

Volume 2.43: November 4, 2019

#### Publications of the Week

## Spatiotemporal Expansion of Primary Progenitor Zones in the Developing Human Cerebellum

First Author: Parthiv Haldipur (*pictured*, *left*) | Senior Author: Kathleen Millen (*center*) Science | Seattle Children's Research Institute and UW



The authors presented histological and molecular analyses of the developing human cerebellum from 30 days after conception to 9 months after birth. Differences in developmental patterns between humans and mice included spatiotemporal expansion of both ventricular and rhombic lip primary progenitor zones to include subventricular zones containing basal progenitors. Profile Abstract

## Adaptive Archaic Introgression of Copy Number Variants and the Discovery of Previously Unknown Human Genes

First Author: PingHsun Hsieh (pictured) | Senior Author: Evan Eichler Science | UW School of Medicine



The authors focused on the discovery of introgressed and adaptive copy number variants (CNVs) that have become enriched in specific human populations. Consistent with the hypothesis of archaic introgression outside Africa, they found a significant excess of CNV sharing between modern non-African populations and archaic hominins. Profile | Abstract

## An Improved Platform for Functional Assessment of Large Protein Libraries in Mammalian Cells

First Author: Kenneth Matreyek | Senior Author: Douglas Fowler (pictured) Nucleic Acids Research | UW



Multiplex genetic assays can simultaneously test thousands of genetic variants for a property of interest. However, limitations of existing methods in cultured mammalian cells hinder the breadth, speed and scale of these experiments. The authors have described a series of improvements that enhanced the capabilities of a Bxb1 recombinase-based landing pad system for conducting different types of multiplex genetic assays in various mammalian cell lines. Abstract

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#### Awards

**\$17.2M Grant to Explore Link between Aging Eyes and Brains** UW Medicine

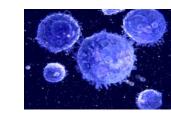


In pursuit of changing the course of Alzheimer's, support is growing to explore new avenues that might unlock mysteries of this brain disease. This includes investigating the link between aging eyes and aging brains. Dr. Cecilia Lee (pictured), an Assistant Professor of Ophthalmology at the UW School of Medicine, has recently received a \$17.2 million grant from the National Institute on

Aging to research eye diseases' associations with Alzheimer's. Read More

# Benaroya Research Institute Receives \$4.5 Million Grant to Predict Which **Cancer Patients Will Benefit from Immunotherapy**

Benaroya Research Institute at Virginia Mason



Scientists at Benaroya Research Institute at Virginia Mason have received a \$4.5 million, five-year grant from the National Cancer Institute to identify biomarkers that predict the success of checkpoint inhibitor immunotherapy drugs used to treat certain types of cancer. Despite the success of checkpoint inhibitors at improving patient survival, they do not work in all patients and often have serious side effects including sudden-onset symptoms of autoimmune disease. Read More

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Local News

## To Survive in the Human Gut, Bacteria Need Genetic "Passcode" Howard Hughes Medical Institute



Humans' guts are a dangerous place. Bacteria living in people's intestines pump out toxins to deter microbial intruders. But each person's gut comes with its own set of toxins - an individualized "passcode" microbes must solve to survive, according to new research co-led by Dr. Joseph Mougous at UW. The findings suggest that there's not a one-size-fits-all approach to probiotics or live biotherapeutics. Read More

## **Researchers Describe How Malaria Parasites Prepare Blueprint to Attack** Humans

Seattle Children's via News-Medical.Net



Within seconds after an infected mosquito bites, the malaria parasite navigates the host skin and blood vessels to invade the liver, where it will stay embedded until thousands of infected cells burst into the bloodstream, launching malaria's deadly blood-stage infection. For the first time, a team from Seattle Children's Research Institute has described how malaria *Plasmodium* parasites prepare for this journey as they lie in waiting in the mosquito's salivary glands. Read More

# UW Researchers Uncover DNA Data Security Flaws on Popular Genealogy Website

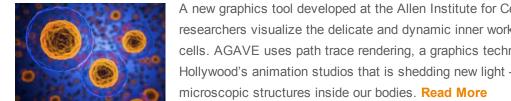
GeekWire



In what could be an exceptionally personal form of identity theft, UW researchers have determined that a popular genealogy website is vulnerable to security risks which could compromise the information people share about their genetic makeup. The UW scientists looked into GEDmatch, a third-party site where users can compare their DNA sequences to others who have uploaded test results. **Read More** 

How Hollywood's Latest Animation Technique Is Shedding New Light on Cell Biology

Allen Institute for Cell Science



A new graphics tool developed at the Allen Institute for Cell Science will help researchers visualize the delicate and dynamic inner workings of human stem cells. AGAVE uses path trace rendering, a graphics technique straight from Hollywood's animation studios that is shedding new light — literally — on the

# Multi-Year NIH Contract Positions IDRI to Apply Key Immunological **Findings across Diseases**

Infectious Disease Research Institute



The Infectious Disease Research Institute (IDRI) has announced the award of a groundbreaking multi-year contract from the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health (NIH). The goal of the contract is to comprehensively identify the complex immune responses required to prevent Mycobacterium tuberculosis infection or active tuberculosis disease. **Read More** 

## University of Washington Once Again Named World's Most Innovative **Public University**

GeekWire



For the third year in a row, UW has won the title of the world's most innovative public university, according to an annual ranking by Reuters and Clarivate Analytics. The list considered factors including patent filings and research paper citations to determine which educational institutions did the most to "advance science, invent new technologies and power new markets and industries." **Read More** 

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#### Interesting Articles

# **Trump Revives Dormant Science and Technology Advisory Council** Medium



Nearly three years into his administration, President Trump has reestablished the President's Council of Advisors on Science and Technology Policy, an influential group of scientists and engineers that advises the White House on policy issues related to science, technology, and innovation. Dr. Kelvin Droegemeier (pictured), President Trump's Chief Science Advisor and Director of the White House Office of Science and Technology Policy, will chair the council. Read More

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## Upcoming Events in Seattle

November 6 4:00 PM	Innovations in Healthcare: Xconomy Insight Seattle Life Science Forum Seattle Children's Research Institute
November 7 4:00 PM	Manipulating Microbial Communities Through Artificial Selection Cambia Grove
November 7 5:30 PM	Women of Influence Hyatt Bellevue
November 8 8:00 AM	Genome Sciences Symposium: Genomics from Worms to Humans Foege Auditorium
November 11 - 12 9:00 AM	Allen Institute Showcase Symposium Allen Institute

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#### Science Jobs in Seattle

Scientist/Senior Scientist, Cellular Immunotherapy Neoleukin Therapeutics

Scientist, Therapeutic Discovery Allen Institute for Brain Science

Scientist, Immunology Seattle Genetics

Postdoctoral Fellow, Endothelial Dysfunction and Malaria Seattle Children's Research Institute

**Account Manager** Phase Genomics

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Associate Product Manager, Hematology (Vancouver, BC) STEMCELL Technologies

Scientific Inside Sales Representative (Vancouver, BC) STEMCELL Technologies

Flow Cytometry Specialist (Vancouver, BC) STEMCELL Technologies

Scientific Sales Representative, Cell Separation Products (San Francisco, CA) STEMCELL Technologies

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