



Publications of the Week

Microbial Community-Scale Metabolic Modeling Predicts Personalized Short-Chain Fatty Acid Production Profiles in the Human Gut

First Author: Nick Quinn-Bohmann | Senior Authors: Christian Diener and Sean Gibbons (pictured) | Nature Microbiology | Institute for Systems Biology, Fred Hutch, and UW



Microbially derived short-chain fatty acids (SCFAs) in the human gut are tightly coupled to host metabolism, immune regulation, and integrity of the intestinal epithelium. Here, researchers use a microbial community-scale metabolic modeling approach to predict individual-specific SCFA production profiles to assess the impact of different dietary, prebiotic, and probiotic inputs. [Abstract](#)

High-Throughput Single-Cell Transcriptomics of Bacteria Using Combinatorial Barcoding

First Author: Karl Gaisser and Sophie Skloss | Senior Author: Anna Kuchina (pictured) | Nature Protocols | Institute for Systems Biology and UW



Microbial split-pool ligation transcriptomics (microSPLIT) is a high-throughput single-cell RNA sequencing method for bacteria. With four combinatorial barcoding rounds, microSPLIT can profile transcriptional states in hundreds of thousands of Gram-negative and Gram-positive bacteria in a single experiment without specialized equipment. [Abstract](#)

Inverted Triplications Formed by Iterative Template Switches Generate Structural Variant Diversity at Genomic Disorder Loci

First Author: Christopher Grochowski | Senior Author: Claudia Carvalho (pictured, right) | Cell Genomics | Pacific Northwest Research Institute



The duplication-triplication/inverted-duplication (DUP-TRP/INV-DUP) structure is a complex genomic rearrangement. Here, researchers studied the genomic architecture of DUP-TRP/INV-DUP by investigating the DNA of 24 patients identified by array comparative genomic hybridization on whom they found evidence for the existence of four out of four predicted structural variant haplotypes. [Abstract](#) | [Press Release](#)

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Awards

Dr. Amy Orsborn Receives Prestigious NSF Career Award

UW Department of Bioengineering



Dr. Amy Orsborn (pictured) has received a prestigious National Science Foundation (NSF) Career Award award to support her research in sensorimotor neural interfaces. This award, one of the nation's most prestigious for early-career faculty, will aid Orsborn's exploration into how the brain and nervous system interact with these interfaces. [Read More](#)

\$5.25M from the Kuni Foundation Propels Innovative Adult Oncology Research

Fred Hutch



Principal investigators working at Fred Hutch Cancer Center and UW Medicine secured \$5.25 million in grants from the Kuni Foundation for a diverse lineup of projects to advance our understanding of tumor regression and improve care for an array of adult cancers, including by reducing the cost of therapy. Recipients include Drs. David Hockenbery (pictured, left) and Shailender Bhatia (right). [Read More](#)

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Local News

Aurion Biotech Gets FDA Approval to Speed Development of Vision Restoring Treatment

GeekWire



Seattle's Aurion Biotech that it received special designations from the US Food and Drug Administration (FDA) that should speed up the development of its treatment for a common disease that damages the cornea and can result in vision loss. The FDA granted Breakthrough Therapy Designation and Regenerative Medicine Advanced Therapy Designation for Aurion's cell therapy. [Read More](#)

Cancer-Fighting Biotech Startup InduPro Raises \$85M Round

Puget Sound Business Journal



InduPro, a biotechnology company defining protein spatial relationships to create novel therapeutics for the treatment of cancer and autoimmune diseases, announced an \$85 million Series A financing. The financing will support the advancement of the first expected clinical product candidate targeting cancer tissue based on the proximity of co-targeted pairs. [Read More](#)

From Takeoff to Flight, a Map of a Fly's Nervous System

UW Medicine



Work is underway at UW Medicine on a wiring diagram of the motor circuits in the central nervous system that control muscles in fruit flies. This connectome, as the wiring diagram is called, is already providing detailed information on how the nerve coordination of leg movements differs from that controlling the wings. Some of the latest findings in this area are published in *Nature*. [Read More](#)

Groundbreaking Study Shows Drug's Impact on Chronic Kidney Disease; Co-Authored by ITHS Co-PI

Institute of Translational Health Sciences (ITHS)



A promising study published in *The New England Journal of Medicine* showed that semaglutide, the compound in Ozempic and Wegovy, dramatically reduced the risk of kidney complications, heart issues and death in people with Type 2 diabetes and chronic kidney disease. ITHS Co-PI Dr. Katherine Tuttle (pictured) is one of the lead authors of the study. [Read More](#)

Ultrasounds May Not Find This Cancer in Black Women

UW Medicine



A common algorithm to check for endometrial cancer is not reliable for Black women, according to a new study published by UW and Fred Hutch researchers in *JAMA Oncology*. In Black patients with concerning symptoms, a tissue biopsy is strongly recommended to rule out endometrial cancer instead of using transvaginal ultrasound, the report concluded. [Read More](#)

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Upcoming Events in Seattle

- July 1 11:00 AM **ISCRM Fellows Mini-Symposium 2024**
Orin Smith Auditorium & Zoom
- July 10 12:00 PM **PNRI's Science Matters Seminar with Dr. Davut Pehlivan**
Online
- July 13 9:00 AM **Head for the Cure 5K**
Marymoor Park
- July 15 - 17 8:00 AM **2024 Allen Institute Modeling Software Workshop**
Allen Institute
- August 15 4:30 PM **Life Science Washington Annual Summer Social 2024**
188 E Blaine St

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Science Jobs in Seattle

- Post-Doctoral Research Fellow, Lin Lab**
Fred Hutch
- Clinical Research Faculty Assistant/Associate Member**
Benaroya Research Institute
- Scientific, Associate Research Scientist**
Advent Global Solutions
- Implementation Science Research Coordinator**
UW
- Research Associate I, Transgenic Colony Management**
Allen Institute

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