

Publications of the Week
Metabolic Control of Astrocyte Pathogenic Activity via cPLA2-MAVS

 First Author: Chun-Cheih Chao | Senior Author: Francisco Quintana (pictured)
 Cell | Harvard Medical School, Broad Institute and Brigham and Women's Hospital


Metabolism has been shown to control peripheral immunity, but little is known about its role in central nervous system (CNS) inflammation. Through a combination of proteomic, metabolomic, transcriptomic, and perturbation studies, the authors found a novel mechanism that promoted CNS inflammation in experimental autoimmune encephalomyelitis and, potentially, multiple sclerosis.

[Profile](#) | [Abstract](#)
Generation of Mesenchyme Free Intestinal Organoids from Human Induced Pluripotent Stem Cells

 First Author: Aditya Mithal | Senior Author: Gustavo Mostoslavsky (pictured)
 Nature Communications | Boston University School of Medicine and Boston Medical Center


Efficient generation of human induced pluripotent stem cell-derived human intestinal organoids (HIOs) would facilitate the development of *in vitro* models for a variety of diseases that affect the gastrointestinal tract, such as inflammatory bowel disease or cystic fibrosis. The authors report a directed differentiation protocol for the generation of mesenchyme-free HIOs that can be primed towards more colonic or proximal intestinal lineages in serum-free defined conditions.

[Abstract](#)
Targeting Rictor Sensitizes SMAD4-Negative Colon Cancer to Irinotecan

 First Author: Chen Khuan Wong | Senior Author: Sam Thangalingam (pictured)
 Molecular Cancer Research | Boston University School of Medicine


Deciphering molecular targets to enhance sensitivity to chemotherapy is becoming a priority for effectively treating cancers. Loss of function mutations of SMAD4 in colon cancer is associated with metastatic progression and resistance to 5-fluorouracil (5-FU). The authors report that SMAD4 deficiency also confers resistance to irinotecan, another common chemotherapeutic frequently used alone or in combination with 5-FU against colon cancer.

[Abstract](#)
[View All Publications](#)
Awards
NIAD Awards Grant to Kephera Diagnostics for Point-of-Care Test for Neurocysticercosis

MassBio



Kephera Diagnostics has been awarded a two-year, \$600,000 Phase I SBIR grant from the National Institute of Allergy and Infectious Diseases (NIAD) to develop a point-of-care test for neurocysticercosis. Neurocysticercosis is an infection of the central nervous system with the larval form of the pork tapeworm, *Taenia solium*. Humans are infected with the tapeworm through the consumption of undercooked pork.

[Read More](#)
Whitehead Institute Receives \$10 Million to Study Sex Chromosomes' Impact on Women's Health

MIT News



The Whitehead Institute has announced that Brit Jesson d'Arbeloff SM '11 — a pioneering engineer, advocate for women in science, and philanthropic leader — has made a \$10 million gift to support research uncovering the biological consequences of the sex chromosomes on women's health and disease. The overall initiative is a comprehensive effort to understand sex differences at the molecular level, a long-neglected area of biomedical research.

[Read More](#)
Windgap Medical and University of Minnesota Twin Cities Receive \$3.2 Million NIH Grant to Develop Cyanide Antidote Autoinjector

BioSpace



Massachusetts-based pharmaceutical company Windgap Medical, Inc. and the University of Minnesota Twin Cities have received a \$3.2 million grant from the National Institutes of Health (NIH) to develop a new device to quickly administer a recently developed antidote for cyanide poisoning. Under the grant, researchers from the University's Center for Drug Design, College of Pharmacy, and Windgap Medical are collaborating to design an autoinjector.

