pressing challenges of the COVID-19 pandemic, the Massachusetts Consortium on Pathogen Readiness, a multi-institutional initiative convened by Harvard Medical School to combat the disease and prepare for future outbreaks, has announced over \$16.5 million in funding to support 62 high-impact research projects, including one led by Dr. Galit Alter (*pictured*). [Read More](#)

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**Local News**
**The Most Powerful Gene Variant for Height Discovered to Date**

Broad Institute



A team of researchers from Harvard Medical School, Brigham and Women's Hospital, Socios En Salud, and the Broad Institute have identified the single largest genetic contributor to height known to date. The findings are based on an analysis of samples from ethnically diverse Peruvians, a population known to have the shortest stature in the world. [Read More](#)

**Adapting Academic Research Center to SARS-CoV-2 Testing Lab**

BU School of Medicine



During the COVID-19 pandemic, as demand for SARS-CoV-2 diagnostic testing has far outweighed the supply, academic research scientists have begun converting their labs to testing facilities. Dr. George Murphy's (*pictured*) team at the BU School of Medicine and Boston Medical Center have outlined how they adapted their lab to test patient samples for SARS-CoV2, and provide a blueprint for other labs that want to do the same thing. [Read More](#)

**Combing Through Old Drugs to Find New Ones for COVID-19**

Broad Institute



Scientists are testing existing drugs that are already proven safe in humans to see whether they can be repurposed to treat COVID-19 patients. In this interview, Dr. Florence Wagner (*pictured*), Director of Medicinal Chemistry in the Broad Institute's Center for the Development of Therapeutics and the Stanley Center for Psychiatric Research, talks about drug repurposing, and how she and her team are working with other research groups on both near- and long-term projects. [Read More](#)

**Smothering the Fire**

Harvard Medical School



Research in mice co-led by Dr. Hao Wu (*pictured*) at Boston Children's Hospital, has revealed that the FDA-approved drug disulfiram, commonly used for treating alcoholism, blocks a key gatekeeper protein involved in inflammation. The findings offer hope for diseases that involve runaway inflammation, although it remains to be seen whether the results can be replicated in people. [Read More](#)

**Genentech Lures Regev from Broad Institute to Lead Research and Early Development**

FierceBiotech



Roche has named Dr. Aviv Regev (*pictured*) as the new head of Genentech research and early development (gRED). Regev, who currently works at the Broad Institute, will take over as head of gRED when Michael Varney retires at the end of July. Genentech highlights Regev as a leader who has spent her career using new technologies to expand the understanding of biological processes. [Read More](#)

**Study Takes Most Comprehensive Look to Date at Connection Between the Ancestry and the Molecular Makeup of Cancer**

Dana-Farber



New findings from the NCI Cancer Genome Analysis Network led by researchers at Dana-Farber provide the most comprehensive look to date at the effect of ancestry on the molecular makeup of normal and cancerous tissues. Drawing on data from 10,678 patients and 33 cancer types, they found that ancestry was tied to variations in hundreds of genes, but that the most important of these differences were linked to specific tissue types. [Read More](#)

**Dyno Explodes Out of Stealth Mode with \$2 Billion in Deals with Biopharma Companies**

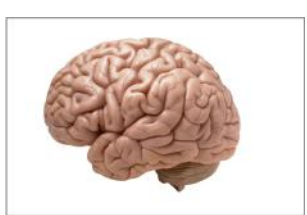
BioSpace



Cambridge, Massachusetts-based Dyno Therapeutics has come out of stealth mode with an official launch of its proprietary CapsidMap platform. The company leverages artificial intelligence to improve gene therapy. The CapsidMap platform allows it to design novel adeno-associated virus vectors that it believes can improve current techniques for gene therapy. [Read More](#)

**3D Brain-Like Tissue Model Links Alzheimer's Disease with Herpes**

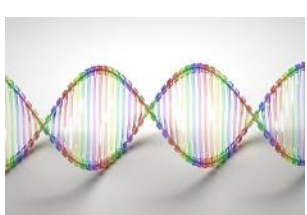
Tufts Now



Engineers and scientists led by Tufts University have used a 3D human tissue culture model mimicking the components and conditions in the brain to demonstrate a possible causal relationship between sporadic Alzheimer's disease and herpes simplex virus 1 infection. The model will allow for further studies into the causes and possible treatments of this devastating neurodegenerative condition. [Read More](#)

**Sex, Genes and Vulnerability**

Harvard Medical School



New work led by researchers in the Blavatnik Institute at Harvard Medical School and at the Broad Institute provides a clear genetic explanation behind the sex bias observed in some of these diseases. The team's findings suggest that greater abundance of an immune-related protein in men protects against lupus and Sjögren's syndrome but heightens vulnerability to schizophrenia. [Read More](#)

**Guohao Dai: 3D Bioprinted Glioblastoma Models and 3D Imaging**

BioTechniques



BioTechniques Digital Editor Tristan Free catches up with Dr. Guohao Dai (*pictured*), Associate Professor of Bioengineering at Northeastern University, to discuss his recent work making improvements in glioblastoma modeling and imaging, using 3D printing techniques. He discusses some of the most exciting findings from the studies, as well as challenges faced. [Read More](#)

**Moderna Eyes 'Early Summer' Start for Phase 3 COVID-19 Vaccine Trial**

Fierce Biotech



Moderna is finalizing the protocol for a Phase 3 trial of its COVID-19 vaccine, with a view to starting the study early in the summer. The establishment of the timeline, which follows FDA clearance to run a Phase 2 trial, puts Moderna on track to win approval for its mRNA vaccine mRNA-1273 next year. Having been the first group to start testing a vaccine against SARS-CoV-2, Moderna is now on the cusp of Phase 2. [Read More](#)

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**Interesting Articles**
**House Democrats Include Research Dollars in Latest Pandemic Relief Package**

ScienceInsider



By week's end, the Democrat-led U.S. House of Representatives hopes to approve another massive coronavirus relief package. For scientists, the good news is that the \$3 trillion spending bill unveiled contains billions of dollars in new research funding. The bad news is that the bill is only a marker for negotiations with Senate Republicans and the White House on what more the federal government should do to help the country deal with the devastating effects of the pandemic. [Read More](#)

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**Upcoming Events in Boston**

May 19 11:00 AM	<b>The Socially Distant Centromere</b> Online
May 20 11:00 AM	<b>Virtual Grant Writing Series</b> Online
May 20 3:00 PM	<b>Tissue Talk with Christopher Chen</b> Online
May 20 3:30 PM	<b>MassBio Virtual Mixer</b> Online
May 21 3:00 PM	<b>Policymakers Live: Virtual Briefing with Senator Joseph Boncore, Senate Chair of the MA Biotech Caucus</b> Online

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Bluebird Bio
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