

Publications of the Week

Modulating Androgen Receptor-Driven Transcription in Prostate Cancer with Selective CDK9 Inhibitors

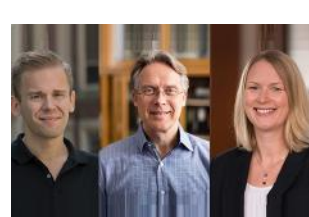
First Author: André Richters (pictured, top left) and Shelby Doyle (top right) | Senior Author: Dr. Angela Koehler (bottom) | Cell Chemical Biology | Broad Institute, Koch Institute and MIT



Castration-resistant prostate cancers lose sensitivity to androgen-deprivation therapies but frequently remain dependent on oncogenic transcription driven by the androgen receptor (AR) and its splice variants. The authors deduced KI-ARv-03 to be a potent, selective inhibitor of CDK9, an important cofactor for AR, MYC, and other oncogenic transcription factors. [Profile](#) | [Abstract](#)

Cell Type-Specific Lipid Storage Changes in Parkinson's Disease Patient Brains Are Recapitulated by Experimental Glycolipid Disturbance

First Author: Oeystein Brekk (pictured, left) | Senior Author: Ole Isacson (pictured, center) | PNAS | McLean Hospital and Harvard Medical School



The field of Parkinson's disease biology has shifted attention away from pure proteotoxic hypotheses to emphasize primary cellular insults, including glycolipid disturbances. Dopaminergic neurons in the Parkinson's disease-vulnerable region of substantia nigra were found to accumulate neutral lipids, whereas in the same tissues, astrocytes had reduced lipid content, and resident microglia showed overall accumulation of lipids associated with inflammation. [Profile](#) | [Abstract](#)

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Awards

Investing in Exceptional Promise: Blavatnik Therapeutics Challenge Awards Promote Translational Opportunities, Therapeutics Development

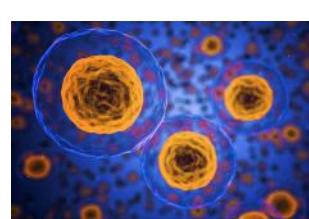
Harvard Medical School



Five research projects with exceptional promise to deliver new life-changing and health-altering therapies have received the inaugural Blavatnik Therapeutics Challenge Awards at Harvard Medical School. The projects, which target a diverse range of conditions will each receive \$1 million over two years to advance their efforts. Among the principal investigators is Dr. Elliot Chaikof (pictured). [Read More](#)

15 HMS Researchers Awarded Grants to Support More Representative Research for the Human Cell Atlas

Harvard Medical School



Researchers worldwide are working together to create a common reference map of all human cells that will allow us to better understand and treat disease: the Human Cell Atlas. Fifteen Harvard Medical School (HMS) researchers are co-principal investigators on 10 teams to receive supplemental grants from the Chan Zuckerberg Initiative to expand the Human Cell Atlas. [Read More](#)

Local News

New Cause of Inflammation in People with HIV Identified

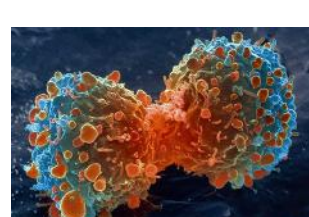
Boston Medical Center



While current antiretroviral treatments for HIV are highly effective, data has shown that people living with HIV appear to experience accelerated aging and shorter lifespans. These outcomes have been associated with chronic inflammation. A new study led by Dr. Manish Sagar (pictured) at Boston Medical Center has identified the inability to control HIV RNA production from existing HIV DNA as a potential key driver of inflammation. [Read More](#)

Precision Chemo-Immunotherapy for Pancreatic Cancer?

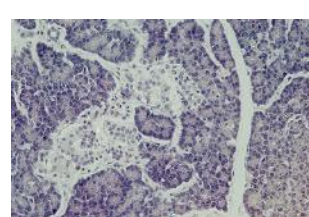
Boston Children's Hospital



Pancreatic cancer is highly lethal and in great need of better treatments. Only about 10 percent of patients remain alive five years after diagnosis. In a new study, researchers in the lab of Dr. Marsha Moses at Boston Children's Hospital offer a glimmer of hope. Using a highly selective, potent, engineered antibody-drug combination, they produced marked and lasting tumor regression in a mouse model of pancreatic cancer. [Read More](#)

5-Module CAR-T Cells Show Promise for Targeting Pathogenic T Cells and Preventing the Development of Type 1 Diabetes

