

Publications of the Week

A Framework for Clinical Cancer Subtyping from Nucleosome Profiling of Cell-Free DNA

First Author: Anna-Lisa Döbler | Senior Author: Gavin Ha (pictured)
 Nature Communications | Fred Hutch, UW, and the Broad Institute for Precision Medicine



Cell-free DNA (cfDNA) has the potential to inform tumor subtype classification and help guide clinical precision oncology. The authors develop Griffin, a framework for profiling nucleosome protection and accessibility from cfDNA to study the phenotype of tumors using as low as 0.1x coverage whole genome sequencing data. [Abstract](#)

Compromised Antigen Binding and Signaling Interfere with Bispecific CD19 and CD79a Chimeric Antigen Receptor Function

First Author: Isabel Leung | Senior Author: Stanley Rhodes (pictured)
 Blood Advances | Fred Hutch and Link Immunotherapeutics



The authors show that despite added specificity, tandem and bicistronic chimeric antigen receptor (CAR T) cells exhibit different defects that impair recognition of tumor cells expressing a single antigen. The data provide support for targeting multiple B cell antigens to improve efficacy and identify areas for improvement of bispecific receptor designs. [Abstract](#)

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Awards

WRF Announces Inaugural David Galas Distinguished Fellows Awardees

Washington Research Foundation (WRF)



Dr. Jason Coult (pictured, left), Cameron Glasscock (middle), and Korena Mafane (right) have been awarded the David Galas Distinguished Fellows Award. The award recognizes the accomplishments of outstanding current WRF postdoctoral fellows, providing each awardee \$7,500 in supplementary funds to apply towards their previously approved research or career goals. [Read More](#)

Thomas Grabowski Appointed to Endowed Professorship for Brain Health Innovations

UW Medicine Memory & Brain Wellness Center



Dr. Thomas Grabowski (pictured) has been named the inaugural holder of the Tim B. Engle Endowed Professorship for Brain Health Innovations supported by the Garvey Institute for Brain Health Solutions. In this role, Dr. Grabowski will help support the Institute's efforts in the area of cognitive aging. This work will focus on strategies to promote brain wellness and resilience across the lifespan and to delay the effects of brain aging and degenerative brain diseases. [Read More](#)

Health Care Leadership Award: Sean Gibbons, Institute for Systems Biology

Puget Sound Business Journal



Dr. Sean Gibbons (pictured), Assistant Professor at the Institute for Systems Biology, has been awarded a Health Care Leadership Award from the Puget Sound Business Journal. Dr. Gibbons studies fecal matter for a living, and believes that someday his microbiome research will translate into personalized medicine for chronic, complicated diseases. [Read More](#)

Health Care Leadership Award: Janet Englund, Seattle Children's Hospital

Puget Sound Business Journal



Dr. Janet Englund (pictured), a Professor of Pediatrics in the Division of Pediatric Infectious Diseases at Seattle Children's Hospital and UW, has been awarded a Health Care Leadership Award from the Puget Sound Business Journal. Her research interests include the study of vaccine-preventable diseases and viral respiratory diseases in young children and immunocompromised hosts. [Read More](#)

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Local News

Scientists May Be Closer to Effective HIV Vaccine

UW Medicine



It's thought that for an HIV vaccine to be widely effective, it will have to spur the body to make special antibodies that can neutralize a broad range of HIV strains. Now scientists say they have taken an essential step in that direction. The findings come from a study of 48 healthy adults who received either two doses of the vaccine or two doses of a placebo. [Read More](#)

Fred Hutch Leads Large-Scale Review of COVID-19 Clinical Trials That Highlights Multiple Disparities

Fred Hutch



Women were underrepresented in COVID-19 treatment clinical trials, and some racial and ethnic groups were underrepresented in COVID-19 prevention trials, according to a new meta-analysis conducted by Fred Hutch in collaboration with researchers from Beijing and London. The study identified system-wide differences in representation among several key demographic groups in COVID-19 prevention and treatment trials in the US. [Read More](#)

New Blood Test Can Detect 'Toxic' Protein Years Before Alzheimer's Symptoms Emerge, Study Shows

UW News



A team led by Dr. Valerie Daggett (pictured) has developed a laboratory test that can measure levels of amyloid beta oligomers in blood samples. Their test — known as the soluble oligomer binding assay — could detect oligomers in the blood of patients with Alzheimer's disease, but not in most members of a control group who showed no signs of cognitive impairment at the time the blood samples were taken. [Read More](#)