[Read More](#)
Two Radiology Faculty Honored by Journal

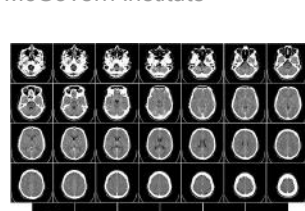
Boston University School of Medicine



Two radiology faculty from the Boston University School of Medicine have been recognized by the journal *Radiology*. Assistant Professor Dr. Akira Murakami and Professor Dr. Priscilla Slanetz (pictured) have been awarded the 2019 Editor's Recognition Award for Special Distinction Certificate for outstanding contribution to the peer review of manuscripts. This award is given each year to the top reviewers who provide the highest quality and most timely manuscript reviews for the journal.

[Read More](#)
[View All Awards](#)
Local News
Explaining Repetitive Behavior Associated with Amphetamine Use

McGovern Institute



Repetitive movements such as nail-biting and pacing are very often seen in humans and animals under the influence of habit-forming drugs. Studies at the McGovern Institute have found that these repetitive behaviors may be due to a breakdown in communication between neurons in the striatum — a deep brain region linked to habit and movement, among other functions.

[Read More](#)
UMass Amherst Researchers Identify New Mechanism Involved in Promoting Breast Cancer

UMass Amherst



A new approach to studying the effects of two common chemicals used in cosmetics and sunscreens found that they can cause DNA damage in breast cells at surprisingly low concentrations, while the same dose did not harm cells without estrogen receptors. The research identifies a new mechanism by which estrogens and xenoestrogens - environmental chemicals that act like estrogens - may promote breast cancer.

[Read More](#)
'Coolsculpting' Inventors Develop New Non-surgical Method for Targeting Fat

Mass General News



The Massachusetts General Hospital laboratory that invented cryolipolysis or "Coolsculpting," a popular non-surgical method for reducing fat under the skin, is developing a new form of the technology that can selectively reduce fat almost anywhere in the body using a safe, injectable ice solution or "slurry." The technology, not yet approved for use in humans, is designed for removal of fat virtually anywhere that can be reached with a hypodermic needle.

[Read More](#)
Dorothy Schafer Lab Shows Gene Therapy Protection of Eyesight in Models of Multiple Sclerosis

University of Massachusetts Medical School



New research by Dr. Dorothy Schafer (pictured) has revealed the molecular process in which synaptic connections in the brain are damaged in multiple sclerosis, and how this contributes to neurodegenerative symptoms. The research also showed how gene therapy may be used to preserve neural circuits and protect against vision loss in the disease.

[Read More](#)
A Solid Vaccine for Liquid Tumors

Wyss Institute



Chemotherapy has been the standard treatment for acute myeloid leukemia (AML) for over 40 years, but it rarely completely eliminates the cancerous cells. A new study presents an alternative treatment that has the potential to eliminate AML cells completely: an injectable, biomaterial-based vaccine that, when combined with standard chemotherapy, caused complete and lasting recovery from and immunity against AML in mice.

[Read More](#)
Study Looks to Genome Editing to Treat Deadly Degenerative Disorder

Harvard Gazette



Harvard University stem cell researchers are embarking on a major study of Duchenne muscular dystrophy (DMD). Supported by research funding from Sarepta Therapeutics the project aims to use *in vivo* genome editing in mouse models of DMD to fully and precisely restore the function of a protein crucial for proper muscular growth and development.

[Read More](#)
Researchers Develop Tool to Identify Molecular Receptors in Worms

WPI



Researchers at Worcester Polytechnic Institute (WPI), led by Associate Professor of Biology and Biotechnology, Dr. Jagan Srinivasan (pictured), have developed a tool to identify molecular receptors in worms that are involved in sensing pheromones related to mating, an advance that could speed up neuroscience research into pheromones by eliminating months of work.

