Volume 3.30: August 10, 2020

Publications of the Week

Structure-Guided Covalent Stabilization of Coronavirus Spike Glycoprotein Trimers in the Closed Conformation

First Author: Matthew McCallum | Senior Author: David Veesler *(pictured)*
Nature Structural & Molecular Biology | UW

The authors report the design of a construct corresponding to the prefusion SARS-CoV-2 spike (S) ectodomain trimer, covalently stabilized by a disulfide bond in the closed conformation. Structural and antigenicity analyses showed they successfully shut S in the closed state without otherwise altering its architecture. They demonstrated that this strategy is applicable to other β-coronaviruses, such as SARS-CoV and MERS-CoV. **Abstract**

Low Concentration IL-1β Promotes Islet Amyloid Formation by Increasing hIAPP Release from Humanized Mouse Islets *In Vitro*

First Author: Andrew Templin | Senior Author: Steven Kahn *(pictured)*
Diabetologia | UW

Using a humanized mouse model of endogenous beta cell human islet amyloid polypeptide (hIAPP) expression, researchers examined whether low concentrations of IL-1β promoted islet amyloid formation *in vitro*. Amyloid-forming islets were cultured for 48 hours in the presence or absence of IL-1β with or without an IL-1β neutralizing antibody. Islet morphology was assessed by immunohistochemistry and islet mRNA expression. **Abstract**

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Awards

Young Innovative Scientists Receive Prestigious Damon Runyon-Sohn Pediatric Cancer Research Awards

Damon Runyon Cancer Research Foundation

The Damon Runyon Cancer Research Foundation has named two outstanding young scientists as recipients of the Damon Runyon-Sohn Pediatric Cancer Fellowship Award, committing nearly $500,000 to help address a critical shortage of funding for pediatric cancer research. Kiara Eldred *(pictured)* from UW is one recipient. She is developing 3D tissue cultures that replicate the complexity of the human retina to study retinoblastoma. **Read More**

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Local News

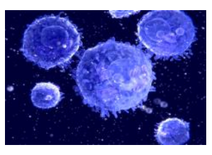
Dr. Carmen Mikacenic Joins Benaroya Research Institute at Virginia Mason

Benaroya Research Institute at Virginia Mason

Benaroya Research Institute at Virginia Mason (BRI) welcomes Dr. Carmen Mikacenic (*pictured*), as an Associate Member in the Center for Translational Immunology. Dr. Mikacenic studies interstitial lung disease, which results from some autoimmune diseases including rheumatoid arthritis, and explores aspects of acute respiratory distress syndrome using airway samples collected from the lungs of local COVID-19 patients. **Read More**

Adaptive Biotechnologies Launches immunoSEQ T-MAP COVID, First Molecular T Cell Monitoring Tool for SARS-CoV-2

Adaptive Biotechnologies



Adaptive Biotechnologies has announced the launch of immunoSEQ® T-MAP™ COVID, a proprietary research product and data analysis service to accurately and reproducibly measure the T-cell immune response to vaccines in development and track the persistence of that response over time. This product leverages data made available that maps T cells from over 1,000 patients to specific SARS-CoV-2 antigens that elicit an immune response. **Read More**

Shifting Liver Cancer Cells Away from Migratory State Could Reduce Their Drug Resistance

Fred Hutch

Whether a liver cancer cell is primed to grow or move affects its ability to resist cancer drugs, according to new work from scientists at Fred Hutch and UW. The team, co-led by Hutch's Dr. Taran Gujral (*pictured*), identified key molecules that orchestrate these different cell states in hepatocellular carcinoma (HCC). Experimental compounds that target these molecules were observed to shift drug-resistant HCC cells toward drug sensitivity. **Read More**

Novartis and a String of High Profile Backers Fund Next-Gen Treg Cell Therapy Startup GentiBio

Fierce Biotech

OrbiMed, Novartis Venture Fund and RA Capital Management have joined forces to fund and help launch GentiBio. With tech out of the Seattle Children's Research Institute and Benaroya Research Institute, the biotech starts life with a $20 million seed funding with an aim of creating new engineered regulatory T cells to deliver immune tolerizing meds for autoimmune, allergic and inflammatory diseases. **Read More**

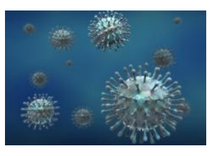
Watch: Why Dr. Andrew Hsieh Is Optimistic about the Future of Treatment for Bladder Cancer

Fred Hutch

Fred Hutch physician-scientist Dr. Andrew Hsieh (*pictured*) talked with Fred Hutch President and Director Dr. Tom Lynch about his research on bladder cancer. His team is kicking off new studies into the role of protein synthesis in cancer and potential new drugs and therapies that can benefit patients with bladder cancer. **Read More**

HIV Vaccine Design Strategy Holds Promise for COVID-19

UW Medicine



A team including researchers at UW Medicine has developed a new vaccine design strategy that could confer improved immunity against certain viruses, including those that cause AIDS, the flu, and COVID-19. Using this technique, the scientists attached proteins from the surface of a virus, called antigens, to custom-made protein nanoparticles, enabling an unprecedented level of control over the molecular configuration of the resulting vaccine. **Read More**

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Upcoming Events in Seattle

August 13 5:30 PM	**Virtual Science of Spirits: Glass Vodka** Online
August 14 - 16 8:00 AM	**SciComm 2020** Online
August 26 5:30 PM	**Women in Bio Seattle: Virtual Summer Networking** Online
September 2 8:30 AM	**2020 from the Laboratory to Leadership - Fall Program** Online
September 16 - 17 6:00 AM	**7th Annual Conference: SBI2 High Content 2020** Online

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Science Jobs in Seattle

Scientist I/II, Epigenetics
Allen Institute

Postdoctoral Research Fellow, Biostatistics
Fred Hutch

Assistant/Associate Faculty Member, Diabetes Clinical Research Program
Benaroya Research Institute at Virginia Mason

Director of Scientific Operations
Allen Institute for Brain Science

Accessioning Supervisor
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