

Publications of the Week

Tissue-Resident T Cell Derived Cytokines Eliminate Herpes Simplex Virus-2 Infected Cells

First Author: Pavitra Roychoudhury | Senior Author: Joshua Schiffer (pictured)
Journal of Clinical Investigation | Fred Hutch



The mechanisms underlying rapid elimination of herpes simplex virus-2 (HSV-2) in the human genital tract despite low tissue-resident CD8⁺ and CD4⁺ T-cell density (T_{RM}) are unknown. The authors developed an agent-based mathematical model of an HSV-2 genital ulcer to integrate mechanistic observations of T_{RM} *in situ* proliferation, trafficking, cytolytic effects and cytokine alarm signaling. [Profile](#) | [Abstract](#)

The Functional Activity of E-Cadherin Controls Tumor Cell Metastasis at Multiple Steps

First Author: Tae-Young Na | Senior Author: Barry Gumbiner (pictured)
PNAS | Seattle Children's Research Institute and the UW School of Medicine



The expression of E-cadherin has been implicated in tumor metastasis, often as a tumor suppressor, but also as a promoter of growth and metastasis. The authors have shown that the functional activity of E-cadherin at the cell surface is often modified in response to environmental factors, and have developed monoclonal antibodies that activate E-cadherin adhesive function. [Abstract](#)

Engineering Heart Morphogenesis

First Author: Christian Mandrycky (pictured) | Senior Author: Nathan Sniadecki
Trends in Biotechnology | Institute for Stem Cell and Regenerative Medicine and UW



Recent advances in stem cell biology and tissue engineering have laid the groundwork for building complex tissues in a dish. The authors propose that these technologies are ready for a new challenge: recapitulating cardiac morphogenesis *in vitro*. They summarize the structures, signaling pathways, and stresses in the looping heart, and evaluate approaches that could be used to build a linear heart tube and guide it through the process of looping. [Abstract](#)

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Spotlight

Dr. Lexi Walls Talks Coronaviruses and Cryo-EM



Dr. Lexi Walls (pictured) is a recent PhD graduate in the laboratory of Dr. David Veesler at the University of Washington. Her research focuses on using cryo-electron microscopy (cryo-EM) to study transmission of coronaviruses. We sat down with Dr. Walls to discuss the current SARS-CoV-2 outbreak, and how insights from structural biology are helping inform vaccine development. [Read More](#)

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Local News

Volunteers in Seattle Get First Doses of Trial Vaccine for COVID-19

USA Today



The first shots in the first vaccine trial for the new coronavirus have been administered, as a small group of volunteers in Seattle will receive varying doses over the next several weeks to test the safety of the experimental vaccine. Doctors at Kaiser Permanente Washington Health Research Institute in Seattle gave the first shots in the trial aimed at combating the spread of COVID-19. [Read More](#)

Benaroya Research Institute Launches Gut Research Program

Benaroya Research Institute at Virginia Mason



Benaroya Research Institute at Virginia Mason has launched a new Gut Immunity Program with the support of a \$3 million donation from a private donor. Researchers will use model systems, cell samples and clinical studies to understand how immune responses go wrong and result in inflammatory bowel disease, ulcerative colitis and Crohn's disease, celiac disease and food allergies. [Read More](#)

We Are Doers. We Want to Get Involved.

American Society for Biochemistry and Molecular Biology



Dr. Sharona Gordon, UW's Associate Dean for Research and Graduate Education, is one of many basic scientists helping with an unusual effort: recruiting volunteer scientists to help keep diagnostic labs running during Seattle's COVID-19 outbreak. After consulting with faculty and department chairs, she sent an email requesting volunteers under age 40 to help out in the labs at the Department of Laboratory Medicine. [Read More](#)

Study Points toward Progress on TB Vaccines

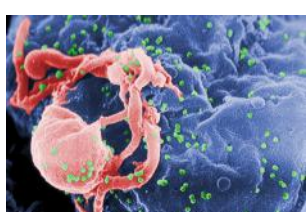
Fred Hutch



Scientists are taking a new look at a vaccine meant to stop the deadliest infectious disease on earth. It is not coronavirus, nor bird flu nor HIV. It is tuberculosis (TB). New work from Fred Hutch researcher Dr. Jim Kublin (pictured) explores what happens when young South Africans were re-vaccinated 12-17 years after they were immunized against TB as infants. [Read More](#)

New Insights Into How to Prevent HIV from Reemerging

The Daily



New work from UW research professors Dr. Florian Hladik and Dr. German Gornalusse, who both work in the Department of Obstetrics and Gynecology, provides insight into how to prevent HIV from reemerging after treatment ceases. For both Hladik and Gornalusse, a passion for the sciences arose early in their careers as they were navigating their lives in their home countries. [Read More](#)

Meet a Seattle Scientist Racing toward a Coronavirus Vaccine

Crosscut



As coronavirus drives most of us into our homes to stem the rate of infection, a select group of scientists is working on ways to keep this from happening again. Some of the scientists are in our backyard, the epicenter of the U.S. crisis, including Dr. Deborah Fuller (pictured), a vaccinologist and Professor of Microbiology at the UW School of Medicine. [Read More](#)

Seattle Biotech Startup Silverback Therapeutics Raises \$78.5M

GeekWire



Seattle biotech startup Silverback Therapeutics has raised a \$78.5 million investment round to support development of its therapies for cancer, fibrosis, and other conditions. Founded in 2016, Silverback's immunoTAC technology can deliver drugs systematically, but only target parts of the body affected by disease. The approach could help prevent harmful side effects and make the therapies more effective. [Read More](#)

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Upcoming Events in Seattle

March 24 6:00 PM	COVID-19 & HIV: What We Know, What We Don't Know & What You Can Do to Stay Safe Online
March 24 7:00 PM	Science in the City: COVID-19 Livestream - Connect with Experts Online
March 25 12:00 PM	LSWI Lunch and Learn: Building Your Founding Team Online
March 26 12:00 PM	Women in Bio National Webinar: Fundraising Boot Camp for Life Science Startups: Messaging and Branding Online
March 28 12:00 PM and 7:00 PM	Virtual Geeky Open Mic Online

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Science Jobs in Seattle

- Scientist, Cell Line Development**
Seattle Genetics
- Senior Scientist, Assay Development, Molecular Product Development**
Adaptive Biotechnologies
- Associate Scientist, Pharmacology**
Zymeworks
- Scientist, Transcriptomics and Integrative Analysis**
Allen Institute for Cell Science
- Research Associate, Viral Vector Process Analytics**
Bristol-Myers Squibb

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hPSC MAINTENANCE AND BANKING
Webinar by Dr. Teneille Ludwig

STEMCELL | nature.research

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