

Publications of the Week

Effect of the Intratumoral Microbiota on Spatial and Cellular Heterogeneity in Cancer

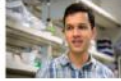
First Author: Jorge Luis Calero-Niño | Senior Author: Susan Bullman (pictured)
Nature | Fred Hutch and UW



The tumor-associated microbiota is an intrinsic component of the tumor microenvironment across human cancer types. Intratumoral host-microbiota studies have so far largely relied on bulk tissue analysis, which obscures the spatial distribution and localized effect of the microbiota within tumors. By applying *in situ* spatial-profiling technologies and single-cell RNA sequencing to oral squamous cell carcinoma and colorectal cancer, the authors reveal spatial, cellular, and molecular host-microbe interactions. [Abstract](#)

A Nascent Peptide Code for Translational Control of mRNA Stability in Human Cells

First Author: Philip Barke | Senior Author: Anand Ravi Subramaniam (pictured)
Nature Communications | Fred Hutch and UW



Stability of eukaryotic mRNAs is associated with their codon, amino acid, and GC content. Yet, coding sequence motifs that predictably alter mRNA stability in human cells remain poorly defined. The authors develop a massively parallel assay to measure mRNA effects of thousands of synthetic and endogenous coding sequence motifs in human cells. [Abstract](#)

Human-Induced Pluripotent Stem Cell-Derived Neurons and Glia for the Elucidation of Pathogenic Mechanisms in Alzheimer's Disease

First Author: Jessica Young (pictured) | Senior Author: Laurence Goldstein
Alzheimer's Disease | UW



Alzheimer's disease (AD) is a common neurodegenerative disorder and a mechanistically complex disease. For the last decade, human models of AD using induced pluripotent stem cells have emerged as a powerful way to understand disease pathogenesis in relevant human cell types. In this review, the authors summarize the state of the field and how this technology can apply to studies of both familial and sporadic studies of AD. [Abstract](#)

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Awards

Susan Parkhurst Named Mark Groudine Endowed Chair for Outstanding Achievements in Science and Service

Fred Hutch



Fred Hutchinson Cancer Center cell biologist Dr. Susan Parkhurst (pictured) was named the second Mark Groudine Endowed Chair for Outstanding Achievements in Science and Service. Established by an anonymous donor in 2016, the Chair recognizes the scientific achievements and administrative contributions to Fred Hutch of both Drs. Parkhurst and Mark Groudine. [Read More](#)

Award Will Fund Research into New Metastatic Prostate Cancer Therapies

UW Medicine



A three-year, \$750,000 grant from the San Antonio, Texas-based Robert J. Kieberg, Jr. and Helen C. Kieberg Foundation will allow Dr. John Lee (pictured) and Fred Hutch collaborators Drs. Pete Nelson and Roland Strong to explore new treatments for metastatic prostate cancer, including immunotherapy. "The human immune system is a much more potent cancer fighter than any sort of treatment we could apply," Dr. Lee said. [Read More](#)

Fred Hutch/UW/Seattle Children's Cancer Consortium Breast Cancer Researchers Receive Grants

Fred Hutch



Six researchers within the Fred Hutch/University of Washington/Seattle Children's Cancer Consortium, including Dr. Nancy Davidson (pictured), have received grants from the Breast Cancer Research Foundation, a longtime funder of the Consortium's Breast and Ovary Cancer Research Program. The funding supports projects including new imaging tracer, better risk prediction for luminal B subtypes, anti-inflammatory vaccines, and more. [Read More](#)

US President's Volunteer Service Awards

UW Medicine



Dr. Jonathan Himmelfarb (pictured) and Glenda Roberts have been recognized by President Joseph R. Biden with US Presidential Volunteer Service Awards. They both received gold medals. In 2003, the President's Council on Service and Civic Participation founded the President's Volunteer Service Award to recognize the important role of volunteers in America's strength and national identity. [Read More](#)

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Local News

Evolution of Herbivore Peptide Recognition by a Plant Immune Receptor

UW Department of Biology



New research from the lab of Dr. Adam Steinbranner (pictured) on the evolution of herbivore peptide recognition by a plant immune receptor was recently published in *eLife*. This new research explores evolution and plant immunity, and utilizes the sequence of the ancestral gene from ~20 million years ago. The study was also authored by Dr. Simon Snoeck and Anthony Garcia. [Read More](#)

How Bacteria Give Cancer a Helping Hand

Fred Hutch



Tumors often get a lot of help in their efforts to survive and grow. Non-cancerous cells around a tumor can help it avoid attacks by the immune system, resist therapies that target them, and allow it to spread to other parts of the body. Researchers are now finding that some of these helpful neighbors aren't even human cells — they're bacteria. [Read More](#)

In Vivo Approach to Treat Sickle Cell Disease and Beyond

UW Medicine



Sickle cell disease (SCD) is a group of inherited red blood cell disorders that affect hemoglobin, the protein that carries oxygen through the body. The condition affects more than 100,000 people in the United States and 26 million people worldwide. In a collaboration with the Bill and Melinda Gates Foundation, the National Institutes of Health is mounting an effort for a one-shot SCD cure that could be administered

Seagen Caps Busy Week with FDA Nod in Pediatric Hodgkin Lymphoma

Biospace



After naming David Epstein as its new CEO, Seagen announced that Adcetris has been given FDA approval for the treatment of children aged two years and above with high-risk classical Hodgkin lymphoma. The regulatory nod, based on data from the Phase III study AHOD1331, covers the use of Adcetris with the chemotherapeutic agents doxorubicin, vincristine, etoposide, prednisone, and cyclophosphamide. [Read More](#)

How Clams Provide Clues into Cancer Evolution

Pacific Northwest Research Institute (PNRI)



The key to learning about cancer evolution in humans may be found by studying a surprising organism: the clam. PNRI scientist Dr. Michael Metzger seeks to understand the principles of how cancer evolves and how some organisms can resist cancer by looking for discovery in an unexpected place through studying transmissible cancers in bivalves: mussels, oysters, cockles, scallops, and clams. [Read More](#)

Your Questions Answered About New Therapy to Delay T1D

Benaroya Research Institute at Virginia Mason



The FDA recently approved a therapy that marks a huge milestone in preventing type 1 diabetes (T1D). This therapy, teplizumab, can delay T1D for a median of two years. "Not only is this a landmark event for those with or at risk for T1D, it also shows — for the first time in any autoimmune disease — that it is feasible to treat a disease early, before it starts," says Dr. Carla Greenbaum (pictured). [Read More](#)

Seattle Vaccine Startup Taking on Pharma Giant GSK with Shingles Shot Raises \$26M

GSKWire



Seattle vaccine startup Curevo, which is developing a vaccine against shingles, has raised \$26 million. The funding comes on the heels of \$60 million raised in February to advance the company's clinical trial for its shot against shingles, a painful condition caused by reactivation of the virus that causes chicken pox. The startup aims to develop a shingles vaccine with a better safety profile and equivalent effectiveness to the leading vaccine on the market. [Read More](#)

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Upcoming Events in Seattle

- November 29 10:00 am **Science Says Expert Series**
Online
- December 1 12:00 pm **The First Ten Calls Every Life Science Entrepreneur Should Make**
Online
- December 2 12:00 pm **Inside Immunology**
Online
- December 7 6:00 pm **AWIS Holiday Happy Hour**
Optimism Brewing Company
- December 8 4:00 pm **UW Engineering Innovation in Health Fall Showcase**
University of Washington

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