Volume 3.02: January 27, 2020

Publications of the Week

Biophysical and Biomolecular Interactions of Malaria-Infected Erythrocytes in Engineered Human Capillaries

First Author: Christopher Arakawa | Senior Author: Ying Zheng *(pictured, front row left)*
Science Advances | UW and Seattle Children's Research Institute

Microcirculatory obstruction is a hallmark of severe malaria, but mechanisms of parasite sequestration are only partially understood. The authors developed a robust three-dimensional microvessel model that mimics the arteriole-capillary-venule transition consisting of a narrow 5- to 10-µm-diameter capillary region flanked by arteriole- or venule-sized vessels. **Profile | Abstract**

Increased Drp1 Acetylation by Lipid Overload Induces Cardiomyocyte Death and Heart Dysfunction

First Author: Qingxun Hu | Senior Author: Wang Wang *(pictured, center)*
Circulation Research | UW

The authors investigated the regulation and function of the mitochondrial fission protein dynamin-related protein 1 (Drp1) in lipid overload-induced cardiomyocyte death and heart dysfunction. In adult cardiomyocytes, palmitate increased Drp1 acetylation, phosphorylation, and protein levels, and these increases were abolished by restoration of the decreased NAD^+ level. **Profile | Abstract**

Two Roles for the Yeast Transcription Coactivator SAGA and a Set of Genes Redundantly Regulated by TFIID and SAGA

First Author: Rafal Donczew | Senior Author: Seven Hahn *(pictured)*
eLife | Fred Hutch

Deletions within genes coding for subunits of the transcription coactivator SAGA caused strong genome-wide defects in transcription and SAGA-mediated chromatin modifications. In contrast, rapid SAGA depletion produced only modest transcription defects at 13% of protein-coding genes — genes that are generally more sensitive to rapid TFIID depletion. **Abstract**

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Awards

Does CAR T-Cell Therapy Leave Patients Vulnerable to Infection?

Fred Hutch

Dr. Joshua Hill *(pictured)*, an infectious diseases specialist at Fred Hutch, will use a new five-year, $3.3 million grant from the National Cancer Institute's Cancer Moonshot program to study the holes that CAR T-cell immunotherapy leaves in patients' defenses against infection — and how doctors can fill them. Hill will lead an interdisciplinary team of researchers from Fred Hutch and Seattle Children's focused on CAR T-cell therapies used to treat blood cancers. **Read More**

Washington Research Foundation Postdoctoral Fellows Announced

Washington Research Foundation

Washington Research Foundation (WRF) Postdoctoral Fellows are funded for three years at eligible institutions in Washington state to work on ambitious projects addressing major public needs. Ten researchers have been named as WRF Postdoctoral Fellows for 2020, including Dr. Rossana Colon-Thillet *(pictured)* from Fred Hutch, who is working on developing of a novel mouse model to investigate and test CRISPR-Cas9 gene-editing therapeutics for hepatitis B. **Read More**

Announcing the Recipients for the 2019 International Infrastructure Awards

The Center for AIDS Research

The UW/Fred Hutch Center for AIDS Research has announced this year's International Infrastructure Awards, which are designed to build capacity for UW-affiliated international HIV research activities. Among the recipients is Dr. Sylvia LaCourse *(pictured)* from UW, who will purchase a 6000 sample capacity liquid nitrogen tank to support UW-affiliated studies in Kenya. **Read More**

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Local News

Geek of the Week: Fred Hutch's Jeanne Chowning Committed to Diversity and Inclusion in Science

GeekWire

Dr. Jeanne Ting Chowning *(pictured)*, the Senior Director of Science Education at Fred Hutch, is a lifelong educator with a passion for science — and a commitment to making sure that that passion reaches and is of service to underrepresented students and teachers. She was selected as GeekWire's Geek of the Week, which profiles the characters of Pacific Northwest tech, science, games, innovation, and more. **Read More**

Like Snowflakes, No Two Cells Are Alike

Fred Hutch

Like snowflakes, all of us are a little different, even genetically identical twins or clones. Whether a mutation manifests, and how strongly, comes down to cellular physiology. New work co-led by Dr. Roger Brent *(pictured)* at Fred Hutch has shown that a cell's capacity to turn genes into proteins influences its characteristics, or phenotype. **Read More**

Use of Hormone Provides No Neuroprotection in Preemies

UW Medicine

A study from researchers at UW Medicine suggests that erythropoietin treatment may not provide neuroprotection for extremely premature babies. The results suggest that high-dose erythropoietin treatment does not lower the risk of death or severe brain damage before two years of age in children who had been born at a very premature stage. There were no differences in severe side effects between the treatment and placebo groups. **Read More**

New Metabolic Modeling Tool Allows Microbiome Researchers to Map Community Ecology to Ecosystem Function

Institute for Systems Biology

Changes in the makeup of the gut microbiome have long been associated with a host of medical conditions, but researchers have had a difficult time pinning down exactly how the ecological composition of an individual's gut influences how that ecosystem actually functions. A promising new open-source modeling tool co-developed by Dr. Sean Gibbons' *(pictured)* lab provides a path forward in predicting ecosystem function from community structure. **Read More**

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Interesting Articles

Trump Restrictions on Fetal Tissue Research Unsettle Key Studies and Scientists

The Washington Post

According to scientists, a recent Trump administration decision to limit funding of research that uses fetal tissue is already disrupting research into major diseases, including AIDS, Down syndrome and diabetes. The controversial federal funding rules, announced seven months ago, are reshaping scientists' research paths and the grants they seek from the National Institutes of Health. **Read More**

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Upcoming Events in Seattle

January 28 12:00 PM	**Lunch & Learn: Market Trends** Cambia Grove
January 29 4:30 PM	**UW Pathology Department: Beer & Science** SLU Campus F106
January 29 5:30 PM	**University of Washington Diversity Career Fair** Husky Union Building
February 4 9:00 AM	**UW Postdoc Association General Assembly** Loew 310
February 4 7:30 PM	**Bees, Guts, Soil, and Cancer** The Forum

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Science Jobs in Seattle

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Sana Biotechnology

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Institute for Systems Biology

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