

Publications of the Week

### Neutralization, Effector Function and Immune Imprinting of Omicron Variants

First Authors: Amin Addetia, Luca Piccoli, James Case, and Young-Jun Park | Senior Authors: David Veasley (pictured), Michael Diamond, and Davide Corti  
Nature | UW



Current SARS-CoV-2 variants have acquired convergent mutations at hot spots in the receptor-binding domain of the spike protein. The effects of these mutations on viral infection, transmission, vaccine efficiency, and current therapies remains poorly understood. Here, researchers demonstrate that recently emerged BQ.1.1 and XBB.1.5 variants bind host ACE2 with high affinity and promote membrane fusion more efficiently than earlier Omicron variants. [Abstract](#) | [Press Release](#)

### Donor Bone Marrow-Derived Macrophage Engraftment into the Central Nervous System of Patients Following Allogeneic Transplantation

First Author: Anisha Loeb | Senior Author: Keith Loeb (pictured)  
Blood Advances | Seattle Children's, Fred Hutch, and UW



Hematopoietic stem cell transplantation is a well-known treatment for hematologic malignancies, wherein nascent stem cells provide regenerating marrow and immunotherapy against the tumor. Researchers developed a sensitive and novel combined immunohistochemistry and XY fluorescence *in situ* hybridization assay to detect, quantify, and characterize donor cells in the cerebral cortex. [Abstract](#)

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Awards

### WRF Awards \$250,000 to the University of Washington in Support of Derrick Hicks' Minibinder-Drug Conjugates for Targeted Cancer Therapies

Washington Research Foundation (WRF)



Washington Research Foundation has awarded \$250,000 to Dr. Derrick Hicks (pictured) of the Institute for Protein Design at the University of Washington. The grant will allow Dr. Hicks to compare novel technology with established approaches for treating a range of cancers and, more specifically, support the development of proprietary minibinder-drug conjugates to improve cancer therapies. [Read More](#)

### Benaroya Research Institute Receives \$9 Million in Funding, With a Focus on Down Syndrome Research

Benaroya Research Institute (BRI)



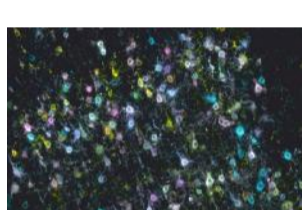
BRI announced eight new awards received in the past two months, totaling over \$9 million in funding — the majority of which will support an ongoing and increased focus into the immune systems of individuals with Down syndrome (DS). BRI's focus on DS grows out of the work of Dr. Bernard Khor (pictured) whose research assesses the biological roots of immune dysregulation in people with DS. [Read More](#)

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Local News

### Projects Launch to Map Brain Connections in Mouse and Macaque

Allen Institute



A complete map of all the connections in an entire mammalian brain may be in sight. Allen Institute researchers have just launched three new projects to construct large, detailed maps of neuronal connections of the mouse and macaque brains, with an eye toward creating full wiring diagrams of these animals' brains in the future. [Read More](#)

### Genomics Pioneer Lee Hood Joins Forces with the Buck Institute to Study Aging and Disease

GeekWire



Phenome Health, a Seattle research organization that has a data-driven approach to human health and longevity, launched a partnership with the Buck Institute for Research on Aging. The partnership establishes the Center for Phenomic Health at the Buck Institute, under the co-leadership of Buck CEO Dr. Eric Verdin and Seattle bioscience pioneer Dr. Leroy Hood (pictured). [Read More](#)

### KayoThera, Inc. Nominates First-in-Class, Oral Inhibitor of the Retinoid Pathway in Genetically Defined Oncology Indications as a Development Candidate

KayoThera



Seattle-based KayoThera, an early-stage therapeutics company developing first-in-class, oral, small molecule inhibitors of the retinoid pathway, announced that it has selected KAYO-1609 as its first drug development candidate. Preclinical studies in multiple models of cancer support the potential of KAYO-1609 in the treatment of genetically-defined cancers. [Read More](#)

### 2022-23 School Year ISB Education Highlights

Institute for Systems Biology (ISB)



Throughout the 2022-2023 academic year, ISB highlights the top projects from the ISB Education team. During Ignite STEM, a celebration supporting ISB Education, ISB Education hosted several stations offering brief, interactive experiences of how the team works with students, teachers and school administrators to foster next-generation science learning. [Read More](#)

### Cancer Care: From 'Sledgehammer' to Precision Cellular Therapy

Fred Hutch



As always with cancer, the news is mixed, but there is good news. Science has made great progress with immunotherapies for skin cancers like melanoma, as well as solid tumors like lung cancer which remains the deadliest cancer in the country. Fred Hutch's Dr. Phil Greenberg (pictured), President of the American Association for Cancer Research, says that research has added years to patients' lives. [Read More](#)

### Seagen's Cancer Drug Succeeds in 'Must-Win' Trial

BioPharma Dive



A combination of cancer drugs from Seagen and Merck & Company has shown early success in a large clinical trial. These results help confirm the pairing's ability to treat a wide range of bladder cancer patients. The companies stated that patients who were given the combination as opposed to chemo have gone significantly longer without their disease progressing while also living longer. [Read More](#)

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### Upcoming Events in Seattle

October 10 12:00 PM	<b>Current Biology Seminar</b> Fred Hutch
October 11 - 13 9:00 AM	<b>2023 ISB Virtual Microbiome Series</b> Online
October 11 10:00 AM	<b>BMES Workshop – Drug Development Pathway</b> Foege Building
October 13 1:30 PM	<b>Weighing the Future: Race, Science, and Pregnancy Trials in the Postgenomic Era</b> Online
October 14 9:00 AM	<b>Seattle Myeloma Round Table</b> The Westin Bellevue

[View All Events](#) 

### Science Jobs in Seattle

- Volunteer: Course Instructor/Course Instructor Assistant**  
SoundBio Lab
- Senior Science Writer and Publications Project Manager**  
Fred Hutch
- Postdoctoral Fellow**  
Seattle Children's
- Clinical Research Faculty Assistant/Associate Member**  
Benaroya Research Institute
- Research Scientist, Microbiology**  
IEH Laboratories

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