

Publications of the Week

F-Domain Valency Determines Outcome of Signaling through the Angiotensin Pathway

First Author: Yan Ting Zhao (pictured, right) | Senior Author: Hannele Ruohola-Baker (left) | EMBO Reports | The Institute for Stem Cell and Regenerative Medicine, Institute for Protein Design, and UW



Despite the similarity in the underlying receptor-binding interaction, angiotensins 1 and 2 (Ang1 and Ang2) have opposite effects: Ang1 induces phosphorylation of AKT, strengthens cell-cell junctions, and enhances endothelial cell survival while Ang2 can antagonize these effects, depending on cellular context. To investigate the molecular basis for the opposing effects, the authors examined the phenotypes of a series of computationally designed protein scaffolds presenting the Ang1 F-domain in a wide range of valencies and geometries. [Profile](#) | [Abstract](#)

Morphological Diversity of Single Neurons in Molecularly Defined Cell Types

First Authors: Hanchuan Peng, Peng Xie, and Lijuan Liu | Senior Author: Hongkui Zeng (pictured) | Nature | Allen Institute for Brain Science



Dendritic and axonal morphology reflects the input and output of neurons and is a defining feature of neuronal types, yet our knowledge of its diversity remains limited. Here, to systematically examine complete single-neuron morphologies on a brain-wide scale, the authors established a pipeline encompassing sparse labeling, whole-brain imaging, reconstruction, registration and analysis. [Abstract](#) | [Press Release](#)

Human Parainfluenza Virus Evolution during Lung Infection of Immunocompromised Humans Promotes Viral Persistence

First Author: Alexander Greninger (pictured) | Senior Author: Anne Moscona | The Journal of Clinical Investigation | UW and Fred Hutch



Long-term infections in immunocompromised hosts are potential drivers of viral evolution and development of infectious variants. The authors show that intra-host evolution in chronic human parainfluenza virus 3 infection in immunocompromised individuals elicited mutations that favor viral entry and persistence, suggesting that similar processes may operate across enveloped respiratory viruses. [Abstract](#)

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Awards

Allen Institute Announces 2021 Next Generation Leaders

Allen Institute



The Allen Institute has announced six new Next Generation Leaders, members of a unique neuroscience advisory panel made up of early-career researchers. Now in its eighth year, the Next Generation Leaders Council advises neuroscience research efforts at the Allen Institute. As the program is focused on early-career neuroscience researchers, council members are postdoctoral fellows or newly appointed faculty members. [Read More](#)

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Local News

Immune Evasion by Delta and Kappa Variants Explored

UW Medicine



A molecular study published in *Science*, led by Dr. David Veessler's (pictured) lab, reveals how the mutations in delta and kappa variants of the pandemic coronavirus help the variants avoid recognition by antibodies. "These are the major targets of neutralizing antibodies in convalescent and vaccinated individuals, thereby raising concerns about the efficacy of available vaccines and therapeutic antibodies against these [kappa and delta] variants," the researchers wrote. [Read More](#)

Beyond BRCA and Breast Cancer Risk

Fred Hutch



Many people know that certain variants (or mutations) in the DNA-repair genes *BRCA1* and *BRCA2* can drive breast and ovarian cancers. But these two genes — which we all have — can contribute to other tumor types, as well. Genes have jobs, and some of them have incredibly important jobs, like suppressing tumors. When they become mutated and can't do that job as well, cancers arise. [Read More](#)

COVID-19 Vaccine with IPD Nanoparticles Meets Phase I/II Trial Goals

Institute for Protein Design



SK bioscience announced that the company has confirmed a positive immune response and safety in the final analysis result of the Phase I/II clinical trial of the COVID-19 vaccine candidate, 'GBP510,' co-developed with the Institute for Protein Design (IPD) at UW and adjuvanted with GlaxoSmithKline's pandemic adjuvant system. SK bioscience will submit the positive data of the Phase I/II clinical trial to domestic and international regulatory agencies. [Read More](#)

Toward Better Cures for Kids with AML: Q&A with Dr. Soheil Meshinchi

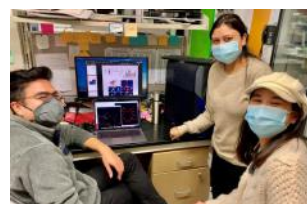
Fred Hutch



Leukemias from both an adult and a child may look the same under a microscope. They may have the same name. But take a deeper look at the molecular engines that make them go, and it becomes clear that they're completely different diseases. Understanding those distinctions, knows Dr. Soheil Meshinchi (pictured), is absolutely critical to giving patients the right treatment. [Read More](#)

Undergraduate Students on the Hunt for Cancer Killing Molecules

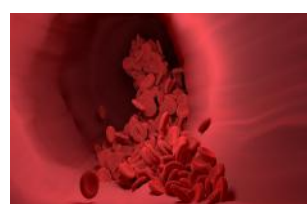
Institute for Stem Cell & Regenerative Medicine



Debra del Castillo has enlisted dozens of UW undergraduates, including Julien Ishibashi (pictured, left), Riya Keshri (middle), and Tung Ching (right) in a cancer drug screening project that is the subject of a new paper in the journal *Cells*. Many would likely not have had access to the opportunity without del Castillo's knack for finding talent, often in students from backgrounds that are traditionally under-represented in biomedical research. [Read More](#)

NodThera Announces Progress of NT-0796, a Novel NLRP3 Inflammasome Inhibitor, into a Phase I First-in-Human Study

BioSpace



Nodthera announced that the first healthy volunteers have been dosed in a Phase I clinical trial of its lead investigational candidate, NT-0796. NT-0796 selectively inhibits NLRP3, the upstream regulator of the body's inflammation response, to reduce levels of both IL-1 β and IL-18 — pro-inflammatory cytokines known to play a role in chronic inflammation underlying a wide range of chronic diseases. [Read More](#)

Inventprise Announces Investment of Up to \$90 Million to Advance Its 25 Valent Pneumococcal Conjugate Vaccine Candidate into Proof-of-Concept Clinical Trials

Inventprise



Inventprise announced that the Bill & Melinda Gates Foundation has made a program-related investment in the company's continued development of IVT-25, an investigational pneumococcal conjugate vaccine designed to prevent pneumococcal bacterial infections. The investment will support development activities through completion of Phase I and Phase II clinical studies to assess safety and immunological proof-of-concept. [Read More](#)

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Upcoming Events in Seattle

- November 16 12:00 PM **Current Biology Seminar** Online
- November 17 12:00 PM **Biostatistics Seminar Series** Online
- November 18 4:30 PM **Life Science Washington Institute's BioBash** The Cathedral
- November 20 5:00 PM **Seattle Festival of Trees Gala** Fairmont Olympic Hotel
- November 30 2:00 PM **Science Says** Online

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Science Jobs in Seattle

- Clinical Research Coordinator I**
Fred Hutch
- Cytogenetics Technologist (I, II, or III)**
Seattle Cancer Care Alliance
- Senior Project Manager**
A-Alpha Bio
- Senior Research Associate/Associate Scientist, Protein Chemistry**
OncoResponse
- Supervisor, Molecular Lab Operations**
Adaptive Biotechnologies

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