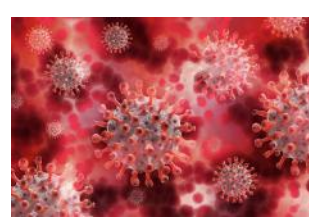
Joslin Diabetes Center



T cells with a biomimetic-designed chimeric antigen receptor (CAR) can specifically target and eliminate pathogenic T cell populations, according to new research from Joslin Diabetes Center. Specifically, the researchers used the approach to demonstrate how type 1 diabetes in mice that is induced by such pathogenic T cells can effectively be prevented from developing in the first place. [Read More](#)

Study Uncovers Subset of COVID-19 Patients Who Recover Quickly and Sustain Antibodies

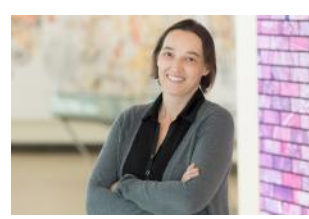
Brigham and Women's Hospital



A new study led by investigators from Brigham and Women's Hospital examined blood samples and cells from patients who had recovered from mild to moderate COVID-19 and found that, while antibodies against the virus declined in most individuals after disease resolution, a subset of patients sustained anti-virus antibody production several months following infection. [Read More](#)

Angelika Amon, Cell Biologist Who Pioneered Research on Chromosome Imbalance, Dies at 53

MIT News



Angelika Amon (pictured), Professor of Biology at MIT and a member of the Koch Institute, died on Oct. 29 at age 53, following a two-and-a-half-year battle with ovarian cancer. "Known for her piercing scientific insight and infectious enthusiasm for the deepest questions of science, Professor Amon built an extraordinary career – and in the process, a devoted community of colleagues, students and friends," MIT President L. Rafael Reif wrote in a letter to the MIT community. [Read More](#)

Chromatin Regulation Enables Generation of Diverse Antibodies

Boston Children's Hospital



We need a variety of antibody types to help fight off invading foreign pathogens and our genome is exquisitely tuned to produce them to meet emerging needs. A new study from the laboratory of Dr. Frederick Alt (pictured) of the Program in Cellular and Molecular Medicine at Boston Children's Hospital has found that not just our DNA, but its configuration and packaging, help us generate diverse antibodies. [Read More](#)

How Scientists Launched a Study in Days to Probe COVID-19's Unpredictability

Broad Institute



On a Friday afternoon in mid-March 2020, as the emergency department at Massachusetts General Hospital began admitting its first coronavirus patients, attending emergency physician and researcher Dr. Michael Filbin recognized an urgent need to quickly learn about the emerging pathogen. Filbin decided to assemble a team of researchers to answer a key question that made the illness so hard to treat. [Read More](#)

From Ideas to Medicines

Harvard Medical School



Helping Harvard Medical School (HMS) scientists develop better medicines that can improve human health. That's the goal of the HMS Therapeutics Initiative — a sweeping school-wide endeavor to advance fundamental scientific discovery, help translate discoveries into medicines and craft new educational paradigms for therapeutics education. [Read More](#)

Additional COVID-19 Related Genes – Both Helpful and Harmful – Revealed in Massive Screen

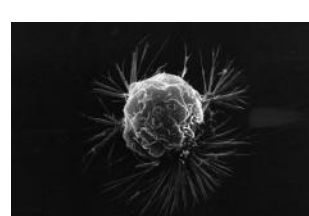
Broad Institute



Researchers at the Broad Institute and Yale University screened hundreds of millions of cells exposed to the SARS-CoV-2 and MERS viruses, and have identified dozens of genes that enable the viruses to replicate in cells, as well as those that seem to slam the door on the virus. The pro-viral and anti-viral roles of these genes will help guide scientists in development of new therapies to combat COVID-19. [Read More](#)

Melding Biology and Physical Sciences Yields Deeper Understanding of Cancer

Massachusetts General Hospital



An evolving understanding of cancer that incorporates the physical properties of tumors and their surrounding tissues into existing biologic and genetic models can direct cancer researchers down previously uncharted avenues, potentially leading to new drugs and new treatment strategies, say investigators from Massachusetts General Hospital, Harvard Medical School (HMS), and the Ludwig Center at HMS. [Read More](#)

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Upcoming Events in Boston

November 11 6:30 PM	Antibiotics: From Cures to Crisis Online
November 12 8:00 AM	Virtual Discover Brigham 2020 Online
November 12 5:00 PM	Story Slam: Tales from the Bench and Beyond Online
November 12 6:00 PM	Beyond Academia: A Career Panel Discussion for Life Science PhDs Online
November 13 2:00 PM	Stem Cell Day Online

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Broad Institute
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Rheos Medicines
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Novartis
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