

### Publications of the Week

## A Spatiotemporal Notch Interaction Map from Plasma Membrane to Nucleus

First Author: Alexandre Martine | Senior Authors: Marian Kalocsay and Stephen Blacklow *(pictured)*  
 Science Signaling | Harvard Medical School, Brigham and Women's Hospital, Boston Children's Hospital, and Dana-Farber Cancer Institute



To map the location and timing of the individual steps required for the proteolysis and movement of Notch from the plasma membrane to the nucleus, the authors used proximity labeling with quantitative, multiplexed mass spectrometry to monitor the interaction partners of endogenous NOTCH2 after ligand stimulation in the presence of a  $\gamma$ -secretase inhibitor and as a function of time after inhibitor removal.

[Abstract](#)

## Exploring the Relationship Between History of Infertility and the Experience of Menopausal Symptoms

First Author: Victoria Fitz | Senior Author: Jorge Chavarro *(pictured)*  
 Menopause | Massachusetts General Hospital and Harvard University



The authors examine longitudinal associations of history of infertility with menopausal symptoms in midlife. Their findings suggest that women with prior infertility are more likely to have an Menopause Rating Scale score above the median and experience depressive mood, irritability, and sleep problems during midlife than women without infertility. [Abstract](#) | [Press Release](#)

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### Awards

## Whitehead Institute Researchers Receive an HHMI Gilliam Fellowship

Whitehead Institute



Doctoral researcher Anaïs Tsai and Whitehead Institute Director Dr. Ruth Lehmann *(pictured)* are recipients of a 2023 Howard Hughes Medical Institute Gilliam Fellowship for Advanced Study. Working under Dr. Lehmann's guidance, Tsai is researching how germline transcription is regulated by a pioneer transcription factor during embryonic development. [Read More](#)

## Iain Cheesman Named a Fellow of the American Society for Cell Biology

Whitehead Institute



The American Society for Cell Biology (ASCB) has elected Whitehead Institute Member Dr. Iain Cheesman *(pictured)* as a Fellow of the Society. An honor bestowed by his scientific peers, the selection as an ASCB Fellow recognizes Dr. Cheesman's decades of research achievements and his continuing efforts to advance the field of cell biology. [Read More](#)

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### Local News

## Lab on a Chip Technologies to Improve the Assessment of Stored Red Blood Cells

Massachusetts General Hospital



Dr. Osman Berk Usta *(pictured)* and others posit that stored red blood cells (RBCs), under current practices, are not always safe to transfuse due to donor, time, and processing factors. They highlighted the lack of quantitative assessment of stored RBCs before transfusion on a unit-by-unit basis, a notable failure in this era of personalized medicine. [Read More](#)

## Syrian Refugees Are Diagnosed with Breast Cancer Younger and with More Advanced Tumors, Study Finds

Brigham and Women's Hospital



Brigham researchers with Dr. Aditi Hazra *(pictured)* and international collaborators identified that Syrian migrants, including refugees, with breast cancer were more likely to be younger and diagnosed with late-stage cancers when compared to Jordanian women. "We know that there is stigma, a delay to accessing care, and competing interests for funding in regard to treating breast cancer in Syrian refugees," said Dr. Hazra. [Read More](#)

## Errant Cell Division Can Lead to Changes in Gene Activity, Study Finds

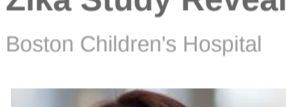
Dana-Farber Cancer Institute



There are several ways to ruin a tune: play the wrong notes, play them at the wrong time, or with the wrong emphasis. Cancer cells, working from a corrupted score — their genome — manage to do all three. Dr. David Pellman *(pictured)* and scientists at Dana-Farber describe a mechanism by which such alterations could arise — a process that involves one of the most perilous, harrowing experiences a chromosome can undergo. [Read More](#)

## Zika Study Reveals How Infection Can Cause Microcephaly

Boston Children's Hospital



The Zika epidemic in Brazil during 2015-2016 posed an extreme case, causing hundreds of babies to be born with microcephaly, or an abnormally small head. "Multiple viruses, including chickenpox, measles, cytomegalovirus, West Nile, and herpes simplex viruses can cause congenital brain diseases in newborns in the US," says neurobiologist Dr. Judith Steen *(pictured)*. [Read More](#)

## Massachusetts General Hospital Launches First-of-its-Kind Center for Clinical Transplant Tolerance

Massachusetts General Hospital



Dr. Tatsuo Kawai *(pictured)* will serve as the first director of the Legorreta Center for Clinical Transplant Tolerance. "Over the last almost four decades, our transplant patients have been treated with the same three powerful but toxic immunosuppressive medicines with no major advances in the field. However, we are now ready to radically change the care of transplant patients through transplant tolerance," said Dr. Kawai. [Read More](#)

## Making Sense of Cell Fate

MIT News



MIT researchers with Dr. Michael Yaffe *(pictured)* show that cell signaling proteins commonly associated with cell proliferation and apoptosis instead commit cancer cells to senescence within 12 hours of treatment with low doses of certain kinds of chemotherapy. "When it comes to treating cancer, this study underscores that it's important not to think too linearly about cell signaling," says Dr. Yaffe. [Read More](#)

## Kiessling Paper Published in Science Advances

MIT Chemistry



Members of Dr. Laura Kiessling's *(pictured)* lab have been studying the role of human lectins, many of which are found at interfaces between our bodies and microbes. It is known that human lectins influence the microbiome, but how they influence it remains a mystery. The researchers recently developed a general strategy to relate glycan binding to microbe species identity. [Read More](#)

## Helping to Fill In Gaps in Urology Research for Female Patients

Whitehead Institute



Dr. Nicole De Nisco *(pictured)* studies urinary tract infections (UTIs) and the urinary microbiome in postmenopausal women. She discovered that reservoirs of tissue-resident bacteria exist in human patients with recurring UTIs, a condition which may ultimately lead to women needing to have their bladder removed. Dr. De Nisco now mostly works with postmenopausal women who have been suffering from decades of recurring UTIs. [Read More](#)

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### 📅 Upcoming Events in Boston

August 14 - 17  
12:00 PM **The 15<sup>th</sup> Annual Bioprocessing Summit**  
Hynes Convention Center

August 28 - 29  
8:00 AM **The mRNA Conference 2023**  
DoubleTree by Hilton Hotel

Sept 7 - 10  
7:30 AM **Hypertension Scientific Sessions 2023**  
Sheraton Boston Hotel

Sept 18 - 21  
9:30 AM **BioTech Week**  
Boston Convention and Exhibition Center

Sept 20 - 21  
10:00 AM **BIOMEDevice Boston 2023**  
Boston Convention and Exhibition Center

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### 📁 Science Jobs in Boston

**Cell & Gene Therapy Specialist, North America**

STEMCELL Technologies

**Scientific Inside Sales Representative, Cell Culture**

STEMCELL Technologies

**Research Assistant, Epidemiological Research**

Harvard Medical School

**Associate Director, Oncology Program Management**

Moderna

**Medical Science Liaison, Vaccines**

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