

Publications of the Week
Basophil-Derived Tumor Necrosis Factor Can Enhance Survival in a Sepsis Model in Mice

 First Author: Adrian Pilgonsky *(pictured)* | Senior Author: Stephen Galli
 Nature Immunology | Seattle Children's Research Institute and UW School of Medicine


Basophils are evolutionarily conserved in vertebrates, despite their small numbers and short life span, suggesting that they have beneficial roles in maintaining health. However, these roles are not fully defined. The authors demonstrated that basophil-deficient mice exhibit reduced bacterial clearance and increased morbidity and mortality in the cecal ligation and puncture model of sepsis. [Profile](#) | [Abstract](#)

Characterizing the Major Structural Variant Alleles of the Human Genome

 First Author: Peter Audano | Senior Author: Evan Eichler *(pictured)*
 Cell | UW School of Medicine


In order to provide a comprehensive resource for human structural variants (SVs), the authors generated long-read sequence data and analyzed SVs for fifteen human genomes. They sequence resolved 99,604 insertions, deletions, and inversions including 2,238 (1.6 Mbp) that are shared among all discovery genomes with an additional 13,053 (6.9 Mbp) present in the majority, indicating minor alleles or errors in the reference. [Abstract](#)

Targeting the Perivascular Niche Sensitizes Disseminated Tumour Cells to Chemotherapy

 First Author: Patrick Carlson | Senior Author: Cyrus Ghajar *(pictured)*
 Nature Cell Biology | Fred Hutch and UW


Disseminated tumor cells (DTCs) persist in distant tissues despite systemic administration of adjuvant chemotherapy. Many assume that this is because the majority of DTCs are quiescent. The authors challenge this notion and provide evidence that the microenvironment of DTCs protects them from chemotherapy, independent of cell cycle status. [Abstract](#)

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Awards
Tietze Young Scientist Awards for Two ISCRM Faculty Members

Institute for Stem Cell & Regenerative Medicine (ISCRM)



Two ISCRM faculty members, Dr. Smita Yadav *(pictured)*, Assistant Professor of Pharmacology, and Dr. Ronald Kwon, Associate Professor of Orthopedics and Sports Medicine, have received prestigious awards from the John H. Tietze Foundation Trust that will help fuel promising research underway in their labs. Dr. Yadav is studying autism spectrum disorder, while Dr. Kwon is studying regeneration. [Read More](#)

The Parker Institute for Cancer Immunotherapy Welcomes Tijana Martinov as Parker Scholar

Parker Institute for Cancer Immunotherapy



The Parker Institute for Cancer Immunotherapy recently welcomed seven talented early career researchers in cancer immunotherapy to its network as part of the Parker Scholars, Parker Bridge Scholars and Parker Fellows programs. One of the recipients, Tijana Martinov *(pictured)*, is from Fred Hutch, and is excited to take risks and address big problems in cancer immunotherapy. [Read More](#)

Dr. Arvind Subramaniam Receives Grant to Study How Cells Cope with Stalled Protein Synthesis

Fred Hutch



Fred Hutch computational and molecular biologist Dr. Arvind "Rasi" Subramaniam *(pictured)* has received a five-year, \$920,000 CAREER Award from the National Science Foundation to develop computational models of how cells cope with stalled protein synthesis. Cells rely on proteins for all their functions, and Subramaniam's research will shed light on how protein synthesis goes awry in diseases such as cancer. [Read More](#)

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Local News
In Vitro Grafts Increase Blood Flow in Infarcted Rat Hearts

UW Medicine



Researchers from UW, including Drs. Ying Zheng and Charles Murry *(pictured)*, have succeeded in creating functional blood vessels *in vitro* for hearts of rats that had sustained a heart attack. "To our knowledge, this is the first demonstration that building organized blood vessels with perfusion outside the body leads to improved integration with host blood vessels and better tissue blood flow," said Zheng, a UW Associate Professor of bioengineering. [Read More](#)

Seattle Area's Life-Science Sector Is on the Upswing, and It Is Scrambling to Fill Jobs

The Seattle Times



Five years ago, the sector was in the doldrums locally. But now, it is adding new life-science firms at the rate of around 80 a year, according to a new report from state trade group Life Science Washington. This is thanks to a roaring global economy, a health-care industry desperate for cost-saving innovation, and a new generation of products. [Read More](#)

How a Phone Call Helped Shape the Field of Bone Marrow Transplant

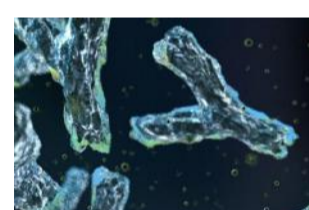
Fred Hutch



In 1972, a lifesaving new leukemia treatment was harming some patients' digestive organs, and no one really understood why. Over the past 40-plus years, Dr. George McDonald *(pictured)* has helped the field fill in the blanks. First as an intrigued volunteer, then on the faculty of Fred Hutch, McDonald has helped unravel countless mysteries surrounding GI and liver problems in patients with cancer. [Read More](#)

An Unexpected Mode of Action for an Antibody

UW Medicine



An international team headed by UW Medicine scientists is among those attempting to understand how severe acute respiratory syndrome (SARS) and Middle-East respiratory syndrome (MERS) coronaviruses infect humans, and how their presence elicits a response from the immune system. The research group is particularly interested in how neutralizing antibodies target the coronavirus' cell-invasion machinery. [Read More](#)

Gene Therapy Cassettes Improved for Muscular Dystrophy

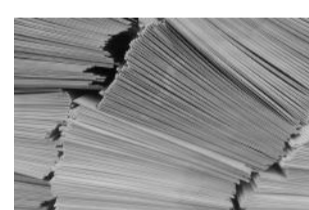
UW Medicine



Experimental gene therapy cassettes for Duchenne muscular dystrophy have been modified to deliver better performance. The cassettes, which carry the therapy into muscle cells, contain newer versions of a miniaturized treatment gene. The revamped versions were developed and tested at UW Medicine labs in animal models of muscular dystrophy by researchers including Professor Dr. Jeffrey Chamberlain *(pictured)*. [Read More](#)

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After Shutdown, NSF Catching Up on Review Panels, Funding Requests

The Scientist



When the US government was partially shut down for 35 days starting December 22, work at several government agencies ground to a halt, with a total of 800,000 federal employees furloughed. The National Science Foundation, one of the sidelined agencies, is addressing all that went undone during that time. [Read More](#)

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Upcoming Events in Seattle

- February 20
7:00 PM
10th Annual Galileo Dialogues: "Time and Time Again, Part II"
Seattle University Student Center, Room 160
- February 21
5:00 PM
Life Science Industry Networking Event
Agora Conference Center
- February 25 - 26
Training in Multi-Disciplinary Team Science
Seattle Children's Sand Point Learning Center
- February 25
7:00 PM
Science On Tap: Emerging Science at the Intersection of Ecology, Genetics and Policy
Ravenna Third Place - Cafe Arta
- March 3
3:30 PM
Exploring Frontiers Seminar: Christopher Mason
Allen Institute

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Science Jobs in Seattle

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