

Publications of the Week

Multi-Timescale Reinforcement Learning in the Brain

First Authors: Paul Masset (*pictured*) and Pablo Tano | Senior Authors: Alexandre Pouget and Naoshige Uchida
Nature| Harvard University



To thrive in complex environments, animals and artificial agents must learn to act adaptively to maximize fitness and rewards. Such adaptive behavior can be learned through reinforcement learning. In classical reinforcement learning, agents discount future rewards exponentially according to a single timescale, known as the discount factor. Here, researchers explore the presence of multiple timescales in biological reinforcement learning. [Abstract](#) | [Press Release](#)

Iterative Transcription Factor Screening Enables Rapid Generation of Microglia-Like Cells From Human iPSC

First Authors: Songlei Liu, Li Li, Fan Zhang, and Mariana Garcia-Corral | Senior Authors: Jenny Tam (*pictured*), Soumya Raychaudhuri, and George Church
Nature Communications | Harvard University, Broad Institute, Brigham and Women's Hospital, UMass Chan Medical School, and the Whitehead Institute



Transcription factor (TF) screens have enabled efficient production of a few cell types; however, engineering cell types that require complex TF combinations remains challenging. Here, researchers report an iterative, high-throughput single-cell TF screening method that enables the identification of TF combinations for specialized cell differentiation, which was validated by differentiating human microglia-like cells. [Abstract](#) | [Press Release](#)

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Awards

Faculty Honored Across Tufts for Excellence in Teaching and Research

Tufts Now



At the conclusion of each academic year, Tufts University schools recognize excellence in research and teaching among the members of their individual faculties. This spring, a number of faculty members were recognized, including Dr. Srivalleesha Mallidi (*pictured*), who earned the Recognition of Undergraduate Teaching Excellence Award. [Read More](#)

Sabrina Kistler Receives 2025 Marion R. Kramer Scholarship

Boston University Biology



Sabrina Kistler (*pictured*), a Biomolecular Pharmacology PhD student in the Ho Lab, received the 2025 Marion R. Kramer Scholarship. Kistler's research investigates the role of alternative RNA splicing in Alzheimer's disease, with a particular focus on the apolipoprotein E and Reelin receptor, APOER2. Kistler is utilizing both human brain samples and knock-in mouse models to examine disease progression. [Read More](#)

KathrynAnn Odamah Receives 2025 Charles Terner Award

Boston University Biology



KathrynAnn Odamah (*pictured*), a fifth-year PhD student in the Man Lab, received the 2025 Charles Terner Award. Her lab studies the synaptic mechanisms underlying neurodevelopmental and neurodegenerative disorders. Odamah's project is focused on investigating the use of genetic restoration strategies to rescue neuronal impairments and behavioral deficits in a Nexmif-dependent mouse model of autism spectrum disorder. [Read More](#)

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Local News

Gilles Martin Identifies Neurons Associated With the Suppression of Binge Drinking

UMass Chan Medical School



Among the billions of neurons in the brain, fewer than 500 are responsible for suppressing binge drinking, according to new research by Dr. Gilles Martin (*pictured, center*), Dr. Pablo Gimenez-Gomez (*right*), and Timmy Le (*left*). Published in *Nature Neuroscience*, these findings provide insights into binge drinking behavior and alcohol dependency that may lead to new therapeutic targets. [Read More](#)

First-of-Its-Kind Device Profiles Newborns' Immune Function

MIT News



Researchers from the Singapore-MIT Alliance for Research and Technology have developed a first-of-its-kind device to profile the immune function of newborns. Using a single drop of blood, the Biophysical Immune Profiling for Infants system provides real-time insights into newborns' immune responses, enabling the early detection of severe inflammatory conditions and allowing for timely interventions. [Read More](#)

Autism Advances

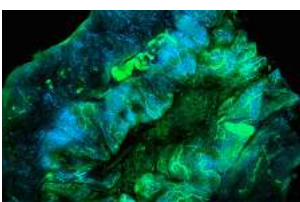
The Picower Institute



Rooted in fundamental curiosity about how the brain works, Picower scientists continue to break new ground in understanding autism and devising treatment strategies. "You can't solve a brain disorder by just studying the disorder," said Dr. Mriganka Sur (*pictured*), "It will be difficult to understand the disorder unless that understanding is built on a lot of basic biology." [Read More](#)

Northeastern Researchers Identify Proteins Receptive to Treating Ovarian Cancer

Northeastern Global News



Researchers at Northeastern University have identified two proteins abundant on drug-resistant ovarian cancer cells that become receptive to chemotherapy when treated with light. By targeting cancer cells with photo-sensitive antibodies and then shining light on them, researchers have made previously untreatable tumors receptive to drugs. [Read More](#)

Broad-Spectrum Coronavirus Drug Developed Through AI-Enabled Dynamic Modeling

Wyss Institute



About 30% of all respiratory tract infections are caused by coronaviruses. During the COVID-19 pandemic, a team led by Dr. Donald Ingber (*pictured*) sought to leverage existing computational and biological modeling to rapidly repurpose existing FDA-approved drugs for the fight against the disease. Their findings and methodologies have been published in *Frontiers in Molecular Biosciences*. [Read More](#)

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📅 Upcoming Events in Boston

June 25 - 27 8:00 AM	2025 RNA Therapeutics: From Concept to Clinic UMass Medical School
June 27 9:00 AM	Koch Institute Symposium 2025 Huntington Hall
August 18 - 21 8:00 AM	The Bioprocessing Summit 2025 Omni Hotel Boston at the Seaport
September 18 9:00 AM	The 2025 Aging Brain Initiative Symposium: The Neuro-Immune Axis and the Aging Brain Singleton Auditorium
September 22 - 25 8:00 AM	Discovery On Target 2025 Sheraton Boston Hotel

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🏢 Science Jobs in Boston

Senior Principal Scientist, Discovery BioSciences
Bristol Myers Squibb

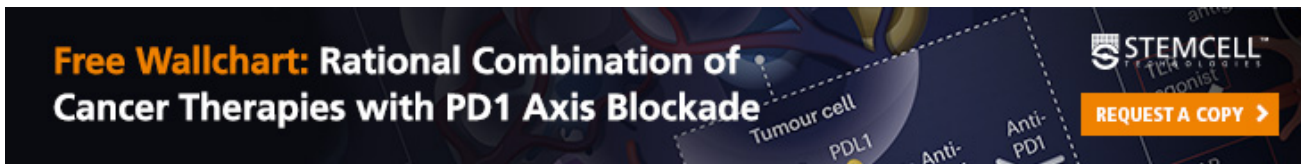
Research Fellow, Stanton Lab
Mass General Brigham

Discovery Postdoctoral Fellow, Fibrosis & Aging
Novartis

Research Investigator
Takeda

Postdoctoral Research Fellow
Beth Israel Deaconess Medical Center

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