Dr. Bonnie Ramsey's Retirement

Institute of Translational Health Sciences



Dr. Bonnie Ramsey (pictured) is the epitome of the triple threat in medicine — an outstanding clinician, teacher, and mentor, and world-class researcher. She has changed the clinical trajectory for patients with cystic fibrosis and she has passed on her passion for translational research to scores of students and trainees. While Bonnie is retiring from full-time faculty work, she will be part of the Institute for Translational Health Science for years to come helping mentor the next generation of scientists dedicated to improving human health. [Read More](#)

New Step toward Regenerating Damaged Eye Cells

UW Medicine



"When people lose their vision from something like macular degeneration, there's no way to get it back right now. We're studying ways to restore that vision, to replace those cells, by stimulating a kind of endogenous stem cell within the retina," said Tom Reh, a Professor of Biological Structure. "I think we've now been able to get to a point where we can go from having essentially just a retina that's degenerated to something that's starting to fix itself again." [Read More](#)

Promising Young Scientist: For Sander Frank, Cancer Research Is a Calling

Brotman Baty Institute



For some researchers, their work is a challenging and rewarding opportunity. For Dr. Sander Frank (pictured), it is a calling. Dr. Frank, a postdoctoral fellow at Fred Hutch, lost his mother to breast cancer. Twenty-five years and twelve peer-reviewed papers later, he is working alongside two Principal Investigators, Drs. Peter Nelson and Valeri Vaslouchkin, studying the roles of DNA repair defects in prostate cancer. [Read More](#)

ISCRM Researchers Identify Gene with Dual Influence on Bone and Muscle Development

Institute for Stem Cell & Regenerative Medicine (ISCRM)



Researchers have set out to better understand how humans inherit bone and muscle mass. The team was interested in how genetic variants influence bone- and muscle-related traits. Previous studies had pinpointed a region in chromosome 7 harboring genetic variants that seemed to influence such traits in children. However, how they exerted dual influence on bone and muscle was not known. To study these questions, the team turned to zebrafish, a species that shares 70% of its genes with humans. [Read More](#)

A Diffusion Model for Protein Design

Institute for Protein Design



A team from Dr. David Baker's (pictured) lab has created a powerful new way to design proteins by combining structure prediction networks and generative diffusion models. The team demonstrated extremely high computational success and tested hundreds of AI-generated proteins in the lab, finding that many may be useful as medications, vaccines, or even new nanomaterials. [Read More](#)

SpotSeq: A New Non-Invasive Test to Diagnose Genetic 'Hotspots' in Pediatric Vascular Malformations

Brotman Baty Institute



Dr. James Bennett (pictured, left), along with colleagues including Dr. Candace Myers (right), is launching a new and minimally invasive, laboratory developed test in early 2023 that exemplifies "precision approaches to health care." The test, "SpotSeq," is designed to diagnose genetic "hot spots" for mutations causing vascular malformations in children, specifically abnormal development of arteries, veins, or the lymphatic system. [Read More](#)

COVID Vaccine Ideas May Have Better Variant Resilience

UW Medicine



The latest research findings show that vaccine-elicited neutralizing antibodies against SARS-CoV-2 are mostly directed against one of the two main domains of the viral entry machinery. The findings also point out a key role of the same domain of the spike in eliciting a broad antibody response against many variants, as well as related viruses. [Read More](#)

On World AIDS Day, a Broad View of Continuing Work

Fred Hutch



From the earliest days of HIV/AIDS, Fred Hutch virologists, immunologists, and epidemiologists have played leading roles in the efforts to understand the virus, test treatments for it, and find ways to prevent it. While worldwide efforts to develop a vaccine for HIV/AIDS have yet to produce one, the work continues. The Fred Hutch-headquartered HIV Vaccine Trials Network has recently launched a variety of small, highly focused trials each aimed at building incremental progress towards a new generation of vaccine candidates. [Read More](#)

Researchers Begin Trial for mRNA Flu Vaccine

Kaiser Permanente Washington Health Research Institute



Researchers at Kaiser Permanente Washington Health Research Institute are now recruiting participants age 65 and older who have not yet received this season's flu vaccine for a trial of an investigational mRNA flu vaccine developed by Pfizer. The trial, taking place at many research sites across the US, will evaluate the vaccine's efficacy and the immune response that it generates. [Read More](#)

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Upcoming Events in Seattle

- December 14 9:00 am **TechAlliance Policy Matters Summit: Innovation Basics**
Seattle Airport Marriott
- December 14 9:00 am **Policy Matters: Innovation Basics**
Seattle Airport Marriott
- December 14 3:00 pm **WWL: Life Sciences/Bio-Tech**
W Seattle
- December 14 6:00 pm **Movie Screening – Coded Bias**
Fred Hutch
- January 13 9:00 am **Open Ephys Plugin Development Workshop**
Online

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