

Publications of the Week
Deep Immune Phenotyping Reveals Similarities between Aging, Down Syndrome, and Autoimmunity

 First Author: Katharina Lambert (*pictured, left*) | Senior Author: Bernard Khor (*right*)
 Science Translational Medicine | Benaroya Research Institute at Virginia Mason


A quantitative understanding of how various immune compartments change with age in Down syndrome remains lacking. The authors performed deep immunophenotyping of a cohort of individuals with Down syndrome across the life span, selecting for autoimmunity-free individuals. They simultaneously interrogated age- and sex-matched healthy controls and people with type 1 diabetes as a representative autoimmune disease. [Abstract](#)

Antibody-Mediated Broad Sarbecovirus Neutralization through ACE2 Molecular Mimicry

 First Authors: Young-Jun Park, Anna De Marco, Tyler Starr, and Zhuoming Liu | Senior Author: David Veesler (*pictured*)
 Science | Howard Hughes Medical Institute, UW, and Fred Hutch


Understanding broadly neutralizing sarbecovirus antibody responses is key to developing countermeasures against SARS-CoV-2 variants and future zoonotic sarbecoviruses. The authors describe the isolation and characterization of a human monoclonal antibody, designated S2K146, that broadly neutralizes viruses belonging to SARS-CoV- and SARS-CoV-2-related sarbecovirus clades which use ACE2 as an entry receptor. [Abstract](#) | [Press Release](#)

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Local News
Novel Transplant Approach Improves the Odds for Leukemia Patients

Fred Hutch



In the latest and largest study yet of a novel technique for treating leukemia patients, researchers have affirmed that it dramatically reduces a common debilitating side effect — chronic graft-vs.-host disease — in those receiving blood stem cell transplants. The experimental approach was developed by a Fred Hutch team led by Dr. Marie Bleakley (*pictured*). [Read More](#)

New Technique Sorts Out What Different Kinds of Neurons Do in the Brain

Allen Institute



While scientists are making headway at sorting out the number and types of neurons and other cells that are the building blocks of the mammalian brain, broader questions remain largely unanswered: Why do we have so many kinds of neurons? What do they all do? A new study led by researchers at Boston University in collaboration with scientists at the Allen Institute for Brain Science describes a method aimed at addressing those questions. [Read More](#)

Priming The Heart For Regeneration

Institute for Stem Cell and Regenerative Medicine (ISCRM)



At the ISCRM, researchers in multiple labs are pursuing novel approaches that can potentially cure rather than manage heart disease. Dr. Jason Miklas, now a postdoctoral researcher at Stanford University, is the lead author of a long-term study, which was published in the journal *iScience*. "Our idea was to take a new look at how to regenerate the heart," says Dr. Miklas. [Read More](#)

NEJM Paper Is Compendium on Rapid Tests for COVID-19

UW Medicine



A clinical practice article in the *New England Journal of Medicine* distills available data and clinical experience into a compendium about rapid diagnostic tests for SARS-CoV-2. The paper's author, Dr. Paul Drain, Associate Professor of Medicine and Global Health at the UW School of Medicine, leads a clinical research group in the International Clinical Research Center to develop and evaluate rapid diagnostic tests for various infectious diseases. [Read More](#)

Bronchopulmonary Dysplasia Program Expansion at Seattle Children's Serves Growing Need

Seattle Children's



Bronchopulmonary dysplasia (BPD) is a long-lasting form of lung disease affecting babies born prematurely. The number of newborns with BPD has risen as more and more babies survive being born many weeks before their due date. In this Q&A, Dr. Gregory Redding, Division Chief of the Pulmonary and Sleep Medicine Division at Seattle Children's and Professor of Pediatrics at UW, shares details on Seattle Children's expanding Bronchopulmonary Dysplasia Program. [Read More](#)

Sana Doubles Efforts for CAR T Research with New Collaborations

BioSpace



Sana Biotechnology, led by CEO Steve Harr (*pictured*), went all-in on improving CAR T therapies against B cell cancers in two recent deals. First, Sana entered into a non-exclusive commercial rights deal with China-based IASO Bio and Inovvent Biologics. Second, Sana reported that it has entered into an agreement with the US National Cancer Institute for exclusive global rights to the National Institutes of Health's CD22 CAR with a fully-human binder to be used in specific *in vivo* gene therapies and *ex vivo* allogeneic CAR T applications for B cell cancers. [Read More](#)

Juno Co-Founder Launches Ambitious New Startup with Fred Hutch Colleagues to Treat Cancer

GeekWire



A new cell therapy company is on the block, propelled by powerhouse scientific co-founders from Fred Hutch with years of experience investigating how to harness the immune system to treat cancer. Affini-T Therapeutics is developing cancer treatments using a strategy called T cell receptor cancer immunotherapy. The method involving engineering immune T cells to recognize tumor cells and infusing them into the patient. [Read More](#)

Dr. Anna Kuchina Joins ISB as Assistant Professor

Institute for Systems Biology (ISB)



Dr. Anna Kuchina (*pictured*) has joined ISB as Assistant Professor, and is their newest faculty member. She comes to ISB after completing her postdoctoral training in the Seelig Lab at UW. "I am particularly looking forward to applying the bacterial single-cell sequencing technology beyond the simple model organisms to gain insight into the behavior of individual microorganisms in various contexts relevant to human health," says Dr. Kuchina. [Read More](#)

Bristol Myers Squibb and Century Therapeutics' Deal for \$150M Could Boost Seattle Cell Research

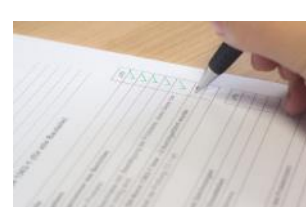
GeekWire



Cell therapy company Century Therapeutics will receive a \$100 million up front payment and \$50 million in equity investment from Bristol Myers Squibb. Under the agreement, which stands to bolster cell therapy research in the Seattle area, Bristol Myers Squibb will develop and commercialize up to four of Century's programs for cancer therapies made from induced pluripotent stem cells, which can be generated from adult human tissue. [Read More](#)

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Research Evaluation Needs to Change with the Times

Nature



Many researchers who are funded from public sources are required to participate in national evaluations of their work. Such assessments are popular with governments because they help to ensure a degree of accountability for taxpayer cash. However, researchers generally see assessments as unhelpful to their work. Evaluations can also be stressful and burdensome, and in some cases create tensions between colleagues in academic and administrative roles. [Read More](#)

Elizabeth Holmes Verdict: Researchers Share Lessons for Science

Nature



Elizabeth Holmes, the infamous biotech chief executive who promised to revolutionize blood testing, has been found guilty of fraud. The case will no doubt shape how biotechnology entrepreneurs approach investors, say researchers who spoke to *Nature* — and it makes abundantly clear the importance of validating early research through peer review. [Read More](#)

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Upcoming Events in Seattle

January 18 4:00 PM	Research Roundtable – Dr. Jim Heath Online
January 20 10:30 AM	Distinguished Seminar Series – Nii Addy Online
January 21 4:00 PM	SEP School Year Workshop: DNA Exonerations Online
January 27 8:00 AM	UW Postdoc Association 2022 Annual Research Symposium Online
January 27 8:30 AM	Seattle Cell Science Symposium 2022 Online

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