

Publications of the Week

Contractile Forces in Platelet Aggregates under Microfluidic Shear Gradients Reflect Platelet Inhibition and Bleeding Risk

First Author: Lucas Ting | Senior Author: Nathan Sniadecki (pictured)
Nature Communications | Institute for Stem Cell & Regenerative Medicine and UW



Platelets contract forcefully after their activation, contributing to the strength and stability of platelet aggregates and fibrin clots during blood coagulation. The authors report a rapid, microfluidic approach for measuring the contractile force of platelet aggregates for the detection of platelet dysfunction. This may be a useful approach for monitoring both antiplatelet therapy and traumatic bleeding risk.

[Profile](#) | [Abstract](#)

Alterations in Phosphorylation of Hepatocyte Ribosomal Protein S6 Control Plasmodium Liver Stage Infection

First Author: Elizabeth Glennon | Senior Author: Alexis Kaushansky (pictured)
Cell Reports | Center for Infectious Disease Research and Seattle Children's Research Institute



Plasmodium parasites are highly selective when infecting hepatocytes and induce many changes within the host cell upon infection. While several host cell factors have been identified that are important for liver infection, our understanding of what facilitates the maintenance of infection remains incomplete. The authors describe a role for phosphorylated ribosomal protein S6 in Plasmodium yoelii-infected hepatocytes. [Profile](#) | [Abstract](#)

Distinct Progenitor Populations Mediate Regeneration in the Zebrafish Lateral Line

First Author: Eric Thomas | Senior Author: David Raible (pictured)
eLife | UW



Mechanosensory hair cells of the zebrafish lateral line regenerate rapidly following damage. These renewed hair cells arise from the proliferation of surrounding support cells, which undergo symmetric division to produce two hair cell daughters. Utilizing novel transgenic lines, the authors identified support cell populations with distinct progenitor identities. [Abstract](#)

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Awards

Dr. Heather Wright Receives NIH Training Fellowship to Study Pancreatic Cancer Metastasis

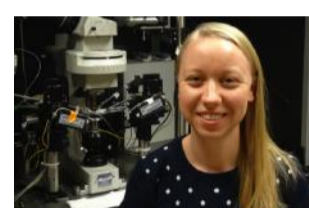
Fred Hutch



Dr. Heather Wright (pictured), a postdoctoral research fellow in the Hingorani Lab at Fred Hutch, has received a prestigious three-year training fellowship from the National Institutes of Health (NIH) to study the mechanisms of pancreatic cancer spread, or metastasis, to distant organs. The NIH established the Ruth L. Kirschstein National Research Service Award to help shepherd postdocs into independent research careers. [Read More](#)

Eight Postdoctoral Researchers at the University of Washington Receive Awards from the Washington Research Foundation

UW



Eight researchers at UW have been named Washington Research Foundation Postdoctoral Fellows, including Alison Weber (pictured). An external committee from academia and industry chose the Fellows from a pool of candidates to conduct original research, primarily in the life sciences, at Washington state research institutions. This year's cohort will research topics in health care, food sustainability and renewable energy, among others. [Read More](#)

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Local News

Scientists Are Creating Virtual Simulations of the Brain to Better Understand the Real Thing

Allen Institute



The ability to infer what's missing in a visual scene is not unique to humans — many other animals can do it too — but we are far from understanding how the brain manages those complex computations. That's what Dr. Stefan Mihalas wants to figure out. To do so, he and his computational neuroscientist colleagues at the Allen Institute build models, or virtual recreations, of the brain (or parts of it). [Read More](#)

Putting Developmental Diseases on the Map

The Daily



Most people use a map to understand the physical world around them. Now, genetic researchers have a map of their own to understand how developmental diseases work at the genetic level. In a recent study, UW graduate student Junyue Cao profiled approximately 2 million cells from 61 mouse embryos between 9 and 14 days old, resulting in a digital representation of how each cell type develops and its gene expression changes. [Read More](#)

HIV Protection for Infants May Come From Breastfeeding and the Gut

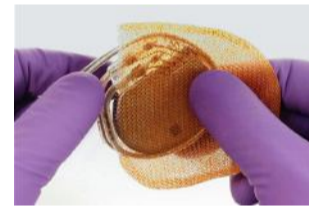
Seattle Children's Hospital



Scientists at Seattle Children's Research Institute are looking for new clues in an important indicator of overall infant health — a baby's developing immune system and microbiome. Ongoing research not only examines how an infant's microbiome can evolve to help protect against HIV infection, but also what factors, such as diet, alter an infant's susceptibility when exposed to HIV through their mother's breast milk. [Read More](#)

Wrapped Heart Devices Cut Infection in Implanted Patients

UW Medicine



Among the 1.7 million patients implanted globally every year with heart defibrillators and pacemakers, postoperative infections are a major concern. Dr. Jeanne Poole and colleagues at UW report that wrapping defibrillators and pacemakers in an antibacterial, bio-absorbable mesh envelope during the implantation significantly reduces the rate of infections experienced by patients in the following year. [Read More](#)

Ablation More Effective than Meds for Heart-Rhythm Ailment

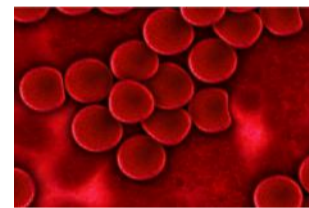
UW Medicine



Catheter ablation is a minimally invasive procedure in which areas of vessels are purposely deadened so they cannot conduct erratic electrical currents within the heart. New research from Dr. Jeanne Poole has associated the procedure with a significant improvement in quality of life and a reduced need for hospitalizations, compared with drug therapy. [Read More](#)

New Method to Assess Platelet Health Could Help ER Doctors

UW News



Currently, doctors have no direct method to assess the health of one of the most critical component of the blood: platelets. Dr. Nathan Sniadecki and colleagues at UW have created a novel system that can measure platelet function within two minutes and can help doctors determine which trauma patients might need a blood transfusion upon being admitted to a hospital. [Read More](#)

Research Spotlight: Dr. Jerry Nepom

Benaroya Research Institute at Virginia Mason (BRI)



Dr. Jerry Nepom (pictured), who founded BRI's Diabetes Research Program, now devotes his time to a laser-focused effort on getting experimental therapies to patients. As the leader of the Immune Tolerance Network—an international organization of scientific and clinical experts in immunological diseases—Jerry directs teams of investigators who design, conduct, and analyze clinical trials for type 1 diabetes, as well as other autoimmune diseases and organ transplantation. [Read More](#)

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Upcoming Events in Seattle

March 26 5:00 PM	2019 Bio in the Brewery Stoup Brewing – Ballard
March 27 8:30 AM	Stem Cells & Gene Editing Workshop Allen Institute
April 3 8:30 AM	Introduction to Science Communication Workshop ATLAS workbase
April 3 3:30 PM	Exploring Frontiers Seminar: Christopher Mason Allen Institute
April 3 - 6 8:00 AM	Society for Biomaterials Annual Meeting and Exposition Washington State Convention Center

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Fred Hutch
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Benaroya Research Institute at Virginia Mason

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