

Publications of the Week

Constitutive XBP-1s-Mediated Activation of the Endoplasmic Reticulum Unfolded Protein Response Protects against Pathological Tau

First Author: Sarah Waldherr (pictured, center) | Senior Author: Brian Kraemer (left)
Nature Communications | UW and Veterans Affairs Puget Sound Health Care System



To identify pathways protecting neurons from pathological tau protein, the authors employed a transgenic *Caenorhabditis elegans* model of human tauopathy exhibiting proteostatic disruption. They showed that normal functioning of the endoplasmic reticulum unfolded protein response (UPR^{ER}) promoted clearance of pathological tau, and loss of the three UPR^{ER} branches differentially affected tauopathy phenotypes. [Profile](#) | [Abstract](#)

Interplay of Disordered and Ordered Regions of a Human Small Heat Shock Protein Yields an Ensemble of 'Quasi-Ordered' States

First Author: Amanda Clouser | Senior Author: Rachel Kievit (pictured)
eLife | UW



The authors present a hybrid approach to provide the first residue-level characterization of the N-terminal region (NTR) of the small heat shock protein HSPB1. The results support a model in which multiple grooves on the α-crystallin domain interact with specific NTR regions, creating an ensemble of 'quasi-ordered' NTR states that can give rise to the known heterogeneity and plasticity of HSPB1. [Profile](#) | [Abstract](#)

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Local News

New Genetic Link Found for Some Forms of SIDS

UW Medicine



A multi-institutional study led by Dr. Hannele Ruohola-Baker (pictured) at UW Medicine has found a genetic link for some instances of sudden infant death syndrome, or SIDS. This is the first such study to make an explainable link tracking the mechanism between a genetic anomaly and some forms of the devastating syndrome, which claims the lives of more than 3,000 infants a year. [Read More](#)

How a Common Cancer Mutation Actually Drives Cancer - And How to Correct It

Fred Hutch



It's difficult to find out what genetic mutations are doing to drive cancer growth. A coast-to-coast group of collaborators, co-led by Dr. Robert Bradley (pictured) at Fred Hutch, has applied a powerful new method to do just that. The team has shown how one commonly mutated gene actually drives cancer growth, and how, potentially, to counteract it. [Read More](#)

Global Clinical Trial Aims to Improve Therapies for Pediatric Acute Leukemia

Seattle Children's Hospital



Dr. Todd Cooper (pictured) of Seattle Children's is the Clinical Trial Lead of a groundbreaking clinical trial that will potentially transform treatment methods for children with relapsed acute pediatric leukemia. *On the Pulse* sat down with Dr. Cooper to discuss the specifics of the trial, and how it will possibly revolutionize the types of cancer treatments available for children. [Read More](#)

Allen Institute Debuts New Window into Brain Cell Communication

Allen Institute for Brain Science



The Allen Institute has released its first - and the world's largest - dataset of electrical brain activity gathered using NeuroPixels, a new high-resolution silicon probe that can read out activity from hundreds of neurons simultaneously. These data capture billions of lightning-fast spikes of electrical communication sparked from nearly 100,000 neurons as laboratory mice see and respond to images and short movies. [Read More](#)

Fred Hutch Scientist on How Gold Nanoparticles Could Bring CRISPR to the Developing World

GeekWire



Dr. Jennifer Adair (pictured) and other scientists at Fred Hutch are devising an approach that vastly simplifies how CRISPR is applied. Their goal is to create a safe process for gene editing that takes place entirely within the body of a patient. To deliver CRISPR to blood stem cells inside the body, they're using gold nanoparticles that are about a billionth the size of a grain of table salt and able to smuggle in RNA, DNA and a protein. [Read More](#)

New Program Will Focus Research on Combating Zika Virus

UW Medicine



A new program delving into how viruses and bacteria attack the fetus, and how the body fights back, has been created at UW Medicine. The research program was made possible after two UW Medicine researchers received almost \$19 million in National Institutes of Health grants over the past several months. The funding has launched a Program on Maternal-Fetal Health within the Center for Innate Immunity and Disease. [Read More](#)

Seattle Children's Building Cure Opens in Downtown Seattle to Accelerate Pediatric Research Discoveries

Seattle Children's Hospital



Seattle Children's has announced the opening of Building Cure™, a new 540,000 square-foot pediatric research facility located at Stewart Street and Terry Avenue in downtown Seattle's biotech corridor. Building Cure is the latest step in Seattle Children's quest to revolutionize pediatric medicine and improve the lives of children worldwide. [Read More](#)

Students Get Hands-On Experience at Seattle Children's New Research Facility

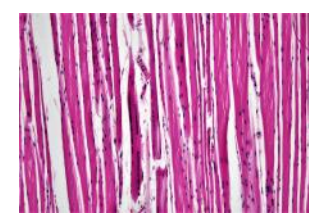
KING 5 News



Inside a lab on the ground floor of Seattle Children's new research facility, kids will work alongside scientists to get a hands-on approach to medical research. The Science Discovery Lab was designed specifically to host middle and high school students, giving them access to authentic equipment. It's embedded in Building Cure, and kids are taught procedures and practices used by scientists in other parts of the building. [Read More](#)

New Research Center to Explore Muscle Health and Disease

UW Medicine



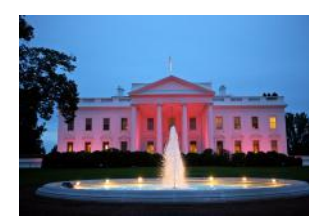
A new, interdisciplinary muscle research center is celebrating its opening at its main location at UW Medicine South Lake Union. With collaborating labs across the UW campus and at other Seattle-area institutions and beyond, the Center for Translational Muscle Research will encompass a myriad of muscle science and disease investigations. [Read More](#)

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Interesting Articles

Biotech Experts Gather at the White House for 'Summit on America's Bioeconomy'

GeekWire



More than 100 biotech researchers, industry executives and government officials met at the White House for a summit focusing on America's bioeconomy — the range of products, services and data derived from biological processes and bioscience research. The White House said that it would work with federal agencies to improve cooperation and make sure the bioeconomy is recognized as a priority in key R&D budgets. [Read More](#)

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Upcoming Events in Seattle

October 22 12:30 PM	How to Be an Awesome Mentor: Ask the Experts Hogness Auditorium
October 25 7:00 AM	2019 Washington State Life Science Summit Meydenbauer Center
October 25 3:00 PM	Women in Bio Seattle: Lyell Lounge VUE Research Building
October 30 8:00 AM	BioTech & Bagels Morning Meetup Capital One Café
October 30 7:00 PM	Science in the City: The Crimes of Macbeth – Witchcraft or Neuropsychology? Pacific Science Center

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Science Jobs in Seattle

- Assistant Faculty, Basic Sciences Division**
Fred Hutchinson Cancer Research Center
- Research Scientist Engineer 3**
UW Department of Biochemistry
- Scientist, Stem Cells & Gene Editing**
Allen Institute for Cell Science
- Technical Application Scientist**
Adaptive Biotechnologies
- Senior Research Associate, CAR T Process Development**
Celgene

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STEMCELL Technologies
- Scientific Sales Representative, Cell Culture Products (Los Angeles, CA)**
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- Associate Product Manager, Mesenchymal & Myogenic (Vancouver, BC)**
STEMCELL Technologies
- Scientist, Cell Line Development (Vancouver, BC)**
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- Scientist, Pulmonary (Vancouver, BC)**
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MODELING PANCREATIC DEVELOPMENT AND DISEASE

Webinar with Dr. Ray Dunn and Dr. Jamie Trott

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