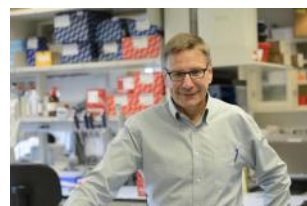


Publications of the Week
MHC Class II Antigen Presentation by the Intestinal Epithelium Initiates Graft-versus-Host Disease and Is Influenced by the Microbiota

 First Author: Motoko Koyama | Senior Author: Geoffrey Hill *(pictured)*
 Immunity | Fred Hutch and UW


The authors examined the mechanisms that initiate graft-versus-host disease (GVHD), including the relevant antigen-presenting cells. MHC class II was expressed on intestinal epithelial cells (IECs) within the ileum at steady state, but was absent from the IECs of germ-free mice. IEC-specific deletion of MHC class II prevented the initiation of lethal GVHD in the gastrointestinal tract. [Profile](#) | [Abstract](#)

 γ -Secretase Inhibition Increases Efficacy of BCMA-Specific Chimeric Antigen Receptor T Cells in Multiple Myeloma

 First Author: Margot Pont | Senior Author: Stanley Riddell *(pictured)*
 Blood | UW and Fred Hutch


The authors investigated whether blocking B cell maturation antigen (BCMA) cleavage by small molecule γ -secretase inhibitors (GSIs) could augment BCMA-targeted chimeric antigen receptor (CAR)-T cell therapy. Exposure of myeloma cell lines and patient tumor samples to GSIs markedly increased surface BCMA levels in a dose-dependent fashion, decreased soluble BCMA concentrations, and improved tumor recognition by CAR-T cells *in vitro*. [Profile](#) | [Abstract](#)

 N^6 -Methyladenosine mRNA Marking Promotes Selective Translation of Regulators Required for Human Erythropoiesis

 First Author: Daniel Koppers | Senior Author: Patrick Paddison *(pictured)*
 Nature Communications | UW and Fred Hutch


To identify new regulators of erythropoiesis, the authors utilized a functional genomic screen for genes affecting expression of the erythroid marker CD235a/GYPa. They demonstrated that N^6 -methyladenosine (m^6A) methyltransferase activity promoted erythroid gene expression programs through selective translation of ~ 300 m^6A marked mRNAs. [Abstract](#)

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Awards
Infectious Diseases Society to Honor Dr. Michael Boeckh

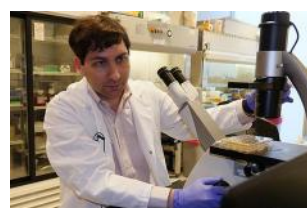
Fred Hutch



Dr. Michael Boeckh *(pictured)*, one of the world's leading experts in viruses that afflict patients with compromised immune systems, delivered the prestigious John F. Enders Lecture in Washington, D.C. at IDWeek, an annual conference of doctors and researchers specializing in infectious diseases. The lectureship is considered one of the highest honors bestowed by the Infectious Diseases Society of America. [Read More](#)

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Local News
Genome Editing to Be Tested in Kidney Organoids

UW Medicine



Gene editing will be tested in UW Medicine labs on kidney organoids – tiny, kidney-like structures grown from stem cells – as part of a federally funded effort to develop safe, effective genome editing technologies and therapies. The project will be a collaborative effort between Dr. Benjamin Freedman's *(pictured)* lab at UW Medicine, and the University of California Berkeley lab of Dr. Jennifer Doudna. [Read More](#)

Genes Contribute to Dog Breeds' Iconic Traits

UW News



New research co-led by Dr. Noah Snyder-Mackler at UW points to 131 genetic variants that offer new evidence to support what scientists have long suspected: that some of the behaviors that help characterize dog breeds - a drive to chase, for example, or aggression toward strangers - are associated with distinct genetic differences among them. [Read More](#)

Universal Blood Test from Microsoft and Adaptive Is a Google-Sized Data Challenge

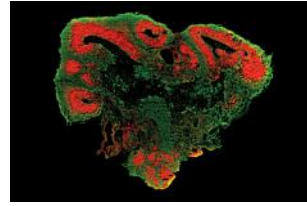
GeekWire



A novel effort from Microsoft and Adaptive Biotechnologies to diagnose multiple diseases from a single blood test is a data challenge on the scale of Google search. Rather than indexing web pages like Google, Adaptive and Microsoft are using artificial intelligence to map out signals associated with diseases as well as the cell receptors that bind to them. [Read More](#)

New Grants to Study the Aging Brain and Build Better Tools to Access Brain Cells

Allen Institute for Brain Science



Allen Institute researchers are embarking on two new projects to better understand the building blocks of the mammalian brain: its cell types. Funded by the National Institutes of Health, the projects will advance our knowledge of how our brains age, and build a suite of new tools to label brain cell types. Both studies will lay the groundwork for the scientific community to better understand the brain in health and disease. [Read More](#)

Why I – And Everybody Else – Loves My 3D Printed Brain

UW Medicine Memory and Brain Wellness Center



Have you ever wanted to hold your brain in your hands? Well, you can hold Genevieve Wanucha's. Using a magnetic resonance imaging scan collected as part of a research study that she participates in each year, Tim Wilbur, a research scientist at the UW Integrated Brain Imaging Center, made her brain on his own 3D printer. [Read More](#)

A Computational Challenge to Help Developmental Biology

The Paul G. Allen Frontiers Group



The Allen Institute Cell Lineage Reconstruction DREAM Challenge is a competition to use machine learning to reconstruct an entire animal's developmental lineage. The Paul G. Allen Frontiers Group sat down with three of the researchers involved in organizing this DREAM Challenge, including Dr. Jay Shendure *(pictured)* from the Allen Discovery Center for Lineage Tracing. [Read More](#)

UW Medicine Receives \$50 Million Donation to Start Brain Institute that Will Study Addiction, Alzheimer's and Other Brain Disorders

The Seattle Times



A pair of philanthropists from Bellevue have given \$50 million to UW Medicine to create an institute focused on developing treatments for brain disorders such as addiction, depression and Alzheimer's disease. The money, donated by Lynn and Mike Garvey, will kickstart the development of the Garvey Institute for Brain Health Solutions. [Read More](#)

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Upcoming Events in Seattle

- | | |
|------------------------|---|
| October 17
5:00 PM | Life Science Industry Networking Event
Life Science Washington |
| October 18
7:00 PM | Brewology
Pacific Science Center |
| October 22
12:30 PM | How to Be an Awesome Mentor: Ask the Experts
Hogness Auditorium |
| October 25
7:00 AM | 2019 Washington State Life Science Summit
Meydenbauer Center |
| October 25
3:00 PM | Women in Bio Seattle: Lyell Lounge
VUE Research Building |

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Science Jobs in Seattle

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Seattle Genetics
- Assistant Professor, Genome Sciences**
UW Department of Genome Sciences
- Associate Development Scientist**
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Fred Hutchinson Cancer Research Center
- Scientist/Senior Associate Scientist, Formulations Development**
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