

Publications of the Week

Fetal Origin Confers Radio-Resistance on Liver Macrophages via p21^{cip1}/WAF1

First Author: Radika Soysa | Senior Author: Ian Crispe (pictured, left)
Journal of Hepatology | UW



Cells of hematopoietic origin, including macrophages, are generally radiation-sensitive but a subset of Kupffer cells (KCs) is relatively radioresistant. The authors identified radioresistant KCs as the long-lived subset that is derived from CX3CR1-expressing progenitor cells in fetal life, while adult bone marrow-derived KCs did not resist irradiation. [Profile](#) | [Abstract](#)

Glial Injury in Neurotoxicity after Pediatric CD19-Directed Chimeric Antigen Receptor T Cell Therapy

First Author: Juliane Gust (pictured, left) | Senior Author: Rebecca Gardner
Annals of Neurology | Seattle Children's Research Institute and Juno Therapeutics



The authors tested whether systemic cytokine release was associated with central nervous system inflammatory responses and glial injury in immune effector cell-associated neurotoxicity syndrome after chimeric antigen receptor-T cell therapy in children and young adults. Cerebrospinal fluid levels of S100 calcium-binding protein B and glial fibrillary acidic protein increased during neurotoxicity, indicating astrocyte injury. [Profile](#) | [Abstract](#)

Salmonella Translocated Effectors Recruit OSBP1 to the Phagosome to Promote Vacuolar Membrane Integrity

First Author: Anna Kolodziejek | Senior Author: Samuel Miller (pictured)
Cell Reports | UW



Intracellular *Salmonella* use a type III secretion system to translocate effector proteins across the phagosome membrane and thus promote vacuole membrane tubulation, resulting in intracellular survival. The authors demonstrated that the effector SseJ binds the eukaryotic lipid transporter oxysterol binding protein 1 (OSBP1). [Abstract](#)

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Awards

Dr. Joseph Mougous Announced as Finalist of the Prestigious Blavatnik National Awards for Young Scientists

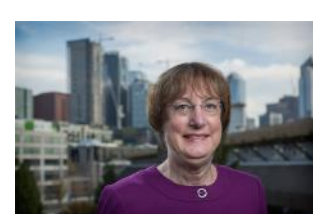
Blavatnik Awards



Dr. Joseph Mougous (pictured) from UW has been announced as a finalist of the 2019 Blavatnik National Awards for Young Scientists, which recognize the past accomplishments and the future promise of the most-talented faculty-rank scientists and engineers aged 42 years and younger at America's top academic and research institutions. [Read More](#)

Dr. Nancy E. Davidson Receives Raisbeck Endowed Chair for Collaborative Research

Fred Hutch



Dr. Nancy E. Davidson (pictured), a world-renowned breast cancer oncologist and researcher, wears many hats. She now has another prestigious title that reflects her role as a bridge-builder across cancer-research and treatment powerhouses: the Raisbeck Endowed Chair for Collaborative Research. The new chair was created to facilitate collaboration between oncology researchers at Fred Hutch and UW. [Read More](#)

Dr. Nathan Price Named NAM Emerging Leader in Health and Medicine Scholar

Institute for Systems Biology



The National Academy of Medicine (NAM) has announced the Institute for Systems Biology's Dr. Nathan Price (pictured) as a 2019 Emerging Leader in Health and Medicine Scholar. NAM's program provides a platform for a new generation of leaders to collaborate with the NAM and its members across generations and fields of expertise to advance science, combat persistent challenges in health and medicine, and spark transformative change to improve health for all. [Read More](#)

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Local News

Special Delivery: Gold Nanoparticles Ship CRISPR Cargo

Fred Hutch



Forget UPS and FedEx: Tiny golden delivery trucks created at Fred Hutch can ship CRISPR into human blood stem cells, offering a potential way to treat diseases like HIV and sickle cell anemia. And the researchers behind those trucks have even bigger distribution dreams. They think their new CRISPR courier could help deliver gene therapy to patients around the world. [Read More](#)

New Genetic Engineering Strategy Makes Human-Made DNA Invisible

Forsyth



Bacteria have evolved complex defense systems to protect against foreign intruders—especially foreign DNA. Dr. Christopher Johnston has developed a new technique to genetically engineer bacteria by making human-made DNA invisible to a bacterium's defenses. In theory, the method can be applied to almost any type of bacteria. [Read More](#)

