

Publications of the Week

Deep Mutational Scanning of CYP2C19 in Human Cells Reveals a Substrate Specificity-Abundance Tradeoff

First Author: Gabriel Boyle | Senior Author: Douglas Fowler *(pictured)*
Genetics | Howard Hughes Medical Institute, Fred Hutch, Howard Hughes Medical Institute, and UW



Using Variant Abundance by massively parallel sequencing, researchers measured the steady-state protein abundance of 7,660 single amino acid variants in Cytochrome P450 (CYP) 2C19 expressed in cultured human cells. Their findings confirmed critical positions and structural features essential for CYP function and revealed how variants at conserved positions influence abundance. [Abstract](#)

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Awards

Dr. Leticia Sewaybricker Has Been Awarded a Pilot and Feasibility Award Through the UW Nutrition Obesity Research Center

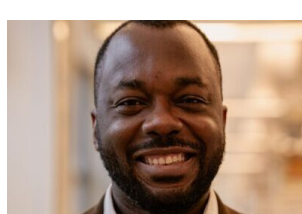
UW Medicine Diabetes Institute



Dr. Leticia Sewaybricker *(pictured)* has been awarded a Pilot and Feasibility Award through the UW Nutrition Obesity Research Center. Dr. Sewaybricker is an Acting Instructor in General Internal Medicine at UW. This award was for her project entitled, "Use of hypothalamic imaging in infants to understand postnatal weight gain." [Read More](#)

ITHS Announces Winners of Pilot Funding to Accelerate Translational Research

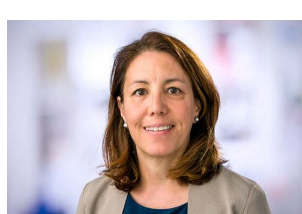
Institute of Translational Health Sciences (ITHS)



ITHS has announced the winners of its Translational Science Acceleration Awards. Leaders of the awarded projects will receive pilot funding to support planning and development of approaches that aim to address significant roadblocks in clinical and translational research. Among the five winners of 2024 is Dr. Ayokunle Olanrewaju *(pictured)*. [Read More](#)

Fred Hutch Science Education Partnership Receives \$1.35M Grant

Fred Hutch



The Science Education Partnership group at Fred Hutch received a \$1.35 million, five-year grant from the National Institute of General Medical Sciences to launch a new science education and training program called Reducing Inequities by Promoting Participatory Learning Experiences in Sciences. Dr. Jeanne Ting Chowning *(pictured)* is the Principal Investigator of the project. [Read More](#)

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Local News

Ultra-Low-Dose Ketamine Can Curb Opioid Withdrawal

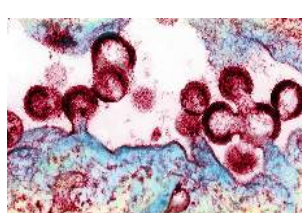
UW Medicine



Drug overdose is the leading cause of injury deaths in young adults in the United States. A pilot study showed that a small amount of ketamine can reduce or eliminate the withdrawal symptoms associated with quitting fentanyl. "The main takeaway is that we have found an easier way for people trapped in the grip of fentanyl addiction to get started in treatment," said Dr. Lucinda Grande *(pictured)*, the study's lead author. [Read More](#)

Zeroing In on Vaginal Microbes That Most Increase HIV Risk

Fred Hutch



Nearly two-thirds of new HIV infections in sub-Saharan Africa occur in women, and a woman's vaginal microbiome can influence her risk. In particular, an overgrowth of bacteria called bacterial vaginosis, or BV, raises HIV risk. New work reports 14 BV-associated bacteria — and one immune protein — that put women at highest risk of HIV infection. [Read More](#)

HDT Bio to Help Spearhead RNA Vaccine Development in National Pandemic Preparedness Initiative

HDT Bio



HDT Bio has announced its pivotal role in the national consortium PROVIDENT (Prepositioning Optimized Strategies for Vaccines and Immunotherapeutics Against Diverse Emerging Infectious Threats). To support PROVIDENT's goal of more rapidly responding to novel viral threats, HDT Bio will focus on developing "road maps" for the rapid creation of RNA vaccines against pathogens with pandemic potential. [Read More](#)

Solving the Unsolved Cases of Rare Diseases

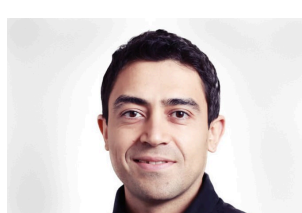
Pacific Northwest Research Institute (PNRI)



Cracking the code of rare genetic diseases takes more than just science — it takes passion, collaboration, and a deep commitment to discovery. This is the work of Dr. Cláudia Carvalho *(pictured, right)* and her team at PNRI. With a focus on genetic structural variants that often go unnoticed in standard genetic tests, Dr. Carvalho's lab is making strides in diagnosing rare diseases that have long baffled the medical community. [Read More](#)

New AI Method Sheds Light on Brain Cell Diversity

Allen Institute



The human brain contains an astonishing diversity of cell types, each with unique shapes, functions, and gene expression patterns. This complexity has long challenged scientists trying to understand how the brain works. Scientists led by Dr. Uygur Sümbül *(pictured)* have developed an innovative machine learning-based approach to enhance our view of both the distinct identities and the continuous variability within brain cells. [Read More](#)

'Exciting Time in Precision Medicine:' Fred Hutch Symposium Offers National Leaders in Cancer Vaccines

Brotman Baty Institute



A symposium on advancing cancer vaccines at the Fred Hutch on October 1, 2024 will convene "national leaders in vaccine design and expert immune-oncologists." "This symposium comes at an exciting time in precision medicine," said Dr. Eric Collisson *(pictured)*, Director of the Institute's Translational Integration. "The ability to craft vaccines based on patients' tumors' genomes is colliding with innovative delivery approaches to maximize immune response." [Read More](#)

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Upcoming Events in Seattle

- October 1 8:30 AM **Stuart and Molly Sloan Precision Oncology Institute Symposium: Advances in Cancer Vaccines**
Fred Hutch
- October 5 8:30 AM **Resonance**
Institute for Systems Biology
- October 16 - 17 9:00 AM **2024 ISB Virtual Microbiome Series**
Online
- October 20 - 24 8:00 AM **Lake Conference – Comparative and Evolutionary Neurobiology**
The Hyatt Regency Seattle
- October 24 5:30 PM **Immunology to Change Lives**
Seattle's Sunset Club

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Science Jobs in Seattle

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- Research Scientist I, Millen Lab**
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