Volume 6.38: October 2, 2023

Publications of the Week

Mesenchymal Stem Cell Extracellular Vesicles from Tissue-Mimetic System Enhance Epidermal Regeneration via Formation of Migratory Cell Sheets

First Authors: Jacob Hodge and Jennifer Robinson *(pictured)* | Senior Author: Adam Mellot
Tissue Engineering and Regenerative Medicine | UW

The secretome of adipose-derived mesenchymal stem cells (ASCs) offers a unique approach to understanding and treating wounds, including the critical process of epidermal regeneration orchestrated by keratinocytes. This study demonstrates how critical the culture environment is on influencing ASC-secretome regenerative capabilities. **Abstract**

Breaching the Blood-Brain Barrier: AAV Triggers Dose-Dependent Toxicity in the Brain

First Author: Daniel Stone *(pictured)* | Senior Author: Keith Jerome
Molecular Therapy Methods & Clinical Development | Fred Hutch and UW

Since *in vivo* transduction of neurons and glia by adeno-associated virus (AAV) vectors was first demonstrated in rat brain, it has been shown that AAV can efficiently transduce neurons, microglia, astrocytes, and oligodendrocytes across multiple species. Researchers investigate the mechanisms by which AAV mediates neurotoxicity following intraparenchymal injection into mouse brain. **Abstract**

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Awards

Dr. Nora Disis to Receive Creative Invention Award

UW Medicine

Dr. Mary (Nora) Disis *(pictured)*, Professor of Hematology and Oncology, is the 2024 recipient of the Creative Invention Award by the American Chemical Society. Dr. Disis is the Founder and Director of the University of Washington Cancer Vaccine Institute. She is being recognized for her work in developing vaccines for the prevention and treatment of cancers. **Read More**

Lumen Bioscience Wins Historic $1.5M Wilkes Center Climate Prize

University of Utah

Lumen Bioscience is the inaugural winner of the $1.5 million Wilkes Center Climate Prize at the University of Utah. The Seattle-based biotech company beat 77 international teams with their proposal to drastically reduce methane emissions from dairy and beef cattle using a patented mixture of enzyme proteins. The Wilkes Climate Prize is one of the largest university-affiliated climate prizes in the world. **Read More**

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Local News

Upcoming Long-Read Sequencing Symposium: Q&A with BBI's Dr. Danny Miller

Brotman Baty Institute (BBI)

UW's Dr. Danny Miller *(pictured)* specializes in long-read genome sequencing, unsolved genetic disorders, and clinical genetic testing in his research and clinical practice at Seattle Children's Hospital. "The primary goal [of the symposium] is to bring together Seattle-area users of long-read sequencing to learn from each other, build new collaborations, and to explore potential synergies among users," explains Dr. Miller. **Read More**

Coding Saves Lives, and Fred Hutch Cancer Center Wants the Next Generation to Take Note

GeekWire

"Coding for Cancer" aims to promote student awareness of computational biomedical research as a potential career path as well as the role it plays in modern cancer research. Hanako Osuga *(pictured, centre)*, the program's lead at Fred Hutch, said an ability to thrive in a virtual learning environment is a better indicator of success in the program than any previous knowledge. **Read More**

Expanding Newborn Screening Panels in the Genomic Era

Pacific Northwest Research Institute (PNRI)

This September marks the 60th anniversary of Newborn Screening, which is considered one of the ten greatest public health achievements worldwide. Two of PNRI's scientists, Dr. Cláudia Carvalho *(pictured, left)* and Dr. Aimée Dudley *(right)*, are conducting pioneering research into the genetic causes of rare, inherited diseases, leading to new and more precise ways to identify infants at the greatest risk. **Read More**

Q&A: How New Software Is Changing Our Understanding of Human Brain Development

UW News

A single brain is unfathomably complex. Brain researchers are now dealing with so much information that they must also come up with new methods to comprehend it. A UW led by Dr. Ariel Rokem *(pictured)* recently used new software to compare MRIs from 300 babies and discovered that myelin, a part of the brain's so-called white matter, develops much slower after birth. **Read More**

Metastatic Lung Disease: The Challenge of Preventing "an Assault from Within"

Brotman Baty Institute (BBI)

BBI's Dr. Mark Headley *(pictured)* has devoted his career to battling what he calls "an assault from within." This "assault" is the metastatic spread to the lungs from other parts of the body, causing cancer cells to colonize, develop, and potentially lead to premature death. Dr. Headley's lab is dedicated to understanding how the underlying immune environment of the lung alters the course of metastatic disease. **Read More**

Revolutionary Microscope to Fuel Immunology Breakthroughs

Benaroya Research Institute (BRI)

What if we could take a blood sample from a person with rheumatoid arthritis, zero in on the immune cells that cause the disease, and watch what they're doing in real-time video? Thanks to a new state-of-the-art microscope, scientists can do that and so much more. "This is the most powerful microscope we have at BRI, and BRI is one of only three academic institutions in the [region] with this technology," says Dr. Caroline Stefani *(pictured)* who leads BRI's Imaging Core. **Read More**

First Lady Jill Biden Visits Seattle, Stops at Fred Hutch to Boost Cancer Moonshot Program

GeekWire

First Lady Jill Biden visited Fred Hutch, where she met with researchers and spoke about cancer prevention and the need to mitigate side effects and reduce recurrence. Jill Biden's visit came after her September 13th announcement with President Biden of new programs linked to the Cancer Moonshot, which was launched a year after President Biden's son Beau Biden's death. **Read More**

New RSV Vaccine Offering Protection for Infants Approved with the Help of Research from Seattle Children's

Seattle Children's

In a major moment for combatting respiratory syncytial virus (RSV), on September 22nd the Centers for Disease Control recommended an RSV vaccine for pregnant persons that researchers have determined is safe and effective in preventing RSV disease in infants through immunization during pregnancy. Studies for the RSV vaccine at Seattle Children's were led by Dr. Janet Englund *(pictured)*. **Read More**

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Upcoming Events in Seattle

October 4 5:00 PM	**Nucleate Activator Info Session** UW Foster School of Business
October 11 - 13 9:00 AM	**2023 ISB Virtual Microbiome Series** Online
October 19 8:30 AM	**20th Annual STI & HIV Research Symposium** Harborview Research & Training Center
October 20 8:30 AM	**Black Women in STEM 2.0** Seattle Pacific University
October 20 5:30 PM	**Bold Breakthroughs** AXIS Pioneer Square

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Science Jobs in Seattle

Postdoctoral Scholar, Self-Replicating mRNA Vaccines
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Swedish

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