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Publications of the Week

Cross-Validation of SARS-CoV-2 Responses in Kidney Organoids and Clinical Populations

First Author: Louisa Helms | Senior Author: Benjamin Freedman *(pictured)*
JCI Insight | UW and Benaroya Research Institute at Virginia Mason

Kidneys are critical target organs of COVID-19, but susceptibility and responses to infection remain poorly understood. The authors combine SARS-CoV-2 variants with genome edited kidney organoids and clinical data to investigate tropism, mechanism, and therapeutics and found that SARS-CoV-2 specifically infects organoid proximal tubules amongst diverse cell types. **Profile | Abstract**

Molecular Basis of Immune Evasion by the Delta and Kappa SARS-CoV-2 Variants

First Author: Matthew McCallum | Senior Author: David Veesler *(pictured)*
Science | Center for Emerging and Re-Emerging Infectious Diseases, Howard Hughes Medical Institute, Institute for Protein Design, and UW

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission leads to the emergence of variants, including the B.1.617.2 (Delta) variant of concern which is causing a new wave of infections and has become globally dominant. The authors show that these variants dampen the *in vitro* potency of vaccine-elicited serum neutralizing antibodies and provide a structural framework for describing their immune evasion. **Abstract | Press Release**

Directional Reorientation of Migrating Neutrophils Is Limited by Suppression of Receptor Input Signaling at the Cell Rear through Myosin II Activity

First Author: Amalia Hadjitheodorou | Senior Author: Julie Theriot *(pictured)*
Nature Communications | Howard Hughes Medical Institute and UW

To migrate efficiently to target locations, cells must integrate receptor inputs while maintaining polarity: a distinct front that leads and a rear that follows. The authors investigate what is necessary to overwrite pre-existing front-rear polarity in neutrophil-like HL60 cells migrating inside straight microfluidic channels. They show that receptor inputs can reorient weakly polarized cells, but the rear of strongly polarized cells is refractory to new inputs. **Abstract**

View All Publications

Awards

Washington Research Foundation Awards $245,000 to Shiri Levy to Develop *De Novo* Protein Technology

EIN Presswire

The Washington Research Foundation has awarded a technology commercialization grant of $245,000 to Dr. Shiri Levy *(pictured)* to demonstrate that a *de novo* protein complex designed at UW can reactivate genes whose repression results in disease. Dr. Levy, a postdoctoral fellow in UW's biochemistry department, expects that the technology will eventually be applicable to many diseases. **Read More**

New Rapid Molecular COVID-19 Test from Anavasi Diagnostics Awarded $14.9 Million by NIH to Accelerate Test Availability

Anavasi Diagnostics

Anavasi Diagnostics announced it has been awarded $14.9 million from the National Institutes of Health (NIH) Rapid Acceleration of Diagnostics initiative. The funding will accelerate the launch and broad market availability of the AscencioDx™ molecular diagnostic platform. "[Our system] can provide results in approximately 30 minutes comparable to lab-based polymerase chain reaction tests," said Nelson Patterson *(pictured)*, CEO of Anavasi Diagnostics. **Read More**

Six MolES Faculty Among World's Most Influential Researchers

Molecular Engineering & Sciences Institute (MolES)

Six researchers affiliated with the MolES Institute are among the most influential in the world, according to the annual Highly Cited Researchers list published by the Web of Science. The list, which includes Drs. David Baker, Guozhong Cao, David Cobden, Debbie Nickerson, Jay Shendure *(pictured)*, and Xiaodong Xu, identifies scientists who have impacted their field as measured by citation of their work by their peers. **Read More**

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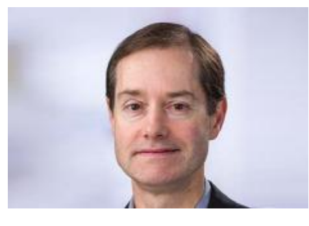
Local News

Researchers Pinpoint 'Correlates of Protection' for Moderna Vaccine

Fred Hutch



In the race to develop new and better vaccines and boosters to block COVID-19, scientists are eagerly seeking laboratory tests that can measure immune responses to quickly show how well these shots are working. Now, a group of top scientists, including Dr. Peter Gilbert *(pictured)*, a biostatistician at Fred Hutch, is reporting that they have defined such measurements — or correlates of protection — for the widely used Moderna mRNA vaccine. **Read More**

International Collaboration Leads to New Insights on Fetal Brain Development

Brotman Baty Institute

A young child's cerebellum is only one-fourth of its adult size, yet it contains the blueprint for integrating environmental cues with developing motor, cognitive, and emotional skills. Drs. Kimberly Aldinger *(pictured, right)*, Georg Seelig *(left)*, and other researchers at Seattle Children's, Yale University, and schools in the United Kingdom, published a paper last August in *Nature Neuroscience* after studying a 13-week window of fetal cerebellum development. **Read More**

UW BIOFAB: A Force for Reproducible Science

Insitute for Protein Design

The lack of reproducibility between experiments is a major problem that slows scientific progress, wastes resources and time, and erodes the public's trust in scientific research. At UW, researchers have access to the UW Biofabrication Center, or BIOFAB, a unique facility in which scientific protocols are encoded as computer programs, allowing undergraduate lab technicians to execute experiments according to detailed instructions. **Read More**

Dr. Jack Gilbert on the State of the Microbiome Field

Insitute for Systems Biology (ISB)

What is the state of the microbiome field? ISB Assistant Professor Dr. Sean Gibbons *(pictured, left)* recently sat down with University of California San Diego Professor Dr. Jack Gilbert *(right)* in a virtual fireside chat. In the final ISB-Town Hall Seattle Science Series event of 2021, the two scientists discussed past research, exciting science happening today, promising products and therapies on the horizon, and much more. **Read More**

Aptevo Therapeutics Reports First Complete Remission, Providing Clinical Update for Its Phase Ib Multi Center, Multi Cohort Expansion Trial in the Treatment of Acute Myeloid Leukemia

Aptevo Therapeutics

Aptevo Therapeutics announced a clinical update for the company's Phase Ib Expansion trial evaluating APVO436 in the treatment of acute myeloid leukemia (AML). The overarching goal of the Phase 1b expansion phase study is to determine if APVO436 treatments can improve the quality of remission in high-risk AML patients by reducing the residual chemotherapy-resistant measurable residual disease burden. **Read More**

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Upcoming Events in Seattle

November 30 2:00 PM	**Science Says** Online
December 3 12:00 PM	**Biology Grad Seminar: Joshua Swore & Carlos Segura** Online
December 4 10:00 AM	**Healthy for the Holidays** Online
December 4 5:00 PM	**Everett Silvertips Hockey Annual Teddy Bear Toss Game** Angel of the Winds Arena
December 7 9:00 AM	**2021 Allen Institute Showcase Symposium** Online

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Science Jobs in Seattle

Research Associate II
Adaptive Biotechnologies

Associate Scientist/Scientist/Senior Scientist, Protein Engineering
SystImmune

Research Technician I, Vaccine and Infectious Disease Division
Fred Hutch

Postdoctoral Fellow, RNA Editing
Seattle Children's

Scientist/Senior Scientist, Synthetic Biology, Protein Engineering
A-Alpha Bio

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