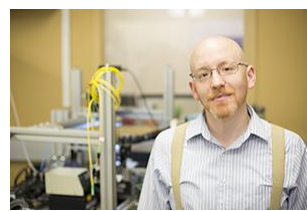


Publications of the Week

Glycan Targeted Polymeric Antibiotic Prodrugs for Alveolar Macrophage Infections

First Author: Jasmin Chen | Senior Author: Daniel Ratner (pictured)
Biomaterials | UW



Facultative intracellular bacteria can cause severe systemic disease and sepsis, with high morbidity and mortality associated with pulmonary infection. Pulmonary administration represents a promising alternative to systemic dosing for delivering antibiotics directly to the lung. The authors present synthesized mannosylated ciprofloxacin polymeric prodrugs for efficient pulmonary delivery, targeting, and subsequent internalization by alveolar macrophages. [Abstract](#)

A Genome-Wide Framework for Mapping Gene Regulation via Cellular Genetic Screens

First Author: Molly Gasperini | Senior Author: Jay Shendure (pictured)
Cell | UW



Over one million candidate regulatory elements have been identified across the human genome, but nearly all are unvalidated and their target genes uncertain. The authors present a multiplex, expression quantitative trait locus-inspired framework for mapping enhancer-gene pairs by introducing random combinations of CRISPR/Cas9-mediated perturbations to each of many cells, followed by single-cell RNA sequencing. [Abstract](#)

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Awards

Institute for Systems Biology's Dr. Sui Huang Wins Grand Challenge Funding from Cancer Research UK to Tackle Cancer's Biggest Questions

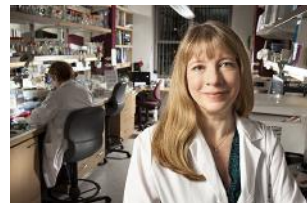
Institute for Systems Biology



Institute for Systems Biology's Professor Sui Huang (pictured) has been announced by Cancer Research UK as a member of a global research team funded through its Grand Challenge competition — an international funding initiative that aims to answer some of the biggest questions facing cancer research. This pioneering team has been awarded about \$25 million to uncover how chronic inflammation causes cancer. [Read More](#)

ITHS Announces Recipients of \$280K in Pilot Award Funding

Institute for Translational Health Sciences



The Institute for Translational Health Sciences (ITHS) offers annual pilot awards for novel, innovative, and collaborative clinical research. Dr. Gail Jarvik (pictured), Professor of Medical Genetics, will use funds from the ITHS Research Innovation Award to develop and distribute a mobile app for families to communicate genetic test results, understand individual disease risk in context, and recognize the appropriate next steps for mitigating those risks with follow-up care. [Read More](#)

[View All Awards](#)

Local News

Region's First Hepatitis C Heart-Transplant Recipient Is Cured

UW Medicine



UW Medicine is declaring success with the Pacific Northwest's first heart-transplant recipient to purposely acquire the hepatitis C virus (HCV) from the donor organ and then have the disease eradicated by antiviral medication. Kerry Hayes of Anacortes, Washington, acquired HCV during a transplant in July at UW Medical Center and subsequently completed an eight-week course of daily antivirals. [Read More](#)

Fred Hutch Researchers Root Out Sleeping Breast Cancer Cells to Stop Metastasis

GeekWire



Chemotherapy is often effective at destroying fast-growing cells, but there's a problem: cancer cells can go dormant and avoid chemotherapy, only to return years later. Researchers at Fred Hutch, led by Dr. Cyrus Ghajar (pictured), recently uncovered promising new science in the battle against metastatic breast cancer. They have found that it's possible to destroy cancer cells that can hide for years in people's bone marrow. [Read More](#)

Genetic Risks Play Part in Fetal Alcohol Syndrome

The Huddle



A study of 84 twin/sibling pairs exposed to alcohol *in utero* shows that two fetuses exposed to identical levels of alcohol can experience strikingly different levels of neurological damage. The researchers found that risk of damage does not depend solely on the pregnant woman's alcohol consumption; rather, fetal genetics plays a vital role. [Read More](#)

Rethinking an Old Viral Foe

Fred Hutch



Cytomegalovirus (CMV) infects at least half of all adults worldwide. Most are unaware they're infected because their healthy immune system keeps it in check. The virus slips into dormancy, becoming a passive and lifelong passenger. But CMV can roar back to life in anyone with a compromised immune system. New research may rewrite the story of why the virus wreaks such havoc — and hint at how to stop it. [Read More](#)

Secret to Sepsis May Lie in Rare Cell

Seattle Children's Hospital



Dr. Adrian Piliponsky's (pictured) research team from the Seattle Children's Research Institute has revealed how a rare group of white blood cells, called basophils, play an important role in the immune response to a bacterial infection, preventing the development of sepsis. The researchers say their findings could lead to better ways to prevent the dangerous immune response that strikes more than 30 million people worldwide every year. [Read More](#)

PNRI and UK Researchers Develop New Type 1 Diabetes Newborn Screening Tool

Pacific Northwest Research Institute



Researchers at the Pacific Northwest Research Institute (PNRI) in Seattle and the University of Exeter in the U.K. have developed a new method of screening babies and adults for future risk of Type 1 diabetes (T1D). This new method takes into account detailed genetic information known to increase the chances of T1D and could make prediction of T1D among all children much more affordable in public health settings. [Read More](#)

Spotlight on Amy Zamora, ISB Systems Research Scholar

Institute for Systems Biology (ISB)



The Systems Research Scholars Program (SRSP) is a two-year program that provides recent college undergraduates a springboard to become the next generation's pioneers of interdisciplinary scientific research. The fully funded SRSP provides scholars mentorship by ISB faculty and immersion in the scientific research of ISB. In this Q&A, Amy Zamora (pictured) describes her experiences at ISB, research interests, future aspirations, and much more. [Read More](#)

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Interesting Articles

New Year, New Federal Policies for Clinical & Translational Research

Institute for Translational Health Sciences



Many researchers are tucking in to finish their first National Institutes of Health (NIH) grant proposals or Institutional Review Board applications of the year. A number of changes to federal regulations and NIH policies relevant to clinical and translational research take effect in January 2019. The Institute of Translational Health Sciences discusses these changes in this article. [Read More](#)

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Upcoming Events in Seattle

- January 29 9:00 AM **Mutational Scanning Symposium**
Brotman Auditorium
- January 30 6:30 PM **The Art of Data Science: Visualizations**
The Pioneer Collective
- February 2 8:30 AM **Women in Science & Engineering Conference**
UW Student Union Building (HUB)
- February 4 6:00 PM **WIB-Seattle: Building a Plan for Your Year**
400 Dexter Avenue
- February 5 7:00 PM **Science in the City – Women in STEM: Breaking Down Barriers**
Pacific Science Center

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Science Jobs in Seattle

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Beharoya Research Institute
- VP, Clinical Development, Hematology**
Adaptive Biotechnologies
- Assay Development Scientist, Antigen Map**
Adaptive Biotechnologies
- Research Scientist/Engineer 3**
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- Senior Laboratory Specialist**
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