

Publications of the Week
Schwann Cells in the Subcutaneous Adipose Tissue Have Neurogenic Potential and Can Be Used for Regenerative Therapies

 First Author: Rhian Staveley | Senior Author: Allan Goldstein *(pictured)*
 Science Translational Medicine | Massachusetts General Hospital and Harvard Medical School


The use of stem cells to repair the injured nervous system has shown promising results in experimental models. However, stem cell therapy development is limited by the paucity of available neural stem cells. The authors identified a population of Schwann cells in nerve bundles obtained from human and rodent subcutaneous fat tissue. [Abstract](#)

Target Receptor Identification and Subsequent Treatment of Resected Brain Tumors with Encapsulated and Engineered Allogeneic Stem Cells

 First Author: Deepak Bhere | Senior Author: Khalid Shah *(pictured)*
 Nature Communications | Brigham and Women's Hospital, Harvard University, Massachusetts General Hospital, and Amasa Therapeutics


Cellular therapies offer a promising therapeutic strategy for the highly malignant brain tumor, glioblastoma (GBM). However, their clinical translation is limited by the lack of effective target identification and stringent testing in pre-clinical models that replicate standard treatment in GBM patients. The authors show the detection of cell surface death receptor target on CD146-enriched circulating tumor cells captured from the blood of mice bearing GBM and patients diagnosed with GBM. [Abstract](#) | [Press Release](#)

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Local News
New Cancer Vaccine Delivers Double Punch to Tumors

Wyss Institute



When normal cells experience DNA damage, they present proteins on their outer surfaces that serve as a "kill me" signal to immune cells. Some cancer cells, however, have figured out how to clip those proteins off of their surfaces, allowing them to evade detection by the immune system's search-and-destroy team. A team of scientists from the Wyss Institute and Dana-Farber Cancer Institute led by Dr. Kai Wucherpfennig *(pictured)* has developed a novel cancer vaccine that induces the body to manufacture antibodies against the "kill me" proteins. [Read More](#)

In NASA's Quest to Feed Astronauts in Deep Space, Tufts Team Sees Promise in Insect Cells

Tufts Now



Future astronauts traveling to Mars will need food that's nutritious and tasty enough to keep them in peak health for several years — and that's also easy to grow, store, and prepare with minimal waste. A Tufts team is developing a promising solution: an alternative version of meat that's made from cultivated insect cells. The research project in Dr. Mark Kaplan's *(pictured)* laboratory is one of 18 US projects awarded funding last fall in NASA's Deep Space Food Challenge. [Read More](#)

Eight Major Findings and Headlines from BU CTE Researchers in the Past Year

The Brink



Whenever a football player struts in celebration after making another bone-crushing hit, it's hard not to wonder what the jarring clash of heads did to their brain. After 15 years of research into the toll of repeated head traumas on the brain, especially among athletes, BU's Chronic Traumatic Encephalopathy (CTE) Center has changed the conversation around contact sports — and shifted the viewing experience for many fans. [Read More](#)

New Research Center Focused on Brain-Body Relationship Established at MIT

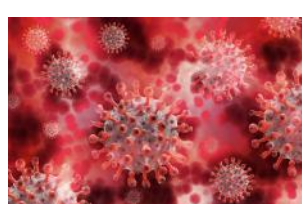
MIT News



A new research center at MIT, funded by a \$38 million gift to the McGovern Institute for Brain Research from philanthropist K. Lisa Yang, aims to create and apply novel tools to explore the multidirectional, multilevel interplay between the brain and other body organ systems. The K. Lisa Yang Brain-Body Center will be directed by Dr. Polina Anikeeva *(pictured)*, Professor of Materials Science and Engineering and Brain and Cognitive Sciences at MIT and an Associate Investigator at the McGovern Institute. [Read More](#)

Remembrance of Viral Encounters Past

Harvard Medical School



How does the immune system remember and recognize viral invaders it has encountered in the past? A trio of newly published studies of people infected with SARS-CoV-2, vaccinated against the virus, or both, are providing tantalizing new clues about the factors that influence the speed and magnitude of the immune system's response to subsequent infection with variants of SARS-CoV-2. [Read More](#)

A New Angle on the Cause of Alzheimer's Disease: Accumulating Brain Mutations

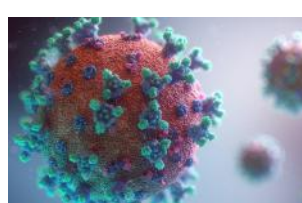
Boston Children's Hospital



Alzheimer's disease is marked by a loss of functional neurons in the brain. But what causes this loss? A new study reveals that people with Alzheimer's have an abundance of newly acquired mutations in their neurons — more than people of the same age without Alzheimer's, and enough to disable genes important to brain function. [Read More](#)

Computer Model Predicts Dominant SARS-CoV-2 Variants

Broad Institute



Scientists at the Broad Institute and UMass Chan Medical School have developed a machine-learning model that can analyze millions of SARS-CoV-2 genomes and predict which viral variants will likely dominate and cause surges in COVID-19 cases. The model, called PyRo, could help researchers identify which parts of the viral genome will be less likely to mutate and hence be good targets for vaccines that will work against future variants. [Read More](#)

Can We Prevent Antibiotic Resistance?

The Brink



Since 2016, Boston University has been at the forefront of an international effort to combat antimicrobial resistance, leading CARB-X, a nonprofit partnership that channels funding and expertise to companies developing life-saving new antibiotics, vaccines, and rapid diagnostics. Now, that work has been given a boost, with CARB-X receiving up to \$370 million in additional funding. [Read More](#)

Northpond Labs Funds Second Wyss Institute Research Project

Wyss Institute



The Wyss Institute and Northpond Ventures have announced that Northpond Labs, the venture capital firm's research- and development-focused affiliate, has signed an agreement to fund the Wyss Institute's SomaCode project. Led by Soufiane Aboulhoda *(pictured)*, Oliver Dodd, and Dr. George Church, SomaCode aims to solve a key problem plaguing cell therapies: getting therapeutic cells to their targets in the body so they can interact with diseased cells. [Read More](#)

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Upcoming Events in Boston

June 8 8:30 AM	The Neurobiology of Eating Behavior in Obesity: Mechanisms and Therapeutic Targets Online
June 10 9:10 AM	Life Sciences Day – "Belgium, the Health & Biotech Valley of Tomorrow" MassBioHub
June 13–14 12:00 PM	8th Semi-Annual New England CryoEM Symposium Online
June 17 8:00 AM	20th Annual Cancer Research Symposium Koch Institute
June 22–24 1:00 PM	2022 RNA Therapeutics Symposium: From Concept to Clinic Online

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