

Publications of the Week

ERα-Associated Translocations Underlie Oncogene Amplifications in Breast Cancer

First Author: Jake June-Koo Lee | Senior author: Peter Park *(pictured)*
Nature | Harvard Medical School, Dana-Farber Cancer Institute, Brigham and Women's Hospital, and UMass Chan Medical School



Although recent studies have revealed the complex structure and the evolutionary trajectories of oncogene amplicons, their origin remains poorly understood. The authors show that focal amplifications in breast cancer frequently derive from a mechanism — termed translocation–bridge amplification — involving inter-chromosomal translocations that lead to dicentric chromosome bridge formation and breakage. [Abstract](#)

Atrophy in Behavioral Variant Frontotemporal Dementia Spans Multiple Large-Scale Prefrontal and Temporal Networks

First Author: Mark Eldaief | Senior Author: Bradford Dickerson *(pictured)*
Brain | Massachusetts General Hospital and Harvard Medical School



The identification of a neurodegenerative disorder's distributed pattern of atrophy — or atrophy "signature" — can lend insights into the cortical networks that degenerate in individuals with specific constellations of symptoms. In addition, this signature can be used as a biomarker to support early diagnoses and to potentially reveal pathological changes associated with said disorder. The authors characterized the cortical atrophy signature of behavioral variant frontotemporal dementia. [Abstract](#)

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Awards

Whitehead Institute Member Siniša Hrvatin Named a Searle Scholar

Whitehead Institute



Whitehead Institute member Dr. Siniša Hrvatin *(pictured)* has been named as one of the 15 researchers to be selected as 2023 Searle Scholars. The Searle Scholars Program supports the research of exceptional young faculty in the biomedical sciences and chemistry. The Hrvatin lab studies states of stasis, such as hibernation, as a means to harness the therapeutic potential of these biological adaptations. [Read More](#)

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Local News

Viruses in the Guts of Centenarians May Help Them Resist Pathogens

Broad Institute



New research suggests that centenarians have a diverse collection of viruses in their gut that could help protect them from infectious diseases. In the study, researchers led by Drs. Joachim Johansen, Ramnik Xavier, Simon Rasmussen, and Damian Plichta at the Broad Institute analyzed the gut viromes from 195 individuals from Japan and Sardinia. [Read More](#)

Not All Statins Are Created Equal

Wyss Institute



A study from researchers at the Wyss Institute used computational tools, medical record analysis, and *in vitro* experiments to reveal that statin drugs differ in their ability to increase survival of COVID-19 patients. "There's a lot of work that can be done to study the multiple functions of drugs to discover new uses for existing medications," said co-first author Dr. Megan Sperry *(pictured)*. [Read More](#)

Gene-Editing Technique Could Speed Up Study of Cancer Mutations

MIT News



Genomic studies of cancer patients have revealed thousands of mutations linked to tumor development. However, for the vast majority of those mutations, researchers are unsure of how they contribute to cancer because there's no easy way to study them in animal models. Researchers in Dr. Tyler Jacks' *(pictured)* lab at MIT have developed a way to easily engineer specific cancer-linked mutations into mouse models. [Read More](#)

Another Angle on Alzheimer's: CSF, Proteomics, and Metabolic Enzymes

Boston Children's Hospital



Currently there are no objective, easily assessed diagnostic markers for Alzheimer's disease, and no good therapeutic options. Taking an agnostic approach, Drs. Hanno and Judith Steen *(pictured)*, who share a lab at Boston Children's Hospital, teamed up to analyze proteomics data from the cerebrospinal fluid (CSF) that bathes the brain, combining data from ten different study cohorts, most of which had been published before. [Read More](#)

Engineers Design Sutures That Can Deliver Drugs or Sense Inflammation

MIT News



Inspired by sutures developed thousands of years ago, MIT engineers in Dr. Giovanni Traverso's *(pictured)* lab have designed "smart" sutures that can not only hold tissue in place, but also detect inflammation and release drugs. The MIT engineers coated the sutures with hydrogels that can be embedded with sensors, drugs, or even cells that release therapeutic molecules. [Read More](#)

Chemists' Technique Reveals Whether Antibodies Neutralize SARS-CoV-2

MIT News



Antibodies that can disarm a virus, known as neutralizing antibodies, are key to the body's ability to fight off infection. Dr. Laura Kiessling's *(pictured)* team at MIT have come up with a new way to identify these neutralizing antibodies in a blood sample, by analyzing how antibodies interact with sugar molecules found on the surface of a viral protein. [Read More](#)

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Upcoming Events in Boston

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|-------------------------------|--|
| <p>June 5
8:30 AM</p> | <p>Accelerate Access to EU Market: Biotech Valley in Wallonia (Belgium)
Tufts Launchpad BioLabs</p> |
| <p>June 6
6:30 PM</p> | <p>Community Concert at BIO
Big Night Live</p> |
| <p>June 13
7:00 PM</p> | <p>Public Symposium: Stem Cells at the Planetarium
Museum of Science</p> |
| <p>June 14
9:00 AM</p> | <p>ISSCR 2023
Boston Convention and Exhibition Center</p> |
| <p>June 20-23
8:00 AM</p> | <p>FOCIS 2023
Boston Marriott Copley Place</p> |

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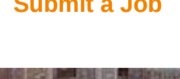
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