



Publications of the Week

Oesophageal Tissue Screening System for Assessing the Retention and Mucosal Absorption of Biologics

First Author: Christina Karavasili | Senior Author: Giovanni Traverso *(pictured)*
Nature Biomedical Engineering | Brigham and Women's Hospital, Harvard Medical School, Broad Institute, and MIT



Drug delivery to the oesophagus poses unique challenges, including rapid transit time due to gravity and the presence of a stratified squamous non-keratinized epithelium. Here, to rapidly identify formulations of excipients for enhanced drug delivery to the oesophagus, researchers developed an oesophageal tissue screening system consisting of specialized custom plates, to incorporate gravity effects, and excised oesophageal mucosa tissues. [Abstract](#) | [Press Release](#)

Efficient Prime Editing *In Vivo* and *In Vitro* Using Lipid Nanoparticles

First Authors: Allen Jiang *(pictured)* and Ana Cristian | Senior Author: David Liu
Nature Nanotechnology | Howard Hughes Medical Institute, Harvard University, Broad Institute, and MIT



Prime editing is a versatile clinical genome editing method that enables precise substitutions, small insertions and deletions at specified locations in the genomes of living systems including human cells. Here, researchers developed a systematic prime editing lipid nanoparticle optimization platform that addresses key bottlenecks in cargo design that limit editing efficiency. [Abstract](#) | [Press Release](#)

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Awards

MIT Affiliates Win 2026 Breakthrough, New Horizons Prizes

MIT News



A number of MIT affiliates were recently honored for their research by the Breakthrough Prize Foundation. Dr. Stuart Orkin *(pictured)* shared a Breakthrough Prize in Life Sciences with Dr. Swee Lay Thein for their research transforming sickle cell disease and beta-thalassemia from incurable to treatable conditions through gene editing therapy. [Read More](#)

Neuroscience Graduate Vanessa Frelih Wins Glushko Prize for Research on Cognitive Flexibility and Aging

Harvard University Department of Molecular and Cellular Biology



Recent Harvard graduate Vanessa Frelih *(pictured)* has been awarded the Robert J Glushko Thesis Prize which recognizes outstanding undergraduate thesis research in cognitive science. Frelih investigated one of the key challenges associated with aging: why older individuals often struggle to adapt to changing environments while retaining many other cognitive abilities. [Read More](#)

Drs. Laura L. Kiessling and Ronald T. Raines Named van 't Hoff Lectureship Award Recipients

MIT Chemistry



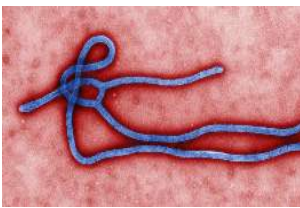
Drs. Laura Kiessling *(pictured, left)* and Ronald Raines *(right)* have been awarded the 2026 van 't Hoff Lectureship Award from the Koninklijke Nederlandse Akademie van Wetenschappen in the Netherlands. Established in 1957 in memory of Dutch chemist Jacobus Henricus van 't Hoff—the first Nobel laureate in Chemistry—the award recognizes leading scientists for their innovative chemistry research. [Read More](#)

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Local News

How Worried Should We Be About the Bundibugyo Ebola Outbreak?

The Brink



An Ebola outbreak in Central Africa that has already claimed more than 130 lives has become a "public health emergency of international concern," according to the World Health Organization. The Boston University–led global infectious diseases tracker, BEACON, first flagged an uptick in Ebola cases in the Democratic Republic of Congo's Ituri Province in mid-May and has continued to monitor the disease's rapid spread. [Read More](#)

Finding Better Answers for Patients With a Deadly Bone Cancer

Tufts Now



The era of precision medicine has successfully targeted many types of cancer, but not osteosarcoma. A new research initiative, co-led by Dr. Heather Gardner *(pictured)*, aims to change that. Backed by a \$15 million investment from patient-driven foundations, Break Through Cancer's Defying Osteosarcoma TeamLab unites more than 20 researchers from eight leading institutions to tackle the disease through a coordinated, multiyear effort. [Read More](#)

Malaria Is Gaining Ground—But Researchers Are Developing Promising New Solutions

Harvard T.H. Chan School of Public Health



Malaria is both an ancient and modern scourge. Malaria researchers at Harvard T.H. Chan School of Public Health and across the university discussed the challenges, unnovations, and spread of the disease at a May 15 symposium titled "Malaria in a Changing World: Past Lessons, Present Challenges, and Future Solutions." [Read More](#)

3D-Printed Devices Could Streamline the Production of Drug-Delivery Microparticles

MIT News



MIT researchers have demonstrated a low-cost design of specialized electronic nozzles, called triaxial electrospray emitters, that could be used to manufacture time-release drug-delivery particles or self-healing materials efficiently and at scale. "We couldn't make a device like this in a semiconductor cleanroom. This is only possible because they are 3D-printed," says Luis Fernando Velásquez-García *(pictured)*, senior author of a paper describing this advance. [Read More](#)

Expanding Uses for Bioengineered Bacterial Spores

Tufts Now



Bacterial spores make great candidates for bioengineering. Tufts researchers have found new ways to expand the potential for using bacterial spores as catalysts for chemical reactions, biofuel production, or breaking down pollutants. Dr. Nikhil Nair *(pictured)* leads a team of researchers that are designing spores to express drugs, industrial enzymes, and catalysts. [Read More](#)

Fluorescent Nanosensor Enables Rapid, First-Of-Its-Kind Detection of Key Gut Health Biomarker

MIT News



An international team of researchers has developed a novel fluorescent nanosensor powered by carbon nanotubes that is capable of rapidly detecting an emerging biomarker linked to gut health and disease. This important development could eventually lead to faster and more accessible gut-health testing. The new platform addresses a longstanding gap in gut metabolite sensing. [Read More](#)

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Upcoming Events in Boston

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|----------------------|---|
| June 22
6:30 PM | Lectures on Tap – One Neuroscientist's Quest to Alter the Past
Boston Seaport |
| June 30
7:30 PM | Designing Materials that Fuel Human Creativity Binge Thinking
Mighty Squirrel Taproom & Kitchen |
| July 15
7:00 PM | Mass Innovation Nights
Museum of Science |
| July 23
8:00 AM | MALSI Day 2026
The Engine |
| August 13
7:00 PM | Poetry Night – Where Science Speaks in Verse
Museum of Science |

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Science Jobs in Boston

- Scientific Inside Sales Representative, Immunology**
STEMCELL Technologies
- Research Lab Tech**
Mass General Brigham
- QC Scientist I**
Pfizer
- Research Technician, Lee Lab**
Dana-Farber Cancer Institute
- Research Associate, Infectious Disease Virology**
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