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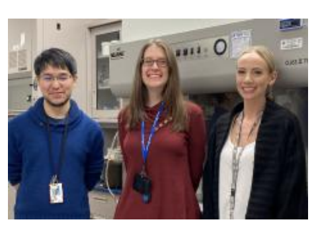
Publications of the Week

Prolonged Culturing of iPSC-Derived Brain Endothelial-Like Cells Is Associated with Quiescence, Downregulation of Glycolysis, and Resistance to Disruption by an Alzheimer's Brain Milieu

First Authors: Lindsey Williams *(pictured, right)* and Takashi Fujimoto *(left)* | Senior Author: Michelle Erickson *(center)*
Fluids and Barriers of the CNS | The Geriatrics Research Education and Clinical Center and UW



Human induced pluripotent stem cell (iPSC)-derived brain endothelial-like cells (iBECs) are a robust, scalable, and translatable model of the human blood–brain barrier (BBB). Most studies evaluate iBECs within the first few days of subculture, and little is known about their proliferative state, which could influence their functions. The authors characterized iBEC proliferative state in relation to key BBB properties at early and late post-subculture time points. **Profile | Abstract**

Single-Cell ATAC-Seq of Fetal Human Retina and Stem-Cell-Derived Retinal Organoids Shows Changing Chromatin Landscapes during Cell Fate Acquisition

First Author: Connor Finkbeiner | Senior Author: Thomas Reh *(pictured)*
Cell Reports | Institute for Stem Cells and Regenerative Medicine and UW

The authors previously used single-cell transcriptomic analysis to characterize human fetal retinal development and assessed the degree to which retinal organoids recapitulate normal development. They now extend the transcriptomic analyses to incorporate single-cell assay for transposase-accessible chromatin sequencing (ATAC-seq), a powerful method used to characterize potential gene regulatory networks through the changes in accessible chromatin that accompany cell-state changes. **Profile | Abstract**

Location of Eosinophils in the Airway Wall Is Critical for Specific Features of Airway Hyperresponsiveness and T2 Inflammation in Asthma

First Author: Taha Al-Shaikhly | Senior Author: Teal Hallstrand *(pictured)*
European Respiratory Journal | Center for Lung Biology, Center for Immunity and Immunotherapies, Seattle Children's, and UW

Eosinophils are implicated as effector cells in asthma but the functional implications of the precise location of eosinophils in the airway wall is poorly understood. The authors aimed to quantify eosinophils in the different compartments of the airway wall and associate these findings with clinical features of asthma and markers of airway inflammation. Intraepithelial eosinophils were linked to the presence of asthma and endogenous airway hyperresponsiveness (AHR), the type of AHR that is most specific for asthma. **Profile | Abstract**

View All Publications

Awards

Kelly Stevens Receives $1.3M Allen Distinguished Investigator Award to Study How Liver Develops

UW Department of Bioengineering

UW bioengineer Dr. Kelly Stevens *(pictured)*, whose research focuses on mapping human organs and engineering artificial human tissues, has been named an Allen Distinguished Investigator by The Paul G. Allen Frontiers Group, a division of the Allen Institute. The $1.3 million, three-year grant will allow the Dr. Stevens and her lab to explore the complex set of factors involved in liver formation. **Read More**

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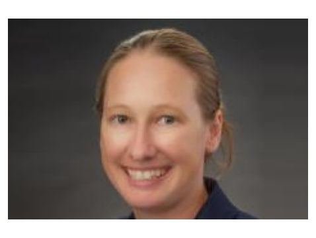
Local News

How Does Leukemia Escape from Immunotherapy?

