

Publications of the Week
The Structure, Function and Evolution of a Complete Human Chromosome 8

 First Author: Glennis Logsdon | Senior Author: Evan Eichler *(pictured)*
 Nature | Howard Hughes Medical Institute and UW Medicine

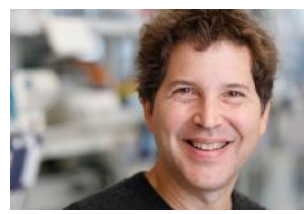

The authors use complementary long-read sequencing technologies to complete the linear assembly of human chromosome 8. Their assembly resolves the sequence of five previously long-standing gaps, including a 2.08-Mb centromeric α -satellite array, a 644-kb copy number polymorphism in the β -defensin gene cluster, and an 863-kb variable number tandem repeat at chromosome 8q21.2.

[Profile](#) | [Abstract](#) | [Press Release](#)
Coordination of Phage Genome Degradation versus Host Genome Protection by a Bifunctional Restriction-Modification Enzyme Visualized by CryoEM

 First Author: Betty Shen *(pictured, second from right)* | Senior Author: Barry Stoddard *(third from left)*
 Structure | Fred Hutch and UW Medicine


Restriction enzymes that combine methylation and cleavage into a single assemblage and modify one DNA strand are capable of efficient adaptation toward novel targets. However, they must reliably cleave invasive DNA and methylate newly replicated unmodified host sites. One possible solution is to enforce a competition between slow methylation, versus faster cleavage that requires multiple unmodified target sites in foreign DNA. [Profile](#) | [Abstract](#)

Designed Proteins Assemble Antibodies Into Modular Nanocages

 First Author: Robby Divine | Senior Author: David Baker *(pictured)*
 Science | Fred Hutch, Institute for Protein Design, Howard Hughes Medical Institute, and UW


Antibodies that bind tightly to targets of interest play central roles in biological research and medicine. Clusters of antibodies, typically generated by fusing antibodies to polymers or genetically linking antibody fragments together, can enhance signaling. The authors set out to computationally design proteins that assemble antibodies into precise architectures with different valencies and symmetries. [Abstract](#) | [Press Release](#)

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Awards
Student Advocate on Race and Medicine Wins Soros Award

UW Medicine



Naomi Nkinsi *(pictured)* a medical student at UW Medicine, and public health student at the UW School of Public Health focusing on global health, is one of 30 winners of the Paul & Daisy Soros Fellowship for New Americans. Winners get \$90,000 unless graduating sooner. This is a highly competitive fellowship looking for graduate students who are going to make the most significant contributions to society. [Read More](#)

Dr. Alice Berger Received a National Institutes of Health MERIT Award

Fred Hutch



Targeted therapies have transformed outcomes for lung cancer patients. After reduced smoking rates, drugs that take aim at signature alterations in tumor cells are the main reason that the death rate has dropped for people diagnosed with lung cancer. Recently, Fred Hutch lung cancer researcher Dr. Alice Berger *(pictured)* received a National Institutes of Health MERIT Award that will support her efforts to extend these advances to more patients with this cancer. [Read More](#)

Dr. Mary-Claire King Receives 2021 Gairdner Award

UW Medicine



UW Medicine genetics researcher Dr. Mary-Claire King *(pictured)* is among the four 2021 Canada Gairdner International Award laureates. The award, presented by the Gairdner Foundation in Toronto, honors renowned scientists who have made seminal discoveries that are among the world's most significant contributions to biomedical science. [Read More](#)

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New Test Better Detects Reservoir of Virus in HIV Patients

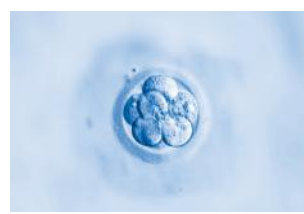
UW Medicine



A new test that measures the quantity and quality of inactive HIV viruses in the genes of people living with HIV may eventually give researchers a better idea of what drugs work best at curing the disease. "Current tests are complicated, expensive, and sometimes give inaccurate readings of viral load" said Dr. Florian Hladik *(pictured)*. [Read More](#)

Your Life History Is Written in Your Cells' Mutations

Allen Institute



Even if small mistakes have no discernible effect on your life, it marks your personal cellular history like a trail of breadcrumbs, showing how one cell from the earliest periods of your development influenced the fate of the rest of your body. It turns out our bodies are riddled with thousands and thousands of such mostly innocuous - but potentially revealing - little mistakes. [Read More](#)

Vaccines Debate: 'Escape Variants' of the Coronavirus Are a Serious Future Threat

UW News



Future versions of the viruses are "escape variants" that have evolved in the environment of weak immune responses – the body in this case has produced a strong enough immune response to tamp down the infection but not strong enough to keep mutated viruses from spreading. "How do we overcome escape variants? We do so by using the full strength of the tools we have available to us" Dr. Larry Corey *(pictured)*. [Read More](#)

Dr. Joseph Czerniecki Begins New Professor Emeritus Role

UW Medicine



Dr. Joseph Czerniecki *(pictured)* has retired from his regular faculty appointment in the Department of Rehabilitation Medicine and begun work in his new appointment as an active Professor Emeritus. Dr. Czerniecki began his career at VA Puget Sound Health Care System. In his role as Associate Director of the Center for Limb Loss and MoBility, he was Principal Investigator or Co-Principal Investigator on grants totaling more than \$28 million. [Read More](#)

You Got Vaccinated. Now What? Seven Things to Know for Your Post-COVID Vaccine Behavior

GeekWire



On April 15, anyone in Washington state who is 16 or older can get a shot of the COVID-19 vaccine. And once two weeks have passed after either one dose of the Johnson & Johnson vaccine, or a second dose of the Moderna or Pfizer vaccine, that person is now considered fully vaccinated. And then what? Here's what we've learned about responsible post-vaccine behavior and our path to a more normal existence. [Read More](#)

Careful Pruning Guides Neuron Function

Fred Hutch



Scientists have known that glial cells nibble at the edges of neurons – but how and why remained unclear. Are glia just cellular janitors that clean up detritus shed by neurons, or are they pilots that carefully steer nerve cell behavior and function? "Our work allowed us to say that the glial cells are in the driver's seat. They are controlling [this phenomenon]" said Dr. Aakanksha Singhvi *(pictured)*. [Read More](#)

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April 20 12:30 PM	Designing and Presenting Your Scientific Poster Online
April 20 4:00 PM	Research Roundtable with Dr. Lee Hood Online
April 21 5:00 PM	Science & Wine Club Online
April 21 6:00 PM	How to Survive & Thrive in a Seattle Startup Accelerator Online
April 22 11:00 AM	Acknowledging and Rewarding Interdisciplinary Research within Appointment, Promotion and Tenure Processes Online

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Fred Hutch
- Postdoctoral Research Associate**
Benaroya Research Institute at Virginia Mason
- Clinical Data Associate II**
Seagen
- Associate Director, Gene Editing Protein Engineering and Genomics**
Bluebird Bio
- Senior Director, Medicinal Chemistry**
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