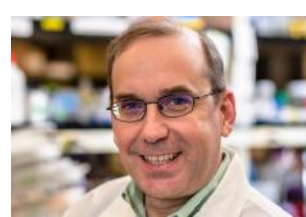


**Publications of the Week**
**cGAS-Like Receptors Sense RNA and Control 3'2'-cGAMP Signaling in Drosophila**

 First Author: Kalley Slavik | Senior Author: Philip Kranzusch (pictured)  
 Nature | Harvard Medical School and Dana-Farber Cancer Institute


Cyclic GMP-AMP synthase (cGAS) is a cytosolic DNA sensor that produces the second messenger 2'3'-cGAMP and controls activation of innate immunity in mammalian cells. The authors show that cGAS-like receptors are innate immune sensors capable of recognizing divergent molecular patterns and catalyzing synthesis of distinct nucleotide second messenger signals. [Abstract](#)

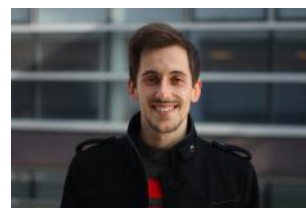
**Dynamic BH3 Profiling Identifies Active BH3 Mimetic Combinations in Non-Small Cell Lung Cancer**

 First Author: Danielle Potter | Senior Author: Anthony Letai (pictured)  
 Cell Death & Disease | Dana-Farber Cancer Institute, Brigham and Women's Hospital, and Harvard Medical School


Drug-induced mitochondrial apoptotic priming, measured by dynamic Bcl-2 homology 3 (BH3) profiling, has been shown in multiple cancers to identify drugs that promote apoptosis *in vivo*. To assess whether targeted agents that increase priming might enhance the efficacy of cytotoxic agents *in vivo* as well, the authors carried out an efficacy study in a PC9 xenograft mouse model. [Abstract](#)

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**Awards**
**Awards & Recognitions: July 2021**

Harvard Medical School (HMS)



Dr. Alen Juginovic (pictured), Research Fellow in Neurobiology at HMS, received the 2021 European Citizen's Prize from the European Parliament for a project he led, "With One Dream United." The prize honors exceptional achievements in promoting better mutual understanding and closer integration between citizens of the member states or facilitating cross-border or transnational cooperation within the European Union. [Read More](#)

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**Local News**
**Grant to Help Scientists Test Whether Brain Region Is a Key Locus of Learning**

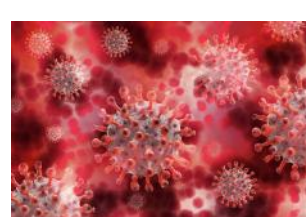
Picower Institute



Small and seemingly specialized, the brain's locus coeruleus (LC) region has been stereotyped for its outsized export of the arousal-stimulating neuromodulator norepinephrine. In a new paper and with a new grant from the National Institutes of Health, an MIT neuroscience lab is making the case that the LC is not just an alarm button, but has a more nuanced and multifaceted impact on learning, behavior, and mental health than it has been given credit for. [Read More](#)

**Early Antiviral Response in the Nose May Determine the Course of COVID-19**

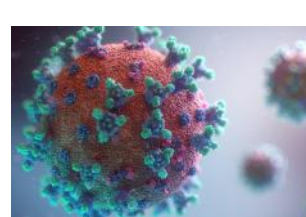
Broad Institute



Over the past 18 months, researchers have learned much about COVID-19 and its viral cause, SARS-CoV-2. They know how the virus enters the body, coming in through the nose and mouth and beginning its infection in the mucus layers of the nasal passageway. They know that infections that remain in the upper airway are likely to be mild or asymptomatic, while infections that progress down the airway to the lungs are much more severe and can lead to fatal disease. [Read More](#)

