



Publications of the Week

### Single-Nucleoid Architecture Reveals Heterogeneous Packaging of Mitochondrial DNA

First Author: Stefan Isaac | Senior Authors: Andrew Stergachis (*pictured*) and Stirling Churchman  
Nature Structural & Molecular Biology | UW



How mitochondrial (mt)DNA is packaged into individual nucleoids remains unresolved. In this study, researchers used long-read single-molecule accessibility mapping to measure the compaction of individual full-length mtDNA molecules at near single-nucleotide resolution. They found that, unlike the nuclear genome, human mtDNA largely undergoes all-or-none global compaction, with most nucleoids existing in an inaccessible, inactive state. [Abstract](#)

### Impact of Rabbit Anti-Thymocyte Globulin (ATG) Exposure on Outcomes After Ex Vivo T-Cell Depleted Hematopoietic Cell Transplantation in Pediatric and Young Adult Patients

First Author: Madhavi Lakkaraja (*pictured*) | Senior Author: Jaap Jan Boelens  
Cytotherapy | Fred Hutch and UW



Traditional weight-based dosing of rabbit anti-thymocyte globulin (rATG) used in allogeneic hematopoietic cell transplantation (HCT) to prevent graft-versus-host disease and graft rejection leads to variable exposures. High exposures induce delayed CD4<sup>+</sup> immune reconstitution and greater mortality. Here, researchers sought to determine the impact of rATG exposure in children and young adults receiving various types of ex vivo T-cell depleted HCT. [Abstract](#)

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Awards

### Boosting the Effectiveness of CAR T-Cell Therapies Against AML

Fred Hutch



As a physician-scientist, Dr. Erik Kimble (*pictured*) works on understanding how immunotherapy can be trained to attack hematologic malignancies, especially acute myeloid leukemia (AML), his area of focus. Dr. Kimble delves into the mechanisms of resistance that leukemia cells employ to dodge annihilation. His goal: to improve the effectiveness of CAR T-cell therapies against AML. [Read More](#)

### \$7.3 Million NIH Grant Funds Effort to Advance Kidney Microphysiological Testing Platforms

Institute for Stem Cell & Regenerative Medicine (ISCRM)



Kidney disease researchers at UW, including ISCRM faculty members Drs. Beno Freedman and Ed Kelly (*pictured*), will use a multimillion-dollar federal grant to advance drug-development platforms that would reduce reliance on animal tests in the production of future medications. Their research aims to finalize multiple kidney-tissue platforms for drug testing. [Read More](#)

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Local News

### The *AUTS2* Gene: Unraveling Common Genetic Threads of Neurodevelopmental Disorders

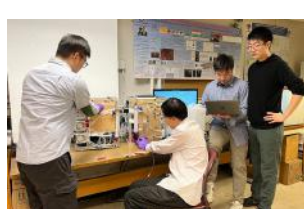
Pacific Northwest Research Institute



*AUTS2* isn't just any gene; it's a high-level regulator, a maestro directing the symphony of neuron formation and the crucial wiring of synaptic connections within the brain. Dr. Lisa Stubbs (*pictured, center*) is on a quest to unravel the distinct functions of *AUTS2* protein isoforms, or variations of the proteins that the *AUTS2* gene creates. [Read More](#)

### A Healthy Collaboration

UW Mechanical Engineering



Collaborations between mechanical engineers and UW Medicine are creating new health-care possibilities. Nanye Du (*pictured, left*), Dr. Ye Jin (*second from left*), Dr. Ziyuan Wang (*second from right*), and Shaohang Hao (*right*) are working on the Artificial Multi-Organ Replacement machine, which is meant to treat organ failure by removing toxins in patients' blood. [Read More](#)

### Proniras Secures Funding for Phase I Opiate Withdrawal Study

Clinical Trials Arena



Clinical-stage biotechnology company Proniras has announced the successful completion of a \$4.65m Series B funding round for a trial of a new treatment for opiate withdrawal. This investment will support the Phase I clinical study of PRN-001-01 (tezampanel), a new therapy for opiate withdrawal. The funding is part of an ongoing effort to secure up to \$9m in the Series B round for the company's research and development initiatives. [Read More](#)

### Jubilant HollisterStier Expansion Enters Next Phase

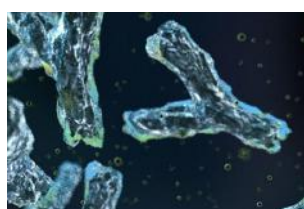
Yahoo Finance



A few years ago, Jubilant HollisterStier was the only Washington company producing COVID-19 vaccines. The company recently announced progress to several substantial expansions to their Spokane facility that will dwarf its current capacity when completed. Line 3, as it is being called by company leaders, increases production of the Spokane facility by around 55 million units per year or 400 vials per minute. [Read More](#)

### ProfoundBio Raises \$112M to Support Clinical-Stage Oncology Pipeline

GeekWire



ProfoundBio raised \$112 million to support development of its pipeline of antibody-drug conjugates (ADCs), agents that recognize a molecular target via an antibody and deliver a toxin or other compound to cells. The company, which has locations in the Seattle region and Suzhou, China, has three clinical-stage ADC candidates focused on solid tumors. [Read More](#)

### International Women and Girls in Science 2024

Access to Advanced Health Institute (AAHI)



AAHI recognizes and celebrates women's contributions in research and innovation and who serve as role models to girls that represent the next generation of scientists, engineers, and mathematicians solving some of the world's most complex issues. AAHI explored the journey of six women in every level of their organization including Dr. Emily Voigt (*pictured*). [Read More](#)

### From AI to Anti-Venom: Celebrating Our Women in Science

The Institute for Protein Design



The Institute for Protein Design exists to create scientific breakthroughs and transform them into practical solutions. Their women trainees and staff have made pioneering contributions to computer science, biochemistry, immunology, and more. Their recent article explores the journeys of three women: Dr. Minkyung Baek, Grace Hendricks, and Susana Vázquez Torres (*pictured*). [Read More](#)

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### Upcoming Events in Seattle

- February 22 2:00 PM **ITHS Biomedical Innovation Fireside Chats: Legal Issues and Intellectual Property** Online
- February 25 2:30 PM **Microbiology Essentials** SoundBio Lab
- February 28 8:00 AM **Seattle BioTech & Bagels Morning Virtual Meetup** Online
- March 7 2:00 PM **Pacific Northwest Regional Resources for Biomedical Entrepreneurs** Online
- March 8 9:00 PM **Mad Science** Here-After

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### Science Jobs in Seattle

- Clinical Research Coordinator I**  
Seattle Children's
- Open Rank Faculty Position, Cancer Cell Therapy**  
Fred Hutch
- Principal Protein Scientist, High-Throughput Screening**  
StealthCo
- Senior Scientist, Nucleic Acid Chemist**  
GenScript Biotech Corporation
- Assistant/Associate Member**  
The Center for Systems Immunology at Benaroya Research Institute

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