

**Publications of the Week**

**BAFF from Dendritic Cells, Monocytes, and Neutrophils Is Required for B Cell Maturation and Autoantibody Production in SLE-like Autoimmune Disease**

First Author: Daniela Giordano | Senior Author: Edward Clark (*pictured*)  
Frontiers in Immunology | UW



B cell-activating factor (BAFF) contributes to the pathogenesis of autoimmune diseases including systemic lupus erythematosus (SLE). Although several anti-BAFF antibodies and derivatives have been developed for the treatment of SLE, the specific sources of BAFF that sustain autoantibody producing cells have not been definitively identified. Using BAFF-RFP reporter mice, the authors identified major changes in BAFF-producing cells in two mouse spontaneous lupus models, and in a pristane-induced lupus model. [Abstract](#)

**A Single Surface-Exposed Amino Acid Determines Differential Neutralization of AAV1 and AAV6 by Human Alpha-Defensins**

First Author: Jessica Porter | Senior Author: Jason Smith (*pictured*)  
Journal of Virology | UW



Adeno-associated viruses (AAVs) are being developed as gene therapy vectors due to their low pathogenicity and tissue tropism properties. However, the efficacy of these vectors is impeded by interactions with the host immune system. One potential immune barrier to vector transduction is innate immune host defense peptides, such as alpha-defensins, which are potent antiviral agents against other nonenveloped viruses. [Abstract](#)

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**Awards**

**Endozene, LegUp Prosthetics, and Piezopulse Win Top Prizes at the 2023 Hollomon Health Innovation Challenge**

UW Department of Bioengineering (BioE)



Seven teams involving UW BioE students were among 22 teams to compete in 2023 Hollomon Health Innovation Challenge (HIC). Of these teams, three BioE-related teams won awards – LegUp Prosthetics, Piezopulse, and Endozene, which won the grand prize. The HIC recognizes student entrepreneurs who seek to address important issues in health care, and offers the opportunity to win seed funding to advance their ideas. [Read More](#)

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**Local News**

**COVID-19 mRNA Vaccination Does Not Promote Autoantibody Development**

Benaroya Research Institute



Researchers from Benaroya Research Institute and Yale University have confirmed that COVID-19 immunization does not drive the development of new autoantibodies. The results of this work bolster the emerging safety profile of mRNA vaccines and highlights their ability to decouple SARS-CoV-2 immunity from the autoantibody responses observed during acute COVID-19 infection. [Read More](#)

**Promising Young Scientist: Samantha Schuster's 'Goal-Oriented Grit' Likely Will Serve Her Well in the Biotech Sector**

Brotman Baty Institute



Samantha Schuster (*pictured, right*) is a doctoral candidate in the UW Molecular and Cellular Biology program supervised by Dr. Andrew Hsieh (*left*). "What attracted me to the UW Molecular and Cellular Biology program was its strong partnership with Fred Hutch," Schuster said. "During my first year, I was able to rotate through several labs studying cancer from different perspectives in a world-class research center." [Read More](#)

**Building a Better BMI**

Institute for Systems Biology (ISB)



ISB researchers have constructed biological body mass index (BMI) measures that offer a more accurate representation of metabolic health and are more varied, informative, and actionable than the traditional, long-used BMI equation. The researchers studied 1,000 individuals who enrolled in a wellness program by performing multi-omic profiling, examining more than 1,100 blood analytes such as proteins and metabolites, as well as genetic risk scores and gut microbiome composition collected at various time points. [Read More](#)

**Biotech Experts Wary of Pfizer Cutting Seagen Workforce — But History Reveals Silver Lining**

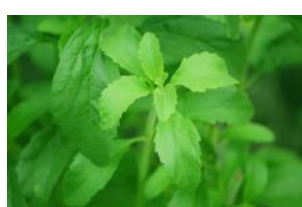
GeekWire



Seattle-area biotech experts are eyeing the past warily in the wake of the news that Pfizer plans to acquire Bothell, Washington-based Seagen for a whopping \$43 billion. Most previous acquisitions in the Seattle region have ultimately gutted biotech companies and their workforces, including at Immunex, Icos, Corixa, and Zymogenetics. That history has some on edge about Seagen's future. [Read More](#)

**Arzeda's New Portfolio of ProSweet Enzymes™ Unlocks the Potential of Stevia by Efficiently Producing Reb D and M from Stevia Leaf Extract**

Arzeda



Arzeda has successfully developed and scaled its ProSweet Enzymes™ that will allow sweetener companies to efficiently – and cost effectively – make Reb D and Reb M from stevia leaf extract. The introduction of the new enzymes comes at a time of increased industry demand and product innovation – as global stevia sales are expected to grow by nearly 10% over the next six years due to continued consumer demand for better-for-you alternatives to sugar. [Read More](#)

**Meet the Machines That Are Helping Us Understand the Brain**

Allen Institute



From probing neurons to grabbing microscope slides, cutting-edge equipment is helping neuroscientists advance research faster. At the Allen Institute, this includes the octo-patch, a machine that records electrical properties from multiple neurons simultaneously, the LASSO, an automated brain tissue slicer, and the VERSA, a slide loader and scanner that helps automate slide placing and imaging. [Read More](#)

**Research from the Heart**

UW Department of Bioengineering



Dr. Patrick Boyle's (*pictured*) team models heart rhythm disorders to help doctors better understand and predict when patients may be at risk of arrhythmia, cardiac arrest, and stroke. Central to their work is atrial fibrillation (A-fib), a type of arrhythmia that's very common — the Centers for Disease Control and Prevention estimates that 12.1 million people in the U.S. will have A-fib by 2030 — yet difficult to detect. [Read More](#)

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**Upcoming Events in Seattle**

- March 28  
3:30 pm

**The Emergence of General AI for Medicine**  
Gates Center, Amazon Auditorium
- March 28  
5:00 pm

**Deloitte PNW Life Science Industry Networking**  
Topgolf Renton
- March 29  
12:00 pm

**PNRI's Science Matters Seminar**  
Online
- April 4  
11:45 am

**PacSci Ignite Luncheon**  
Pacific Science Center
- April 5  
6:00 pm

**Demystifying ChatGPT for Academics**  
Kane Hall Auditorium 130

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**Science Jobs in Seattle**

- Manufacturing Specialist Cell Culture Launchpad**  
Seagen
- Research Associate II, Histology (Molecular Anatomy)**  
Allen Institute
- Clinical Trial Assistant I**  
Fred Hutch
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nanoString
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