**Atlas of Antiviral Defenses**

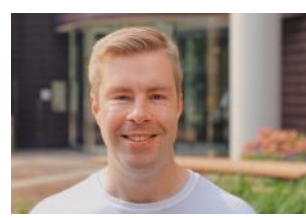
Harvard Medical School



As SARS-CoV-2 continues to evolve, immunologists and infectious disease experts are eager to know whether new variants have grown resistant to the human antibodies that recognized and fought off the initial versions of the virus. Vaccines against COVID-19, developed based on the chemistry and genetic code of this initial virus, may confer less protection if the antibodies they help people produce do not fend off new viral strains. [Read More](#)

**Meet a Whitehead Postdoc: Max Friesen**

Whitehead Institute



Dr. Max Friesen (pictured) is a Postdoc in Whitehead Institute member Dr. Rudolf Jaenisch's lab studying cell metabolism and diabetes. His research focuses on type 2 diabetes, a disease that impacts the quality of life of millions of people globally. He has been working on developing a more accurate human stem cell-derived model of diabetes. [Read More](#)

**Brain's 'Memory Center' Needed to Recognize Image Sequences but Not Single Sights**

Picower Institute



A new MIT study of how a mammalian brain remembers what it sees shows that while individual images are stored in the visual cortex, the ability to recognize a sequence of sights critically depends on guidance from the hippocampus. "This offers the opportunity to actually understand, in a very concrete way, how the hippocampus contributes to memory storage in the cortex," said senior author Dr. Mark Bear (pictured). [Read More](#)

**What Makes Some Immune Cells Better at Killing Melanoma**

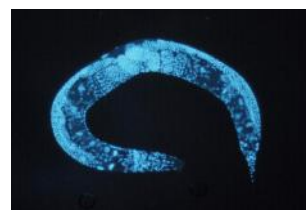
Broad Institute



How the molecular structure and function of T cell receptors (TCRs) correlates with T cell behavior is not fully understood. In a new study published in *Nature*, Drs. Giacomo Oliveira and Catherine Wu (pictured) and colleagues at the Dana-Farber Cancer Institute and the Cancer Program at the Broad Institute of MIT and Harvard take an in-depth look at the relationship between TCRs and T cell phenotypes. [Read More](#)

**Mapping the Cellular Circuits behind Spitting**

MIT Biology



For over a decade, researchers have known that the roundworm *Caenorhabditis elegans* can detect and avoid short-wavelength light, despite lacking eyes and the light-absorbing molecules required for sight. As a graduate student in the Horvitz lab, Dr. Nikhil Bhatia proposed an explanation for this ability. He observed that light exposure not only made the worms wriggle away, but it also prompted them to stop eating. [Read More](#)

**Dana-Farber Cancer Institute Establishes the David Liposarcoma Research Initiative**

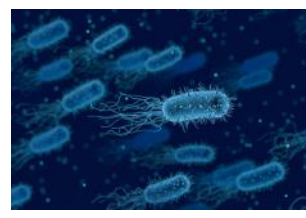
Dana-Farber Cancer Institute



The Dana-Farber Cancer Institute has announced that The Rossy Foundation has committed \$10 million to establish the David Liposarcoma Research Initiative. The five-year initiative will spearhead groundbreaking research into liposarcoma at Dana-Farber and external collaborating partner institutions, with the aim of transforming the treatment of this rare, underfunded, and understudied disease in order to improve care of patients through research. [Read More](#)

**Centenarians Have a Distinct Microbiome That May Help Support Longevity**

Broad Institute



Centenarians are less susceptible to age-related chronic diseases and more likely to survive infectious diseases. Now, a new study reveals that people who live to be 100 or older have a unique microbiome that may protect them from certain bacterial infections including those caused by multidrug-resistant bacteria. The findings, published in *Nature*, could help researchers develop new ways to treat chronic inflammation and bacterial disease. [Read More](#)

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August 18 12:00 PM	<b>Use Social Media to Promote Your Department/Center/Lab</b> Online
September 9 12:00 PM	<b>Topics in Bioengineering: Khuluod Al Jamal</b> Online
September 13 4:30 PM	<b>The Next Normal: Global Health</b> Online
September 17 8:30 AM	<b>Engineering the Next Wave of Immunotherapy</b> Online

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