

Publications of the Week
Understanding Protection from SARS-CoV-2 by Studying Reinfection

 Author: Julie Overbaugh *(pictured)*
 Nature Medicine | Fred Hutch


An underlying motivation for the current development of vaccines against the coronavirus SARS-CoV-2 is the premise that neutralizing antibodies will provide lasting protection from infection, drawn in part from experiences with other anti-viral vaccines. This desire to elicit neutralizing antibodies via a vaccine stems from the idea that antibodies should prevent infection if they block entry of the virus into the cell. [Abstract](#)

Structural Basis for Potent Neutralization of SARS-CoV-2 and Role of Antibody Affinity Maturation

 First Author: Nicholas Hurlburt | Senior Author: Marie Pancera *(pictured)*
 Nature Communications | Fred Hutch and UW


Scientists determined the X-ray crystal structure of a potent neutralizing monoclonal antibody, CV30, isolated from a patient infected with SARS-CoV-2, in complex with the receptor binding domain. The structure revealed that CV30 binds to an epitope that overlaps with the human ACE2 receptor binding motif, providing a structural basis for its neutralization. CV30 also induced shedding of the S1 subunit, indicating an additional mechanism of neutralization.

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Local News
UW Labs Are Racing against the Pandemic

Brotman Baty



February 2020 might seem a lifetime ago, but that's when UW Medicine researchers were the first to report community spread of the novel coronavirus in the United States. They knew the discovery had massive implications, even if the general public couldn't yet fathom them. But what happened next was months, even years, in the making. [Read More](#)

Harnessing the Power of Nanobodies to Rebuild Kidneys

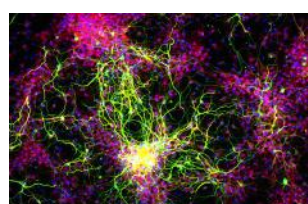
UW Medicine



UW Medicine scientists in the lab of Dr. Benjamin Freedman *(pictured)* are driving a bold, multi-partner experiment to stimulate the repair and regeneration of human kidney cells. A favorable outcome could jump-start a new therapy model for 850 million people worldwide who live with kidney disease. They will develop kidney organoids, miniature complex structures of cells that model kidney function.

[Read More](#)
New Cell Line Lets Researchers Use CRISPR to Reversibly Switch Off Genes

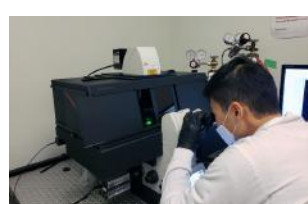
Allen Institute for Cell Science



The gene-editing technique known as CRISPR has become the darling of the laboratory world, most recently garnering its discoverers a Nobel Prize. The method is also taking early steps into the clinic as the basis for experimental gene therapies, for example, for a genetic form of blindness. The Allen Institute for Cell Science is working to release a human stem cell line that contains CRISPR interference for reversibly dialing down the activity of different genes. [Read More](#)

NIH-Funded Center to Study Nucleome in Time and Space

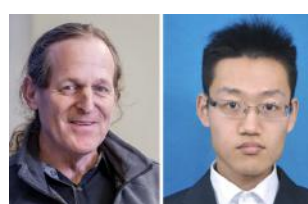
UW Medicine



The National Institutes of Health (NIH) has announced a \$10 million, five-year grant for a 4D Genomic Nuclear Organization of Mammalian Embryogenesis Center at the UW School of Medicine. They will explore changes in the organization of the nucleus, in both its 3D architecture and its functionalities, over time in living cells and systems. [Read More](#)

COVID-19 Immune Response Study Could Lead to More Effective Treatments

Institute for Systems Biology (ISB)



The ISB-Swedish COVID-19 Immune Response Study has revealed new findings that suggest that treatments aimed at arresting the infection at the stage of moderate severity may be most effective. Drs. Jim Heath *(pictured, left)* and Yapeng Su *(right)* utilized novel computational methods to merge observations together to provide an integrated view of COVID-19 infection. [Read More](#)

Seattle Named a Top Life Science Hub by CBRE

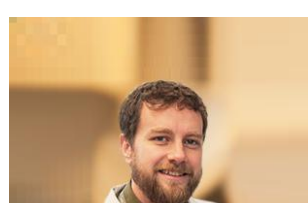
Seattle Business



As the race to create a coronavirus vaccine intensifies, the life sciences industry has boomed. Seattle is a hub for this growth, according to commercial real estate firm CBRE. Seattle ranks number 9 in a report of the largest life sciences markets in the US. The report measured the life sciences job market, lab-space availability and funding from venture capital firms and the National Institutes of Health.

[Read More](#)
Scientist Develops New Way to Test for COVID-19 Antibodies

Seattle Children's



When Dr. Stephen Smith *(pictured)* of Seattle Children's came down with muscle aches, gastrointestinal distress and a sudden loss of smell in late February, he suspected he had COVID-19. The testing criteria had yet to be expanded to include individuals with Smith's symptoms and so he did what many scientists with his expertise would do: he developed a way to test himself. [Read More](#)

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Upcoming Events in Seattle

- November 2 - 6 **Dr. Eddie Méndez Postdoctoral Symposium**
2:00 PM Online
- November 5 - 6 **BCREGMED & ISCRM Cascadia Corridor Research Symposium**
9:00 AM Online
- November 10 **Behind the Scenes of Science**
10:00 AM Online
- November 17 **Cascadia Innovation Corridor**
8:00 AM Online
- November 18 **Hindsight 2020 Virtual Symposium**
8:30 AM Online

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- Senior Process Development Engineer, Synthetic Biology**
A-Alpha Bio
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Chinook Therapeutics
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