

Publications of the Week
Familial Long-Read Sequencing Increases Yield of De Novo Mutations

 First Author: Michelle Noyes | Senior Author: Evan Eichler (pictured)
 American Society of Human Genetics | UW and Howard Hughes Medical Institute


Studies of *de novo* mutation (DNM) have typically excluded some of the most repetitive and complex regions of the genome because these regions cannot be unambiguously mapped with short-read sequencing data. To better understand the genome-wide pattern of DNM, the authors generated long-read sequence data from an autism parent-child quad with an affected female where no pathogenic variant had been discovered in short-read Illumina sequence data. [Abstract](#)

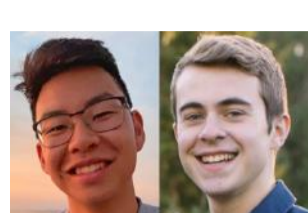
CRISPR/Cas9-Mediated Insertion of HIV Long Terminal Repeat within BACH2 Promotes Expansion of T Regulatory-Like Cells

 First Author: Michelle Christian | Senior Author: David Rawlings (pictured)
 The Journal of Immunology | Seattle Children's Research Institute and UW


One key barrier to curative therapies for HIV is the limited understanding of HIV persistence. HIV provirus integration sites within *BACH2* are common, and almost all sites mapped to date are located upstream of the start codon in the same transcriptional orientation as the gene. Using CRISPR/Cas9-based homology-directed repair in primary human CD4⁺ T cells, the authors directly modeled the effects of HIV integration within *BACH2*. [Abstract](#)

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Awards
Alexander Yan and Isiac Orr receive NSF Graduate Fellowships

UW Department of Bioengineering



UW Bioengineering students Alexander Yan (pictured, left) and Isiac Orr (right) each have received a prestigious National Science Foundation (NSF) Graduate Research Fellowship. The fellowship recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering and mathematics disciplines who are pursuing research-based master's and doctoral degrees at accredited United States institutions. [Read More](#)

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Local News
Understanding the Mechanics of Breast Cancer Metastasis

Fred Hutch



Why do some dormant cells wake up and start growing tumors in our brains or other organs while other dormant cells stay quiet? Why is the tissue in our lungs friendly to cancer proliferation while other tissue, like that in our muscles, is hostile to metastatic disease? New research from Dr. Cyrus Ghajar's (pictured) lab has provided intriguing answers to key questions about metastatic disease. [Read More](#)

BBI Funds Immunotherapy Research to Help Address Pancreatic and Kidney Cancers, a Project that 'Exemplifies Precision Medicine'

Brotman Baty Institute (BBI)



Dr. Evan Newell (pictured, right), an Associate Professor in the Fred Hutch Division of Vaccine and Infectious Disease, and Dr. Venu Pillarisetty (left), Professor of Surgical Oncology at UW Medicine, are working together on developing personalized T cell therapeutics that target an individual patient's cancer. Their project is funded by a \$150,000 BBI grant awarded in January. [Read More](#)

Study Boosts Support for Single-Dose HPV Vaccine Regimen

UW Medicine



A randomized controlled trial of 2,275 women in Kenya showed that a single dose of the human papillomavirus (HPV) vaccine was highly effective. The current standard for women is a three-dose regimen. Dr. Ruanne Barnabas (pictured), Principal Investigator in the trial, said the trial results could help the World Health Organization reach its goal to have 90% of 15-year-old girls vaccinated against HPV by 2030. [Read More](#)

Dr. Phil Greenberg Becomes President-Elect of American Association for Cancer Research

Fred Hutch



Fred Hutch immunologist Dr. Philip Greenberg (pictured) has begun a year-long term as president-elect of the American Association for Cancer Research (AACR), setting the stage for him to lead the organization as president in 2023. At the top of his list is for AACR to develop or support development of what he called a "Bio-Hub" that would make it easier for scientists at smaller institutions to access the advanced technologies that are driving the latest breakthroughs in cancer research. [Read More](#)

The Neural Dynamics of Teamwork: New Allen Institute CEO on Diversity and Impact in Life Science

GeekWire



Dr. Rui Costa (pictured) thinks a lot about how to do team science effectively. Since last December, the neuroscientist has served as CEO and President of an organization devoted to teamwork and open science, Seattle's Allen Institute. In this interview with GeekWire, Dr. Costa talks about team research, his commitment to diversity, and his view on the institute's approach to new industry partnerships. [Read More](#)

