

Publications of the Week
Single-Cell Transcriptomic Comparison of Human Fetal Retina, hPSC-Derived Retinal Organoids, and Long-Term Retinal Cultures

First Author: Akshayalakhmi Sridhar (pictured, center) | Senior Author: Thomas Reh (left) | Cell Reports | UW



To study the development of the human retina, the authors used single-cell RNA sequencing at key fetal stages and followed the development of the major cell types, as well as populations of transitional cells. They also analyzed stem cell (hPSC)-derived retinal organoids; although organoids had a very similar cellular composition at equivalent ages as the fetal retina, there were some differences in gene expression of particular cell types. [Profile](#) | [Abstract](#)

Broadly Neutralizing Antibodies for HIV Prevention

First Author: Shelly Karuna | Senior Author: Lawrence Corey (pictured) | Annual Review of Medicine | Fred Hutchinson HIV Vaccine Trials Network



In the last decade, over a dozen potent broadly neutralizing antibodies to several HIV envelope protein epitopes have been identified, and their *in vitro* neutralization profiles have been defined. Many have demonstrated prevention efficacy in preclinical trials and favorable safety and pharmacokinetic profiles in early human clinical trials. [Abstract](#)

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From Brains to Big Data: How Neuroscientists Scale Up Research

Allen Institute for Brain Science



After months of research by multiple specialized teams at the Allen Institute, each investigating different attributes of a cell, its data — along with data from thousands of other mouse and human neurons — will help researchers around the world understand more about the brain. This is the first time at the Allen Institute that three kinds of data have been extracted from the same individual neurons across so many cells. [Read More](#)

Epilepsy Treatment Side Effect: New Insights about the Brain

Associated Press



For decades, studies of epilepsy patients have revealed secrets of the brain, like how the two halves operate differently. The Allen Institute is building an online atlas that makes information on hundreds of human brain cells freely available for study. The institute hopes that this will provide a new avenue, beyond brain scans and animal studies, for tackling conditions like Alzheimer's disease and autism. [Read More](#)

University of Washington Professor Tina Lockwood Is Working to Improve Health Care for All via DNA Research

Seattle Business



Dr. Tina Lockwood (pictured) is the definition of accomplished in her field, which puts her at the leading edge of research focused on precision medicine and the genetics of human disease. Lockwood is an Associate Professor at UW, where she serves as the Director of the Genetics and Solid Tumor Diagnostics Laboratory in the Department of Laboratory Medicine. In this interview, she talks about female leadership. [Read More](#)

A Paradigm Shift in Cancer Treatment

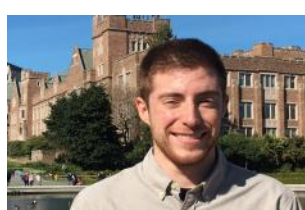
Institute for Stem Cell & Regenerative Medicine



For more than a century, the human fingerprint has been a symbol of individual identity, a plot device for mystery writers and moviemakers, and a tool for criminal investigators hoping to prove that only one person out of several billion could be the culprit. That's the simple version of a complicated story. But it's also the basic premise of a question researchers at UW, led by Dr. Pamela Becker (pictured), are now asking about one of the most prolific killers in history: cancer. [Read More](#)

First-of-Its-Kind Hydrogel Platform Enables On-Demand Production of Medicines and Chemicals

The University of Texas at Austin



A team of chemical engineers, including Trevor Johnston (pictured) from UW, has developed a new way to produce medicines and chemicals on demand and preserve them using portable "biofactories" embedded in water-based gels called hydrogels. The portability of the biofactory to make these molecules makes the hydrogel system especially useful in remote places, without access to refrigeration to store medications. [Read More](#)

How Rose Fields Is Pioneering a Therapeutic Vaccine

The Daily



When it comes to developing a protein cage-based therapeutic vaccine, Rose Fields (pictured), a senior majoring in biochemistry, works in uncharted and high-impact territory. Fields became involved in this particular project through her previous work at the Institute for Protein Design where she started her research career during her freshman year. [Read More](#)

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New FDA Policy Allows Lab Animals to Be Adopted after Experiments

The Scientist



Lab animals used for research by the FDA have a new lease on life. A recent policy change by the federal agency now permits the adoption, transfer and retirement of healthy animals to shelters and sanctuaries after they've been involved in lab experiments. Animals were previously euthanized after being used in experiments. The policy took effect in November, but had not been previously disclosed by the FDA. [Read More](#)

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Upcoming Events in Seattle

- February 20 5:00 PM **Science on Tap**
Optimism Brewing
- February 21 7:00 PM **Science of Spirits**
Pacific Science Center
- February 24 3:30 PM **Bizwomen Mentoring Monday**
UW Student Union Building (HUB)
- February 24 4:30 PM **2020 Winter SLU Collaborative Seminar Series: Single Cell Genomics**
Orin Smith Auditorium
- February 27 10:00 AM **Cambia Grove Open House**
Cambia Grove

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- Staff Scientist Process Development, Cell Therapy**
Fred Hutchinson Cancer Research Center
- Scientist I, Molecular Genetics, Genetic Tool Development**
Allen Institute for Brain Science
- Scientist II**
Adaptive Biotechnologies
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Bristol-Myers Squibb
- Postdoctoral Fellow, Cancer Biology**
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