

### Publications of the Week

#### Sampling of Structure and Sequence Space of Small Protein Folds

First Author: Thomas Linsky | Senior Authors: David Baker (*pictured*) and Eva-Maria Strauch  
Nature Communications | Institute for Protein Design and UW



Nature only samples a small fraction of the sequence space that can fold into stable proteins. Furthermore, small structural variations in a single fold, sometimes only a few amino acids, can define a protein's molecular function. To explore this space, the authors developed and experimentally validated a computational platform that can design a wide variety of small protein folds while sampling shape diversity. [Abstract](#)

#### Oligodendrocyte Precursor Cells Ingest Axons in the Mouse Neocortex

First Author: JoAnn Buchanan | Senior Author: Nuno Maçarico da Costa (*pictured*)  
PNAS | The Allen Institute for Brain Science



Neurons in the developing brain undergo extensive structural refinement as nascent circuits adopt their mature form. The authors used large-scale, serial section transmission electron microscopy with computational volume segmentation to reconstruct the complete 3D morphologies of distinct glial types in the mouse visual cortex, providing unprecedented resolution of their morphology and composition. [Abstract](#)

#### Novel Low Grade Renal Spindle Cell Neoplasm with HEY1::NCOA2 Fusion That Is Distinct from Mesenchymal Chondrosarcoma

First Author: Timothy Isaac Miller | Senior Author: Maria Tretiakova (*pictured*)  
Genes, Chromosomes & Cancer | UW



HEY1-NCOA2 fusion is most described in mesenchymal chondrosarcoma. This is the first case report of a primary renal spindle cell neoplasm of uncertain malignant potential with a HEY1::NCOA2 fusion identified by Fusionplex RNA-sequencing that is histologically distinct from mesenchymal chondrosarcoma. The neoplasm was identified in a 33-year-old woman without significant past medical history who underwent partial nephrectomy for an incidentally discovered renal mass. [Abstract](#)

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### Awards

#### Christina Surawicz to Receive Master of the WGO Award

UW Medicine



Dr. Christina Surawicz (*pictured*), Professor Emeritus, has been selected to receive the 2022 Masters of the World Gastroenterology Organization (WGO) Award. The Masters of the WGO Award is the highest honor WGO can bestow and is granted only to those individuals who have provided outstanding dedication to the mission of the WGO and achieved distinction in scholarly research, teaching, and service to WGO and the community at large. [Read More](#)

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### Local News

#### Scientists Capture Detailed Snapshots of Mouse Brain Cells Nibbling on Neurons

Allen Institute



Dr. JoAnn Buchanan was deep into the data. One click at a time, she scanned through the branching, twisting 3D shapes of mouse brain cells on her computer screen. And then Dr. Buchanan, a scientist at the Allen Institute, saw something weird: a kind of brain cell she wasn't familiar with. "They're just such beautiful cells, they're so beautiful. And I just became obsessed," Dr. Buchanan said. [Read More](#)

#### AmeriCorps Member Sara Calder Joins ISB as Systems Health and STEM Coordinator

Institute for Systems Biology (ISB)



Sara Calder (*pictured*) is a life-long Washington state resident, and her education journey has been focused on science, technology, engineering, and math (STEM). In October, she joined ISB as Systems Health and STEM Coordinator and our second-ever AmeriCorps member. Calder's journey to ISB is an interesting one, and she agreed to answer questions to unpack her past experiences, future aspirations, and much more. [Read More](#)

#### Seattle Startup with Fresh Approach to Parkinson's and Alzheimer's Disease Raises \$96M

GeekWire



Cajal Neuroscience, a Seattle startup taking a unique approach to developing treatments for neurodegenerative diseases like Alzheimer's and Parkinson's, has revealed more details about its strategy and announced \$96 million in funding. Cajal was founded in 2020 to systematically collect such data to reveal key molecules involved in neurodegeneration, with an initial focus on Alzheimer's and Parkinson's disease. [Read More](#)

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### Interesting Articles

#### Research Spending Could Be Lone Bright Spot for US Science After Election Sets up Divided Government

Science



The US Congress has returned after tumultuous midterm elections that left the Republicans still hoping to retake the House of Representatives and the Democrats doing better than expected by retaining the Senate. A divided Congress could mean a bumpy ride for the US research community over the next two years. [Read More](#)

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#### 📅 Upcoming Events in Seattle

December 7 6:00 pm	<b>AWIS Holiday Happy Hour</b> Optimism Bewing Company
December 8 4:00 pm	<b>UW Engineering Innovation in Health Fall Showcase</b> University of Washington
December 8 4:00 pm	<b>Research Roundtable with Dr. Anna Kuchina</b> Online
December 14 9:00 am	<b>TechAlliance Policy Matters Summit: Innovation Basics</b> Seattle Airport Marriot
December 14 9:00 am	<b>Policy Matters: Innovation Basics</b> Seattle Airport Marriot

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#### 📁 Science Jobs in Seattle

**Scientist, Immunology**  
Alpine Immune Sciences

**Manager, Technical Operations**  
Zymeworks

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Benaroya Research Institute at Virginia Mason

**Postdoctoral Fellow, Computational Biology**  
Institute for Systems Biology

**Scientist, Neural Dynamics**  
Allen Institute

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