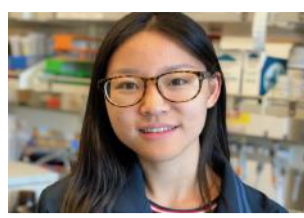


### Publications of the Week

## De Novo Design of Modular Peptide-Binding Proteins by Superhelical Matching

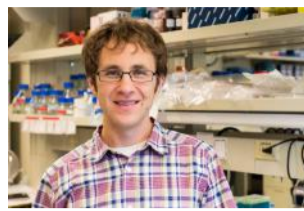
First Authors: Kejia Wu (*pictured*) and Hua Bai | Senior Author: David Baker  
Nature | Institute for Protein Design and UW



General approaches for designing sequence-specific peptide-binding proteins would have wide utility in proteomics and synthetic biology. Inspired by natural and re-engineered protein-peptide systems, the authors set out to design proteins made out of repeating units that bind peptides with repeating sequences, with a one-to-one correspondence between the repeat units of the protein and those of the peptide. [Abstract](#) | [Press Release](#)

## Evolution of the SARS-CoV-2 Mutational Spectrum

First Author: Jesse Bloom (*pictured*) | Senior Author: Kelley Harris  
Molecular Biology and Evolution | Fred Hutch and UW



SARS-CoV-2 evolves rapidly in part because of its high mutation rate. The authors examine whether this mutational process itself has changed during viral evolution. To do this, they quantify the relative rates of different types of single nucleotide mutations at four-fold degenerate sites in the viral genome across millions of human SARS-CoV-2 sequences. [Abstract](#)

[View All Publications](#)

### Awards

## Abigail Burtner Named a UW Goldwater Scholar

Institute for Protein Design



Five UW undergraduates have been honored as Goldwater Scholars by the Goldwater Foundation, marking 2023 as the first time five students from the UW were named in a single year. Broadly interested in immunology and protein design, Abigail Burtner (*pictured*) works in the King lab at the Institute for Protein Design designing *de novo* proteins to bind toll-like receptors, key receptors that activate the innate immune system, for applications in vaccine development. [Read More](#)

[View All Awards](#)

### Local News

## Omeros Lands \$6.7M Grant to Test Treatment for Cocaine Addiction

Puget Sound Business Journal



Seattle-based biotech Omeros Corporation has landed a \$6.7 million grant from the National Institute on Drug Abuse. The grant is expected to provide \$6.69 million over three years and is intended to support both preclinical cocaine interaction studies and a clinical study evaluating the safety and efficacy of Omeros' lead orally administered compound, OMS527, in patients with cocaine use disorder. [Read More](#)

## Landmark Atlases Flag 5,000 Cell Types Across Mouse Brain

Spectrum



Two new atlases catalog the location and type of all cells across the adult mouse brain — including many that have never before been identified, according to two new unpublished studies. In an effort spanning more than ten years, and using different approaches, two teams of researchers each identified about 5,000 distinct clusters that represent different kinds of cells. [Read More](#)

## Melding Data Creates Wider Landscape of Brain Cancer

Fred Hutch



Brain cancer researchers have a new, panoramic visualization tool to help them navigate the complex disease. Built from several publicly available datasets of gene expression and DNA sequences, the new brain cancer landscape acts like a city-wide map of the disease, carefully assembled from neighborhood maps of different brain tumor subtypes. [Read More](#)

## Going Long: Viruses Linger with Lasting Impact

Fred Hutch



From Epstein-Barr to Zika, the list of virus-associated chronic ailments goes on. Millions of Americans infected by SARS-CoV-2 are now dealing with its post-acute sequelae, mostly known as long COVID, the latest long-term condition to stem from a virus. Three years after COVID-19 rocked the world, are we now learning viruses are more of a threat than we imagined? Do they all "go long"? [Read More](#)

## Watching Traffic Jams on the Genomic Highway

UW Department of Bioengineering



Investigators in the physics, bioengineering, and microbiology departments at UW have developed a novel method for measuring the speed of polymerase enzymes on different regions of the genome inside living cells. It turns out, much like driving a car, the speed enzymes move along the DNA depends on where they are. There are short pauses (think stop signs) as well as longer periods of fast and slow speed (think different speed limits). [Read More](#)

