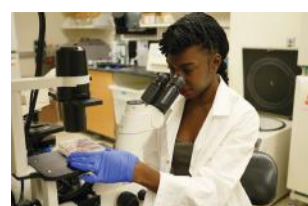


Publications of the Week
Rev7 Loss Alters Cisplatin Response and Increases Drug Efficacy in Chemotherapy-Resistant Lung Cancer

 First Author: Faye-Marie Vassel (*pictured*) | Senior Author: Michael Hemann PNAS | MIT and the Koch Institute


The authors examined whether targeting Rev7, a component of the translesion synthesis machinery, could potentiate the action of cisplatin in non-small cell lung cancer (NSCLC) treatment. Rev7 loss led to an enhanced tumor cell sensitivity to cisplatin and dramatically improved chemotherapeutic response in a highly drug-resistant mouse model of NSCLC. [Abstract](#)

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Awards
Meet the 2020 STAT Wunderkinds

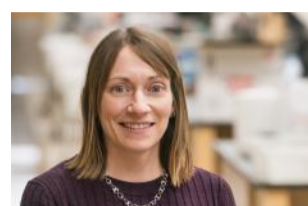
STAT



STAT set out to celebrate the unheralded heroes of science and medicine, poring over hundreds of nominations from across North America in search of the next generation of scientific superstars. Deepshika Ramanan (*pictured*) from Harvard Medical School is among the various Boston-based researchers to be named a 2020 STAT Wunderkind. [Read More](#)

Kim Lab Receives American Lung Association Research Award

Boston Children's Hospital



Boston Children's Hospital's Stem Cell Program has announced that Dr. Carla Kim (*pictured*) was awarded a grant from the American Lung Association. The Lung Association has committed \$11.55 million total to fund promising research through 98 awards. Dr. Kim's research will advance the understanding of using organoid models of lung cancer to test treatment. [Read More](#)

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Local News
Potential Cholera Vaccine Target Discovered

Massachusetts General Hospital



Findings from a team led by investigators at Massachusetts General Hospital may help scientists develop a more effective vaccine for cholera, a bacterial disease that causes severe diarrhea and dehydration and is usually spread through contaminated water. Interestingly, immune responses to a cholera-secreted toxin do not protect against cholera, but previous research from the team showed that antibodies that bind *V. cholerae*'s sugar coating do offer protection. [Read More](#)

Women in Science: Ana Maldonado-Contreras Pivots Gut Microbiome Studies to Tackle COVID-19

UMass Med News



Dr. Ana Maldonado-Contreras (*pictured*), Assistant Professor of Microbiology & Physiological Systems at UMass Medical School, has been fascinated by the relationship between diet, bacteria in the gut and health throughout her career. Since the coronavirus SARS-CoV-2 arrived on the scene early in 2020, Maldonado-Contreras has pivoted to trying to understand how gut microbes can predispose patients to severe COVID complications. [Read More](#)

Peptide is a Key Mediator in the Regulation of Compulsive Alcohol Drinking

BU School of Medicine (BUSM)



BUSM researchers have identified a peptide, pituitary adenylate cyclase-activating polypeptide, as a mediator of compulsive consumption of alcohol. They have discovered that this protein acts in an area of the brain called the bed nucleus of the stria terminalis — a region involved in fear, anxiety and stress responses — to exert these effects. [Read More](#)

Turning the Problem of Cancer Metastasis into an Opportunity

Wyss Institute



The grim prognosis for patients with lung metastasis may soon be less grim thanks to a new technique developed by researchers at Harvard's Wyss Institute and School for Engineering and Applied Sciences. Rather than viewing lung metastasis as unfortunate fallout from a primary tumor elsewhere, the team focused on treating the metastasis itself by delivering immune-cell-attracting chemicals into lung cancers via red blood cells. [Read More](#)

The Coronavirus Sneaks Its Way into Cells. But How?

Tufts Now



In Spring 2020, as the world watched the novel coronavirus spread across the globe, Dr. Marta Gaglia (*pictured*), Assistant Professor of Molecular Biology and Microbiology at Tufts University School of Medicine, had a realization: The very same approaches she had been using to study familiar viruses like influenza and herpes could be applied to SARS-CoV-2, the virus that causes COVID-19. [Read More](#)

Forsyth Launches New Forsyth Oral Microbiome Core

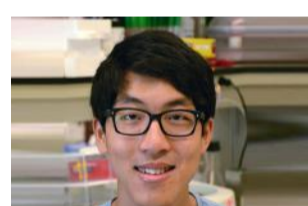
The Forsyth Institute



The Forsyth Institute is now offering next generation sequencing and comprehensive data analyses and interpretation for 16S rRNA gene amplicon sequences and other big data sequence applications through the new Forsyth Oral Microbiome Core. They use state-of-the-art bioinformatic methodology, which will provide the best possible taxa identification. [Read More](#)

Regulating the Regulators

Whitehead Institute



Charlie Shi (*pictured*) and colleagues in Dr. David Bartel's lab at the Whitehead Institute have shown that mRNAs and other RNAs often turn the tables on their microRNA regulators, and show that the path to microRNA degradation is not what scientists expected it to be. "A lot of people know that microRNAs repress mRNAs — that's textbook," said Shi, a graduate student in Bartel's lab. "But in certain cases, this logic is reversed." [Read More](#)

Two Treatment Methods Enhance Chemotherapy by the Same Means: Cellular Senescence

MIT Biology



In 2019, cancer researchers from MIT found a drug that targeted an elusive molecular interaction previously considered "undruggable." In doing so, they opened up a new realm of chemotherapy. This drug, called JH-RE-06, sensitized tumors to treatment, but the scientists didn't fully understand how it exerted its effects. Now, in a pair of studies, the same team is closer to determining which cellular processes this drug alters to enhance cancer therapy. [Read More](#)

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Upcoming Events in Boston

- December 1 4:00 PM **MIT Biology Colloquium Series: Dr. Erin Schuman** Online
- December 2-4 7:00 AM **2020 HMS Research Cores Online Poster Showcase** Online
- December 2 4:00 PM **MIT Alumni Virtual Research Slam** Online
- December 2 4:00 PM **Research on Tap: Wearables and Biosensors for Environmental and Human Health** Online
- December 4 2:00 PM **The History of Now: Plagues and Pandemics Series** Online

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Celsius Therapeutics
- Principal Research Associate for Biological Sciences**
Ribon Therapeutics
- Research Scientist 1, Pathology and High-Plex Imaging Assay Development**
Broad Institute
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