

## Publications of the Week

## Chronic TLR7 and TLR9 Signaling Drives Anemia via Differentiation of Specialized Hemophagocytes

First Author: Holly Akilesh (*pictured, left*) | Senior Author: Jessica Hamerman (*pictured, right*)  
 Science | Benaroya Research Institute and UW



The phagocytosis of red blood cells, platelets, and leukocytes can be a major contributor to acute cytopenias. The authors reasoned that specialized phagocytes may develop in inflammatory conditions in response to the signaling of pattern-recognition receptors, such as toll-like receptors (TLRs). They undertook *in vitro* and *in vivo* studies to investigate TLR-induced macrophage differentiation and the role of this process in inflammatory cytopenias. [Profile](#) | [Abstract](#)

## Basophil-Derived Tumor Necrosis Factor Can Enhance Survival in a Sepsis Model in Mice

First Author: Adrian Piliponsky (*pictured*) | Senior Author: Stephen Galli  
 Nature Immunology | Seattle Children's Research Institute and UW School of Medicine



Basophils are evolutionarily conserved in vertebrates, despite their small numbers and short life span, suggesting that they have beneficial roles in maintaining health. However, these roles are not fully defined. The authors demonstrated that basophil-deficient mice exhibit reduced bacterial clearance and increased morbidity and mortality in the cecal ligation and puncture model of sepsis. [Profile](#) | [Abstract](#)

## CIRCling the Wagons to Protect Intestinal Stem Cells

First Author: Frank Soveg | Senior Author: Ram Savan (*pictured*)  
 Nature Immunology | UW School of Medicine



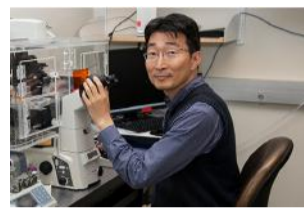
The barrier function of the intestinal epithelium is supported by the interplay of intestinal stem cells (ISCs) and immune cells associated with the intestinal mucosa. Innate lymphoid cell-derived cytokine IL-13 promotes the maintenance of ISCs through stabilization of  $\beta$ -catenin. The circular RNA circPan3 regulates mRNA encoding the cytokine receptor subunit IL-13R $\alpha$  and downstream IL-13 signaling to stabilize the  $\beta$ -catenin pathway in ISCs. [Abstract](#)

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## Awards

## IEEE NANOMED New Innovator Award for Dr. Deok-Ho Kim

Institute for Stem Cell & Regenerative Medicine



Dr. Deok-Ho Kim (*pictured*), Associate Professor in Bioengineering and a Faculty Member of the Institute for Stem Cell and Regenerative Medicine, has been awarded the inaugural 2018 Institute of Electrical and Electronics Engineers (IEEE) NANOMED New Innovator Award. The award recognizes significant contributions to the field of nano/molecular medicine and engineering as demonstrated by innovative research, product development, patents and/or publications. [Read More](#)

## Dr. Alice Berger Receives Grant to Study Causes of Lung Cancer in Never-Smokers

Fred Hutchinson Cancer Research Center



Fred Hutch lung cancer researcher Dr. Alice Berger (*pictured*) has received a grant from the Prevent Cancer Foundation to help untangle how environmental exposures beyond cigarette smoke contribute to lung cancer. The results will be a step toward understanding who among never-smokers may be most at risk for lung cancer and, once validated in further studies, point toward possible preventive and risk-reducing measures. [Read More](#)

## Jay Shendure Awarded 2019 Richard Lounsbery Award

National Academy of Sciences



Jay Shendure (*pictured*) from UW has been awarded the 2019 Richard Lounsbery Award. Shendure is a pioneer and leader in genomics who has developed new technologies that make DNA sequencing faster, cheaper, and more useful - work that is transforming genetics and medicine. This prize is awarded to young French and American scientists to recognize extraordinary scientific achievement in biology and medicine. [Read More](#)

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## Local News

## Temperature-Stable Experimental Tuberculosis Vaccine Enters Clinical Testing

Infectious Disease Research Institute



Vaccinations have begun in a Phase I human clinical trial testing a freeze-dried, temperature-stable formulation of an experimental tuberculosis vaccine candidate. The trial is being conducted at the Saint Louis University School of Medicine Center for Vaccine Development and will enroll as many as 48 healthy adult volunteers aged 18 to 55 years. The experimental vaccine, called ID93, was developed by scientists at the Infectious Disease Research Institute in Seattle. [Read More](#)