Chinook Therapeutics Announces Initiation of Phase I Healthy Volunteer Trial of CHK-336, a First-in-Class LDHA Inhibitor to Treat Hyperoxalurias

BioSpace



Chinook Therapeutics announced that dosing has been initiated in a Phase I clinical trial evaluating CHK-336 in adult healthy volunteers. CHK-336 is an oral small molecule lactate dehydrogenase A (LDHA) inhibitor with liver-targeted tissue distribution being developed for the treatment of patients with primary hyperoxaluria and secondary hyperoxaluria due to increased endogenous oxalate production. [Read More](#)

Carl Bergstrom in Science Magazine on His Efforts for Countering Misinformation

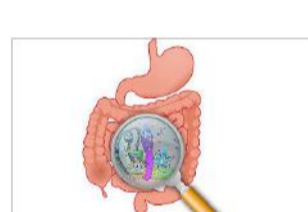
UW Biology



UW Biology Professor Dr. Carl Bergstrom (pictured) was featured in a recent *Science Magazine* article for his efforts in studying — and fighting — misinformation. When Dr. Bergstrom worked on plans to prepare the United States for a hypothetical pandemic, in the early 2000s, he and his colleagues were worried vaccines might not get to those who needed them most. But when COVID-19 arrived, things played out quite differently. [Read More](#)

Adding Key Foods to a Diet Will Help Restore Gut Health

UW Medicine



When it comes to gut health, putting the right foods into your diet might be as important as what you leave out, according to Dr. Chris Damman, a UW Medicine Gastroenterologist. "What you take out might be starving your gut microbiome," said Dr. Damman, referring to the trillions of bacteria and fungi that live in one's gut. "People focus on the nutrients their body needs when they eat, but they don't focus so much on the nutrients their microbiome needs." [Read More](#)

Cell Therapy Biotech Raises \$120M to Advance Therapy to Treat Common Cornea Condition

GeekWire



Aurion Biotech, a spinoff of Seattle eye care company CorneaGen, has raised \$120 million to advance its cell therapy for an eye disorder that affects millions of people. Degeneration of the cornea with age or disease can result in a condition called corneal edema secondary to endothelial dysfunction. Associated with impaired, hazy vision and ultimately blindness, the condition affects about 4% of people over the age of 40 in the United States. [Read More](#)

Health Innovation of the Year: Five Finalists at the GeekWire Awards Span Fields and Approaches

GeekWire



The finalists for Health Innovation of the Year at the GeekWire Awards — A-Alpha Bio, Parse Biosciences, Tasso, Trueta, and the University of Washington's Institute for Protein Design — showcase the strength of science and discovery in the Pacific Northwest. Some have links to the region's innovation powerhouse at UW, and several highlight the growing power of computational approaches to address health problems. [Read More](#)

Seattle Nonprofit Developing COVID-19 Vaccine Lands \$26M Donation

GeekWire



The Chan Soon-Shiong Family Foundation has donated \$26 million to Seattle's Access to Advanced Health Institute (AAHI), a nonprofit that emerged from the Infectious Disease Research Institute after a recent court-overseen restructuring. AAHI recently described its COVID-19 vaccine, which consists of a self-replicating RNA bound to a delivery vehicle, in a preprint study. [Read More](#)

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Upcoming Events in Seattle

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2:00 PM
Exploring Family Connections Using DNA
Online
- April 20-21
7:00 AM
Life Science Innovation Northwest 2022
Online
- April 25
8:00 AM
Global Oncology Lecture Series – Julie R. Gralow
Online
- April 26
8:00 AM
World IP Day: Innovating For a Better Future
Online
- April 26
10:00 AM
The Virtual Science Lab: Does Organelle Shape Matter?
Online

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Science Jobs in Seattle

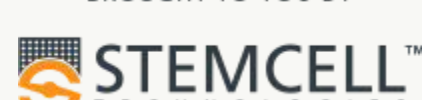
- Research Scientist I, EX**
 Seattle Children's
- Scientist I, Barcoded Connectomics**
 Allen Institute
- Postdoctoral Research Associate**
 Benaroya Research Institute at Virginia Mason
- Clinical Research Coordinator II**
 Fred Hutch
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