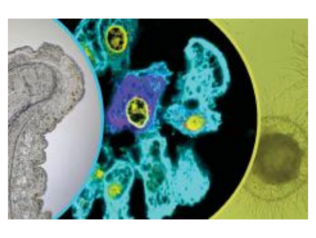
Fred Hutch



When an experimental new cancer treatment shows promising results for many patients, these successes are exciting. But cancer researchers say that the most important insights come from studying the failures. Led by Dr. Kelly Paulson *(pictured)*, a study by a team from Fred Hutch and colleagues does just that, highlighting one way that an aggressive leukemia can wriggle its way free of targeted attack by a high-tech strategy for immune-based therapy. **Read More**

The Paul G. Allen Frontiers Group Announces 23 New Allen Distinguished Investigators

Allen Institute



The Paul G. Allen Frontiers Group, a division of the Allen Institute, announced 11 awards of $1.3-1.5 million each to fund research projects led by 23 new Allen Distinguished Investigators. This is the largest single cohort of Allen Distinguished Investigators announced since the program's inception and represents a total of $15.5 million in funding to support cutting-edge, early-stage research projects that promise to advance the fields of biology and medicine. **Read More**

The Brain-Gut Connection: Dr. Person's Unique Expertise Addresses Children with Chronic Gastrointestinal Issues

Seattle Children's

Seattle Children's recently welcomed Dr. Hannibal Person *(pictured)* to the Gastroenterology and Hepatology team. Dr. Person is looking forward to building an interdisciplinary program to help children who suffer from chronic gastrointestinal symptoms like nausea, vomiting, diarrhea, constipation and pain. His goal is to create a supportive research program focused on the brain-gut connection — a true one-of-a-kind program in the US. **Read More**

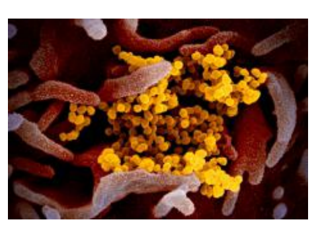
SEngine Precision Medicine and Oncodesign Announce Collaboration Agreement for the Discovery of New Personalized Cancer Treatment for Aggressive and Untreatable Tumors

Business Wire

SEngine Precision Medicine, a precision oncology company revolutionizing cancer therapies by pre-testing drugs on patient-derived 3D cultures, and Oncodesign, a French biopharmaceutical company specialized in precision medicine, have announced the signature of a research collaboration agreement for R&D of a new personalized cancer treatment for aggressive and untreatable tumors. **Read More**

Coronavirus' Distant Past Reveals Ancient Roots of Trait That Could Help Them Jump Species

Fred Hutch



New work, published in the journal *Nature* from scientists at Fred Hutch and UW, suggests that to safeguard against other coronaviruses that could gain the ability to sneak into our cells, we need to think globally. The researchers found that the ability to bind ACE2 — a crucial trait in species-jumping coronaviruses — could be a more widespread possibility than previously thought. **Read More**

Curevo Nets $60M for Adjuvant-Saving Shingles Vaccine

BioSpace

Curevo, a clinical-stage biotechnology company developing safe and highly-effective vaccines to fight infectious diseases such as shingles, has secured $60 million in Series A financing. Curevo's vaccine, CRV-101, would prevent shingles in older adults. It has the potential to provide an improvement over currently approved vaccines because it appears to provide an optimal immune response while requiring less adjuvant, which means fewer side effects. **Read More**

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Interesting Articles

House Passes Sweeping US Innovation Bill, Teeing Up Talks with Senate

ScienceInsider

Remember when your mother said you might choke if you crammed too much food into your mouth? In the weeks to come, Democrats in the US Congress will find out whether that warning also applies to their ability to finalize sweeping legislation that promises to double the budgets of the National Science Foundation and other key research agencies, as well as root out sexual harassment in academic science. **Read More**

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Upcoming Events in Seattle

February 15 12:00 PM	**CFAR/PHSKC Lunchbox Talk: Chase Cannon, MD and Mike Barry, MPH** Online
February 15 12:00 PM	**Current Biology Seminar – Dr. Ahna Skop** Online
February 15 2:00 PM	**BBI's ConnectMyVariant Sets Free Workshop on Hereditary Cancer** Online
February 17 11:00 AM	**Networking to Enhance Development 2022** Online
February 17 4:00 PM	**Research Roundtable with Dr. Nitin Baliga** Online

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Science Jobs in Seattle

Research Scientist III, Lentiviral Gene Therapy
Seattle Children's

Research Technician II
Fred Hutch

Associate Director, Cell Biology
Seagen

Postdoctoral Research Associate
Benaroya Research Institute at Virginia Mason

Principal Scientist/Engineer, iPSC Platform Technical Lead, Cell Therapy
Bristol Myers Squibb

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