## Peanut Allergy: Progress Toward Breakthroughs

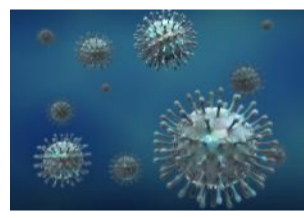
Benaroya Research Institute



In 2017, Eric Wambre, announced that he had identified a cell, called TH2A, that appears to cause all allergies. This opened the door to developing a test that could detect TH2A cells and identify when patients have allergies. Even better, researchers could pursue therapies that target TH2A cells and stop allergies. [Read More](#)

## Cutting-Edge Approach Maps HIV's Escape Routes

Fred Hutchinson Cancer Research Center



Using a cutting-edge approach, scientists at Fred Hutch have constructed an atlas of mutations that HIV uses to escape broadly neutralizing antibodies. The information could help guide researchers who are testing broadly neutralizing antibodies' potential to prevent or treat HIV infection, as well as those working to develop more effective preventive vaccines. [Read More](#)

## Got the Flu? Seattle Wants to Swab Your Nose for a Massive Health Data Project

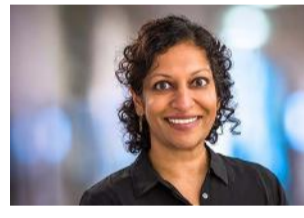
GeekWire



Calling all feverish, coughing, achy Seattleites: Your germs could help prevent the next big pandemic. At least, that's the hope of a new project from the Brotman Baty Institute for Precision Medicine. The Seattle Flu Study will gather swabs from 10,000 resident schnozzes to better understand how contagious diseases spread in a community. [Read More](#)

## Dr. Veena Shankaran Joins Leadership of Fred Hutch's Health Care Economics and Policy Research Institute

Fred Hutchinson Cancer Research Center



Dr. Veena Shankaran (*pictured*) has been named the new co-director of Fred Hutch's health care economics and policy group, the Hutchinson Institute for Cancer Outcomes Research, or HICOR. In her new role, Shankaran will collaborate with HICOR Director Dr. Scott Ramsey in strategic planning, scientific priority setting, fundraising and organizational development. [Read More](#)

## New Life Sciences Building Sets the Gold Standard for Going Green

The Daily



The new UW Life Sciences building is a model of environmentally responsible design, featuring 20-inch-deep solar fins and its own water recycling system. The building is currently LEED Gold certified, a globally recognized sustainability achievement. Perkins + Will, a local architecture and interior design firm, worked closely with the department of biology to make decisions about both form and function. [Read More](#)

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## Interesting Articles

## Why a Scientist Is Running for Seattle City Council

Scientific American



Emily Myers, PhD candidate in Pharmacology at UW, is running for Seattle City Council because she believes "our biggest challenges - climate change, economic inequality, housing shortages and homelessness, addiction and substance abuse, womxn's rights - need scientifically informed policies to make sustainable, lasting change". [Read More](#)

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## Upcoming Events in Seattle

February 4 6:00 PM	<b>WIB-Seattle: Building a Plan for Your Year</b> 400 Dexter Avenue
February 5 7:00 PM	<b>Science in the City – Women in STEM: Breaking Down Barriers</b> Pacific Science Center
February 8 7:00 PM	<b>Brewology</b> Pacific Science Center
February 21 5:00 PM	<b>Life Science Industry Networking Event</b> Agora Conference Center
February 25 - 26	<b>Training in Multi-Disciplinary Team Science</b> Seattle Children's Sand Point Learning Center

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## Science Jobs in Seattle

<b>Principal Scientist, Analytical Development and Outsourcing</b> Impel Neuropharma
<b>VP, Clinical Development Hematology</b> Adaptive Biotechnologies
<b>Scientist, Protein Engineering</b> bluebird bio
<b>Manager/Senior Manager, Nonclinical Outsourcing</b> Impel Neuropharma
<b>Research Scientist II</b> Adaptive Biotechnologies

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