Jay Shendure's Cool Job Using Genome Science to Assess the Risk of Disease

The Seattle Times



Meet Dr. Jay Shendure (pictured), a Seattle-based scientist and UW professor. His team at the Brotman Baty Institute for Precision Medicine has shown that it's possible to sequence the complete genome of a fetus from samples obtained noninvasively from the parents. In this edition of *Cool Jobs*, the Seattle Times interviews Dr. Shendure to learn more about his career. [Read More](#)

Legionnaires' Bacterium Has a Secret Weapon — and a Potential Weakness

Fred Hutch



Researchers from Fred Hutch have discovered one way the bacterium that causes Legionnaires' disease successfully lives in contaminated water supplies: by killing off its neighbors. The study reveals the unexpected molecular poison the bacterium uses to do so — and suggests a potential way to prevent an illness that strikes about 6,000 people each year in the U.S. [Read More](#)

Study Probes the Powering of Contractions in Heart Failure

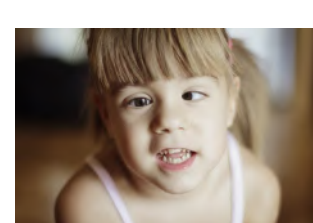
UW Medicine



Earlier research in the lab of Michael Regnier, UW Professor of Bioengineering, had shown that dATP, a natural variant of ATP, can be used to promote stronger heart function. However, there remains a pressing need for data to explain why dATP helps to increase contractile force in heart disease. New research headed by Regnier offers new insights, with unprecedented precision, about the nature of dATP. [Read More](#)

Researcher Wants to Unlock the Mysteries of Strabismus

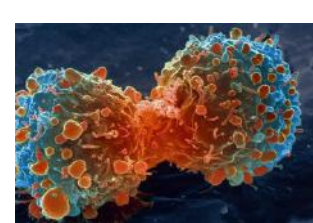
UW Medicine



Strabismus, also known as being cross-eyed or having a wandering eye, is one of the most common reasons that children undergo eye surgery. But little has changed in its treatment since the 1800s, according to Jolene Rudell, acting Assistant Professor of Ophthalmology at the UW School of Medicine. With the goal of advancing treatment, Rudell is working to detect what causes strabismus. [Read More](#)

Innovators of the Year: Kineta Is 'Decorating Tumor Cells' to Make Them Easier to Target, Treat

Puget Sound Business Journal



Many types of cancer cells use their pedigree to trick the immune system into thinking the cells aren't a threat. The challenge facing medical scientists like Shawn Iadonato is convincing the immune system they are. Iadonato is co-founder and CEO of Kineta, a Seattle-based biotech focused on the new frontier of cancer treatment. Kineta's goal is to harness the body's immune system to fight cancer and other diseases. [Read More](#)

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Interesting Articles

NSF, NASA, NIST Would Get Funding Boosts under House Spending Bill

Science Magazine



The National Science Foundation (NSF) will get a 7% budget increase, and NASA a 3.8% bump, under a 2020 spending bill that has been approved by an appropriations panel of the U.S. House of Representatives. The bill rejects cuts to those and other federal research agencies proposed by President Donald Trump's administration. [Read More](#)

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Upcoming Events in Seattle

June 4 6:00 PM	Art Neureau 2019 Fremont Abbey Arts Center
June 6 7:00 PM	Science in the City: The Last Butterflies – Book Signing and Presentation Pacific Science Center
June 10 9:00 AM	Future Faculty Fellows Workshop South Campus Center
June 11 4:30 PM	2019 Spring SLU Collaborative Seminar Series: Immunology Allen Institute
June 11 7:00 PM	Science in the City: Coffee, Kangaroos, and Community: A One Health Approach Pacific Science Center

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Science Jobs in Seattle

- Research Scientist, HIV Cure, Biomarker Sciences**
Gilead
- Staff Scientist, Transcriptional Control in Development and Disease**
Fred Hutchinson Cancer Research Center
- Senior Scientist, Immune Cell Signaling & Tissue Microenvironments**
Allen Institute for Immunology
- Scientist, Protein Engineering**
Bluebird Bio
- Scientific Technical Writer**
Adaptive Biotechnologies

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