

Publications of the Week
Multipotent Progenitors and Hematopoietic Stem Cells Arise Independently from Hemogenic Endothelium in the Mouse Embryo

 First Author: Tessa Dignum | Senior Author: Brandon Hadland *(pictured)*
 Cell Reports | Fred Hutch and UW


The authors demonstrate that rare hemogenic endothelium (HE) with functional hematopoietic stem cell (HSC) potential in the early murine embryo are distinct from more abundant HE with multilineage hematopoietic potential that fail to generate HSCs. Specifically, HSC-competent HE are characterized by expression of CXCR4 surface marker and by higher expression of genes tied to arterial programs regulating HSC dormancy and self-renewal. [Abstract](#)

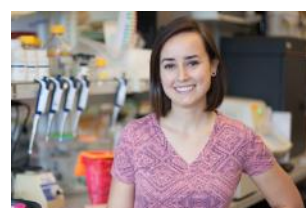
Single-Cell Landscape of Nuclear Configuration and Gene Expression during Stem Cell Differentiation and X Inactivation

 First Author: Giancarlo Bonora | Senior Authors: Xinxian Deng, William Noble, and Christine Diesteche *(pictured)*
 Genome Biology | UW, Brotman Baty Institute, Allen Institute, and Howard Hughes Medical Institute


Mammalian development is associated with extensive changes in gene expression, chromatin accessibility, and nuclear structure. The authors follow such changes associated with mouse embryonic stem cell differentiation and X inactivation by integrating, for the first time, allele-specific data from these three modalities obtained by high-throughput single-cell RNA-seq, ATAC-seq, and Hi-C. [Abstract](#)

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Awards
Dr. Berger Wins Additional WRF Translational Funding

Institute for Protein Design



Washington Research Foundation (WRF) has awarded a \$700,000 phase three technology commercialization grant to Dr. Stephanie Berger *(pictured)* to support the development of an oral biologic for inflammatory bowel disease. Dr. Berger, a translational investigator at the Institute for Protein Design, received two previous grants totaling \$300,500 from WRF for this work. [Read More](#)

Fred Hutch Scientist Dr. Trevor Bedford Receives MacArthur Fellowship

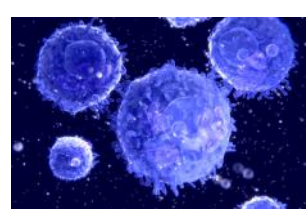
Fred Hutch



Dr. Trevor Bedford *(pictured)*, an infectious disease scientist at Fred Hutchinson Cancer Research Center, was selected as a recipient of the 2021 MacArthur Fellowship. Dr. Bedford uses powerful computers and complex statistical methods to study the spread and evolution of viruses, including SARS-CoV-2, influenza, Ebola and Zika viruses. He and his collaborators have been instrumental in tracking and understanding SARS-CoV-2 in real-time. [Read More](#)

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Local News
New Open Source Software Empowers Scientists to Uncover Immune Secrets

Fred Hutch



Cancer is maddeningly complex, and its interplay with the immune system involves a huge cast of cells and much chemical chatter. But scientists at Fred Hutch want to make studying that complex network significantly easier and cheaper, so they developed Infinity Flow, a free software designed to enhance a popular method of single-cell analysis. It uses machine learning to greatly increase the number of proteins scientists can hunt for on the surface of cells. [Read More](#)

Men Should Check Their Genes for Prostate Cancer Risk

UW Medicine



As Prostate Cancer Awareness Month comes to a close, researchers want to circulate the message that some gene mutations linked to breast and ovarian cancer are also associated with prostate cancer. Both sexes have the same risk for inherited gene mutations, such as BRCA1/2 and PALB2, and the same chances of passing the mutation to their children. Yet women were 10 times more likely than men to be tested for BRCA1/2 mutations. [Read More](#)

Dr. Andrew Magis: Identifying Markers for Cancer Years Before Diagnosis

Institute for Systems Biology



Through blood and other biological samples, Institute for Systems Biology (ISB) scientists have shown they can identify markers for cancer years before diagnosis. This was the topic of a recent Research Roundtable presentation delivered by Dr. Andrew Magis *(pictured)*, Director of Data Science in ISB's Health Data Science Lab. In his presentation, Dr. Magis detailed three separate cases where his team identified metastatic cancer in patients well before clinical diagnosis. [Read More](#)

Ongoing Trials Test COVID-19 Drugs for Earlier, Easier Treatment

Fred Hutch



Fred Hutch's COVID-19 Clinical Research Center is conducting ongoing trials with injected monoclonal antibodies and oral antivirals that could help more patients recover faster. "The real impetus is to give people treatments that can keep them out of the hospital, and to give them in less-restrictive settings," said Fred Hutch physician-scientist Dr. Adrienne Shapiro. "It's a major access issue, and an injectable treatment would be a huge convenience." [Read More](#)

BBI Faculty Conversations – Dr. Taran Gujral

Brotman Baty Institute



The Brotman Baty Institute (BBI) Faculty Conversations offer an inside view of BBI members' work and where they think the field of precision medicine is heading. They were recently joined by Dr. Taran Gujral *(pictured)*, Assistant Professor in the Human Biology Division at the Fred Hutchinson Cancer Research Center, whose lab works to understand how cancer cells respond to various signals. [Read More](#)

Japan's MHLW Approves PADCEV® (Enfortumab Vedotin) for Advanced Urothelial Cancer

Seagen



Astellas Pharma and Seagen announced that Japan's Ministry of Health, Labour and Welfare (MHLW) has approved enfortumab vedotin for radically unresectable urothelial carcinoma that has progressed after anti-cancer chemotherapy. Enfortumab vedotin is an antibody-drug conjugate that is directed against Nectin-4, a protein located on the surface of cells and highly expressed in bladder cancer. [Read More](#)

Faculty Spotlight: Dr. Katherine Bennett

UW Department of Medicine



As part of Healthy Aging Month, the UW Department of Medicine's faculty spotlight for September was Dr. Katherine Bennett, Assistant Professor in the Division of Gerontology and Geriatric Medicine. Dr. Bennett trains the next generation of geriatric medicine providers as the Program Director for the Geriatric Medicine Fellowship Program and as the Assistant Director for Education of the Northwest Geriatrics Workforce Enhancement Center. [Read More](#)

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Interesting Articles
President Biden Announces Members of President's Council of Advisors on Science and Technology

The White House



President Biden announced 30 of America's most distinguished leaders in science and technology as members of his President's Council of Advisors on Science and Technology (PCAST). PCAST is the sole body of external advisors charged with making science, technology, and innovation policy recommendations to the President and the White House. [Read More](#)

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Upcoming Events in Seattle


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|--------------------------|--|
| October 5
12:00 PM | BBi's Danny Miller Conducting Seminar on Long-Read Sequencing using Nanopore Platform
Online |
| October 6
9:00 AM | Exploring Frontiers: Predicting Biology Webinar
Online |
| October 7
1:00 PM | Science Says – Finding New Ways to Stop Solid Tumors
Online |
| October 9
9:00 AM | 9th Annual Run 4 Miles
Rogers High School |
| October 12-13
7:30 AM | 2021 Inter-CFAR HIV and Women Symposium
Online |

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Science Jobs in Seattle


- Research Technician**
Fred Hutch
- Cell Therapy Specialist I-III**
Seattle Cancer Care Alliance
- Scientist/Senior Scientist, Molecular Modeling**
A-Alpha Bio
- Research Associate, Medicinal Chemistry**
Gilead Sciences
- Postdoctoral Fellow, Immuno-Oncology and Cell Therapy**
Bristol Myers Squibb

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