## Report Highlights Growth of Life Sciences Sector in Seattle, Buoyed by NIH Funding

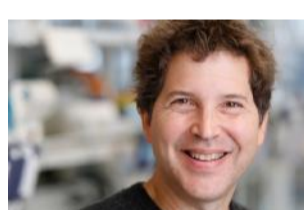
GeekWire



Life sciences employment and federal research funding have grown rapidly in the Seattle area since 2019, according to a new report from real estate firm CBRE. The Seattle area ranked third among metro areas for life sciences employment growth, which increased 25% from 2019 to 2022. Research and development employment in the region increased even more rapidly, at 39.3%. [Read More](#)

## Biologists Say Deep Learning Is Revolutionizing Pace of Innovation

The Wall Street Journal



A milestone in computational biology was announced last July, when DeepMind Technologies announced that its AlphaFold2 artificial intelligence system had been used to predict the three-dimensional structure of nearly all proteins known to science, essentially solving a problem that researchers had been trying to crack for the past 50 years. Dr. David Baker (*pictured*) said DeepMind's work on protein-structure prediction has inspired his group to use deep learning to accelerate the design of new proteins. [Read More](#)

## Researchers Tackle Major Obstacle to Stem-Cell Heart Repair

UW Medicine



Researchers at UW School of Medicine have engineered stem cells that do not generate dangerous arrhythmias, a complication that has to date thwarted efforts to develop stem-cell therapies for injured hearts. "We have found what we have to tackle to make these cells safe," said Dr. Silvia Marchiano (*pictured, left*), a postdoctoral fellow in the laboratory of Dr. Chuck Murry at the UW Medicine Institute for Stem Cell and Regenerative Medicine. [Read More](#)

## WRF Honors Former Board Member Adriane Brown with \$100,000 Grant to Pacific Science Center

Washington Research Foundation



Washington Research Foundation (WRF) has announced a \$100,000 grant to Pacific Science Center in honor of former WRF board member Adriane Brown, who has retired from her position on the Foundation's board after six years of service. The gift will support Pacific Science Center's outreach programming that provides interactive science education to students in schools, homes, libraries, and community centers across the state of Washington, with a focus on low-income communities. [Read More](#)

## Jay Shendure: A Mindset for Scientific Creativity

Brotman Baty Institute



Pursuing innovation has always been a way of life for Dr. Jay Shendure (*pictured*), Professor of Genome Sciences at the UW School of Medicine. Even before a college genetics class inspired him to abandon a major in cultural anthropology, Dr. Shendure had a mindset for scientific creativity. As an investigator at the Howard Hughes Medical Institute, he takes an outside-the-box approach to genetic research. [Read More](#)

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### 📅 Upcoming Events in Seattle

April 19 5:30 PM	<b>PacSci Happy Hour</b> Pacific Science Centre
April 25-26 8:00 AM	<b>Life Science Innovation Northwest 2023</b> Seattle Convention Centre
April 26 12:00 PM	<b>Understanding the Regulation of Our Genome – a PNRI Science Matters Seminar</b> Online
April 26 5:30 PM	<b>UW Engage Science 2023</b> The Wyncote NW Forum
April 30 8:00 AM	<b>Fourth Symposium on Infectious Diseases in the Immunocompromised Host</b> Marriott Waterfront Seattle

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### 📁 Science Jobs in Seattle

**Scientist, Vector Biology**  
Umoja Biopharma

**Research Technician I**  
Fred Hutch

**Scientist, Analytical Development**  
Zymeworks

**Senior Research Investigator**  
Bristol Myers Squibb

**Research Associate I, Single Cell Transcriptomics**  
Allen Institute

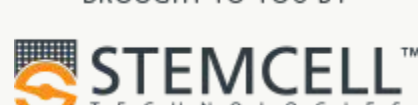
[View 55 Other Science Jobs](#) | [Submit a Job](#)

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