[Read More](#)
New Experimental Therapy May Offer Hope for Rare Genetic Disorders, as Well as More Common Diseases

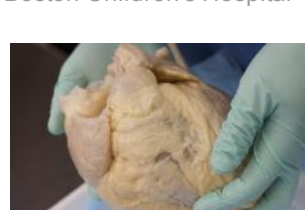
Mass General News



Researchers at Massachusetts General Hospital have developed a new way to alleviate problems caused by dysfunctional mitochondria, which are the "powerhouses" that produce energy in cells. Their discovery could lead to a new treatment for rare diseases caused by "broken" mitochondria, but could also be used to develop novel therapies for more common age-associated disorders.

[Read More](#)
Massachusetts General Hospital Performs First-of-Its-Kind Heart Transplant in New England

Boston Children's Hospital



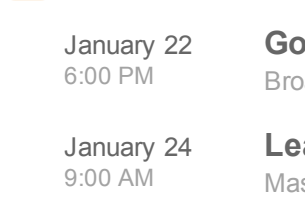
A team of surgeons and specialists at Massachusetts General Hospital announced an achievement in transplant surgery, having recently performed the largest number of adult heart transplants in the country using what are known as Donation after Circulatory Death donor hearts. The five transplants also include the first surgery of this kind for the New England region.

[Read More](#)
[View All Articles](#) | [Submit an Article](#)
Interesting Articles
Trump Science Advisor Meets with Top Boston Academic Research Officials

The Brink



Kelvin K. Droegemeier (pictured), the Director of the White House Office of Science and Technology Policy, is on a mission to protect the security and integrity of the American research enterprise. And while he doesn't dismiss the existence of foreign threats to US researchers, he says those threats should be kept in perspective: the overall enterprise is secure. That was one of the messages to emerge from a meeting Droegemeier held Wednesday at Harvard Law School.

[Read More](#)
[View All Interesting Articles](#) | [Submit an Article](#)
Upcoming Events in Boston


- January 22**
 6:00 PM
Going Beyond the Gut: The Future of Microbiome Therapeutics
 Broad Institute
- January 24**
 9:00 AM
Learn How to Choose The Best Consultant
 MassBio
- January 26**
 8:00 AM
Program for Chairs of Clinical Services
 Harvard Longwood Campus
- January 28**
 3:00 PM
First Annual "Patient Safety in a Digital World" Symposium
 Dana Farber Cancer Institute
- January 30**
 5:00 PM
MassBio Young Professionals Event: Trivia Night
 FUJIFILM

[View All Events](#) | [Submit an Event](#)
STEMCELL Jobs


- Scientific Sales Representative, Cell Separation Products (Cambridge, MA)**
 STEMCELL Technologies
- Scientific Inside Sales Representative (Cambridge, MA)**
 STEMCELL Technologies
- Content Editor & Corporate Writer (Burnaby, BC)**
 STEMCELL Technologies
- Scientific Marketing Specialist, Epithelial Cell Biology (Burnaby, BC)**
 STEMCELL Technologies
- Scientist, Particle Chemistry (Vancouver, BC)**
 STEMCELL Technologies

[View 110 Other STEMCELL Jobs](#)
Other Science Jobs in Boston


- Research Scientist I, Medicinal Chemistry**
 Broad Institute
- Scientist I**
 Harvard Medical School
- Scientist/Sr. Scientist, Cell Engineering (Process Development Group)**
 AvroBio
- Scientist, Biomarker Discovery**
 Casma Therapeutics
- Associate Director, Project Manager of Early Stage Development**
 EMD Serono

[View 155 Other Science Jobs](#) | [Submit a Job](#)

GETTING ENOUGH CORD BLOOD HSCs FOR TRANSPLANTATION ISN'T EASY. BUT SHE IS PAVING THE WAY.

Webinar by Suzan Imren

WATCH NOW

 Submit your articles and events by reaching out to us at Info@scieninboston.com.

BROUGHT TO YOU BY



- STEMCELL Technologies**
 Products | Services
- STEMCELL's Science Newsletters**
 Free Weekly Updates on Your Field
- The Stem Cell Podcast**
 Interviews and Updates on Stem Cell Science