

Publications of the Week

Anti-HLA Antibodies in Recipients of CD19 versus B Cell Maturation Antigen-Targeted CAR T-Cell Therapy

 First Author: Joshua Hill (*pictured*) | Senior Author: Shaun Jackson
 American Journal of Transplantation | UW and Fred Hutch


Antibodies against foreign human leukocyte antigen (HLA) molecules are barriers to successful organ transplantation. B cell-depleting treatments are used to reduce anti-HLA antibodies but have limited efficacy. The authors hypothesized that the primary source for anti-HLA antibodies is long-lived plasma cells, which are ineffectively targeted by B cell depletion. [Abstract](#)

A Virus-Packable CRISPR System Identifies Host Dependency Factors Co-Opted by Multiple HIV-1 Strains

 First Author: Vanessa Montoya | Senior Author: Michael Emerman (*pictured*)
 mBio | UW and Fred Hutch


At each stage of the HIV life cycle, host cellular proteins are hijacked by the virus to establish and enhance infection. The authors adapted the virus packageable HIV-CRISPR screening technology at a genome-wide scale to comprehensively identify host factors that affect HIV replication in a human T cell line. Many host processes were identified and validated as critical for HIV replication across multiple HIV strains. [Abstract](#)

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Local News

Seattle Institute Lands \$9.9M to Develop Nasal Spray Vaccine Against Bird Flu

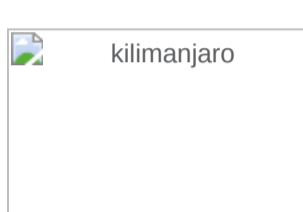
GeekWire



The Access to Advanced Health Institute (AAHI) is aiming to develop an RNA-based nasal flu vaccine with a \$9.9 million award from the U.S. government. The vaccine will be developed against two bird flu viruses that have pandemic potential, H7N9 and H5N1. AAHI principal scientist Dr. Emily Voigt (*pictured*) called AAHI's approach "rapid-response RNA technology." [Read More](#)

Striving for the Summit of Kilimanjaro

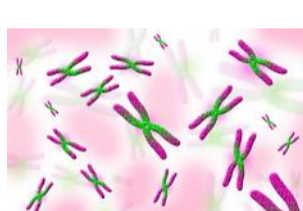
Fred Hutch



This week, a team of nearly 20 philanthropically minded biotech leaders — as well as two Fred Hutch researchers — will combine both of those pursuits when they set out to tackle Mount Kilimanjaro. Regardless of whether they summit Africa's tallest peak, though, the group of driven entrepreneurs has already succeeded in raising \$1 million to fuel scientific discovery at Fred Hutch. [Read More](#)

Struggle Between Sex Chromosomes Underlies Evolutionary Paradox

Fred Hutch



In some species' sperm, X and Y chromosomes wrestle for dominance, each trying to improve its chances of reaching the next generation. New work from scientists at Fred Hutch shows that certain genes in fruit flies used for DNA packaging have been conscripted into this tussle, shaping — and accelerating — their evolution. [Read More](#)

How Do You Make a Universal Flu Vaccine?

The Conversation



Dr. Deborah Fuller (*pictured*) is a Professor of Microbiology at UW developing new vaccines to prevent future pandemics, and Co-Founder of Orliance, a biotechnology company developing a needle-free delivery technology for DNA and RNA vaccines. In this article, she explains the challenges of making a universal flu vaccine and how mRNA could offer a promising solution. [Read More](#)

Are We on the Cusp of a Breast Cancer Vaccine?

Seattle Met



Classic sexism propelled Dr. Nora Disis into breast cancer research. "I was the only woman in my oncology fellowship class, so they had me attend the breast cancer clinic." The old boys' club gets a pass this time because Dr. Disis, Director of the Cancer Vaccine Institute at UW Medicine and a UW and Fred Hutch faculty member, is on the verge of the greatest accomplishment of her 30-plus-year career: a breast cancer vaccine. [Read More](#)

Contagious Cancer in Shellfish Sparks Investigation by International Team of Scientists

Pacific Northwest Research Institute



Dr. Michael Metzger, Assistant Investigator at Pacific Northwest Research Institute, and a team of global co-investigators will study how a virus-like cancer spreads among basket cockles on the Pacific Coast and soft-shell clams on the Atlantic Coast. "We don't normally think of cancer as an infectious disease," said Dr. Metzger. "But several transmissible cancers have recently been found in the wild, causing significant mortality." [Read More](#)

In the Hunt for a Male Contraceptive, Scientists Look to Stop Sperm in Their Tracks

NPR



Researchers are looking into both hormonal and non-hormonal contraceptives for sperm bearers. The hope is that couples will begin to treat contraception more as a shared responsibility. "We would like to create a menu of options for men similar to what women have available to them," says Stephanie Page, a researcher and endocrinologist at UW. [Read More](#)

Long COVID Now Looks Like a Neurological Disease, Helping Doctors to Focus Treatments

Scientific American



Determining which long COVID patients have ongoing inflammation could help inform treatments. Early research identified markers that often are elevated in people with the condition, says Dr. Troy Torgerson (*pictured*), an immunologist at the Allen Institute in Seattle. Three cell-signaling molecules—tumor necrosis factor alpha, interleukin 6 and interferon beta—stood out in long COVID patients. [Read More](#)


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Upcoming Events in Seattle

- | | |
|------------------------|---|
| February 27
8:00 am | Global Oncology Lecture Series
Online |
| February 28
9:00 am | Expanding Single Cell Capabilities with Immune Profiling and Targeted Gene Capture
Online |
| March 1
5:00 pm | EWIB-Seattle: Executive Women in Bio & eMAPS Happy Hour and Networking
Baron's Sino Kitchen and Bar |
| March 1
5:30 pm | PacSci Happy Hour
Pacific Science Center |
| March 8
8:30 am | From the Laboratory to Leadership – Virtual 2023 Spring Program
Online |


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