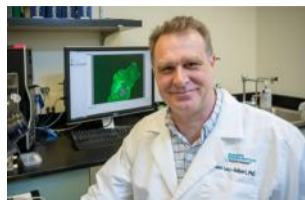


Publications of the Week
MHC Class II Transactivator CIITA Induces Cell Resistance to Ebola Virus and SARS-Like Coronaviruses

 First Author: Anna Bruchez | Senior Author: Adam Lacy-Hulbert (pictured)
 Science | Benaroya Research Institute and UW


Using a transposon-mediated gene-activation screen in human cells, researchers identified that the MHC class II transactivator (CIITA) has antiviral activity against Ebola virus. CIITA induced resistance by activating expression of the p41 isoform of invariant chain CD74, which inhibited viral entry by blocking cathepsin-mediated processing of the Ebola glycoprotein. [Profile](#) | [Abstract](#) | [Press Release](#)

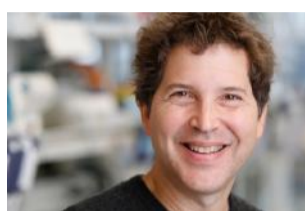
In Vivo Antiviral Host Transcriptional Response to SARS-CoV-2 by Viral Load, Sex, and Age

 First Author: Nicole Lieberman | Senior Author: Alexander Greninger (pictured)
 PLOS Biology | UW and Fred Hutch


Researchers examined host response gene expression across infection status, viral load, age, and sex among shotgun RNA sequencing profiles of nasopharyngeal swabs from 430 individuals with PCR-confirmed SARS-CoV-2 and 54 negative controls. SARS-CoV-2 induced a strong antiviral response with up-regulation of multiple antiviral factors, as well as a reduction in transcription of ribosomal proteins. [Abstract](#)

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Awards
Protein Design and Physics Earn UW Professors a Pair of Prestigious Breakthrough Prizes

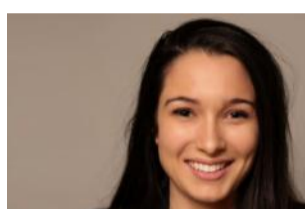
GeekWire



Researchers at UW working on both protein design and the understanding of gravity have been awarded the Breakthrough Prize in Life Sciences and Fundamental Physics. The so-called "world's largest science prize," comes with a \$3 million award. UW Biochemist Dr. David Baker (pictured) won one of four 2021 prizes for his work developing technology that allowed the design of proteins never seen before in nature. [Read More](#)

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Local News
Brain Can Induce Diabetes Remission in Rodents, but How?

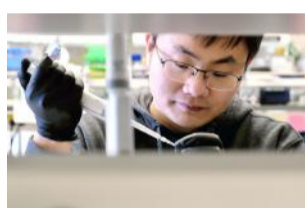
UW Medicine



In rodents with type 2 diabetes, a single surgical injection of a protein called fibroblast growth factor 1 can restore blood sugar levels to normal for weeks or months. Yet how this growth factor acts in the brain to generate this lasting benefit has been poorly understood. Dr. Kim Alonge (pictured) and fellow UW colleagues aimed to clarify how this occurs, potentially opening up more effective diabetes treatments that tap into the brain's inherent potential to ameliorate the condition. [Read More](#)

Designed Antiviral Proteins Inhibit SARS-CoV-2 in the Lab

UW Medicine



Dr. Longxing Cao (pictured) and Institute for Protein Design researchers at UW Medicine have used computer design to originate new proteins that bind tightly to SARS-CoV-2 Spike proteins and obstruct them from infecting cells. The lead antiviral candidate, named LCB1, rivaled the best-known SARS-CoV-2 neutralizing antibodies in its protective actions. [Read More](#)

How Lexi Walls' Graduate School Research Put Us Ahead in the Fight Against COVID-19

UW



Dr. Lexi Walls (pictured) has spent the past five years of graduate school understanding what coronaviruses look like and how they infect people. Dr. Walls studied the structure of coronavirus spike proteins using cryo-electron microscopy and learned how they disguise themselves from a body's immune system. Her work would soon prove critical in helping scientists understand and research treatments for COVID-19. [Read More](#)

Merck and Seattle Genetics Ink Two New Strategic Cancer Collaborations

Seattle Genetics via BioSpace



Merck is making a major investment into Seattle Genetics with two strategic oncology deals. In the first deal, the two companies will work to develop Seattle Genetics' ladiratuzumab vedotin both as a monotherapy and with Merck's checkpoint inhibitor Keytruda in triple-negative breast cancer, hormone receptor-positive breast cancer and other LIV-1-expressing solid tumors. [Read More](#)

Stalled Science, Missed Mates and Virtual Everything

Fred Hutch



When graduate student Kate Dusenbury Crawford returned to the lab from her honeymoon, she had no idea it was a fateful day in her nascent scientific career. The PhD student in Dr. Jesse Bloom's lab at Fred Hutch studies the proteins that viruses like Ebola and rabies use to enter cells — work that could help scientists understand viral pandemics. [Read More](#)

How COVID-19 Has Opened Science

Fred Hutch



At Fred Hutch, evolutionary biologist Dr. Trevor Bedford (pictured) is known as an expert in tracking the spread of diseases like influenza and Ebola by tracing small genetic mutations from viral samples taken from patients. He has also been an advocate for open science and the quick release of vital information from research on epidemics. [Read More](#)

New Test Better Predicts Which Babies Will Develop Type 1 Diabetes

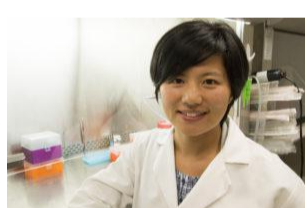
Pacific Northwest Research Institute (PNRI)



A new approach to predicting which babies will develop type 1 diabetes (T1D) — which could help them avoid life-threatening complications — is closer to becoming part of routine testing for newborns. The lab of Dr. Bill Hagopian (pictured) at PNRI is part of a pioneering international study following more than 8,000 children with increased genetic risk for developing T1D. [Read More](#)

New 3D Model to Study Effect of Curvature on Endothelial Cells

Institute for Stem Cell & Regenerative Medicine (ISCRM)



Research led by Dr. Ying Zheng (pictured) at ISCRM sheds new light on the interplay of vessel geometry and the behavior of endothelial cells. In a clever feat of engineering, the research team developed a synthetic 3D, spiral-shaped platform that allowed them to introduce a new factor that they suspected influenced endothelial cells in important ways. [Read More](#)

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- September 24
1:00 PM **National Postdoc Appreciation Week: Common Connections**
Online
- September 25
12:00 PM **Fred Hutch President's Conversation**
Online
- September 25
12:00 PM **Science Friday**
Online
- September 26
9:00 AM **Women in Bio-Seattle: Career Fair, Networking, and Job Searching during the COVID-19 Era**
Online
- September 29
7:00 PM **Calling BS: The Art of Skepticism in a Data-Driven World**
Online

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