

Publications of the Week

**Oncogenic Activation of PI3K Induces Progenitor Cell Differentiation to Suppress Epidermal Growth**

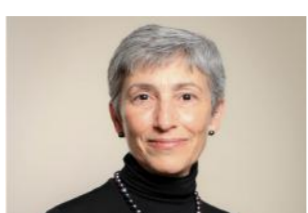
First Author: Zhe Ying | Senior Author: Slobodan Beronja (pictured)  
Nature Cell Biology | Fred Hutchinson Cancer Research Center



Oncogenic lesions are surprisingly common in morphologically and functionally normal human skin. However, the cellular and molecular mechanisms that suppress their cancer-driving potential to maintain tissue homeostasis are unknown. By employing assays for the direct and quantitative assessment of cell fate choices *in vivo*, the authors show that oncogenic activation of PI3K-AKT promotes the differentiation and cell cycle exit of epidermal progenitors. [Profile](#) | [Abstract](#)

**A Bifunctional Role for the UHRF1 UBL Domain in the Control of Hemi-Methylated DNA-Dependent Histone Ubiquitylation**

First Author: Paul DaRosa | Senior Author: Rachel Kleivit (pictured)  
Molecular Cell | UW



DNA methylation patterns regulate gene expression programs and are maintained through a highly coordinated process orchestrated by the RING E3 ubiquitin ligase UHRF1. The authors found that all five domains of UHRF1, including the previously uncharacterized ubiquitin-like domain (UBL), cooperate for hemi-methylated DNA-dependent H3 ubiquitin ligation. [Profile](#) | [Abstract](#)

**h-Channels Contribute to Divergent Intrinsic Membrane Properties of Supragranular Pyramidal Neurons in Human versus Mouse Cerebral Cortex**

First Author: Brian Kalmbach (right) | Senior Author: Jonathan Ting (left)  
Neuron | Allen Institute for Brain Science and UW School of Medicine



Gene expression studies suggest that differential ion channel expression contributes to differences in rodent versus human neuronal physiology. The authors tested whether h-channels more prominently contribute to the physiological properties of human compared to mouse supragranular pyramidal neurons. [Profile](#) | [Abstract](#)

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Awards

**Forbes '30 Under 30' Lists Hutch Immunotherapy Researcher Alex Salter**

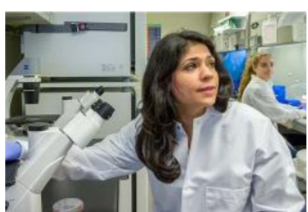
Fred Hutchinson Cancer Research Center



Fred Hutch's Alex Salter (pictured) has been listed as a Forbes "30 Under 30," an annual who's-who of influencers under age 30 in the U.S. and Canada. The M.D./Ph.D. student in the lab of Dr. Stan Riddell at Fred Hutch made the list of 30 standouts in the health care category. Salter said that he is "incredibly honored" to be included on the list. [Read More](#)

**Dr. Sita Kugel Named 2018 V Scholar**

Fred Hutchinson Cancer Research Center



Pancreatic cancer researcher Dr. Sita Kugel (pictured) has been named a 2018 V Scholar by the V Foundation for Cancer Research. The two-year, \$200,000 award will support Kugel's goal of developing a targeted therapy for an aggressive subtype of pancreatic cancer. "Our project aims to improve the treatment options for pancreatic cancer, one of the most lethal of all human cancers," Kugel said. [Read More](#)

**Colette Chaney Named 2018 Nurse of the Year for Research Advancement**

Fred Hutchinson Cancer Research Center



March of Dimes Washington has recognized Colette Chaney (pictured) as its 2018 Nurse of the Year for Research Advancement, which recognizes nurses who use research to guide practice and develop policies. Chaney has helped usher advances in immunotherapy from the lab to the clinic and back again. For countless patients enrolled in clinical trials, she's been the kind face at medicine's frontier. [Read More](#)

**Two New Grants to Fuel Metastatic Breast Cancer Research**

Fred Hutchinson Cancer Research Center



Two early-career investigators at Fred Hutch have received grants that will fuel their research into metastatic breast cancer. Dr. Erica Goddard (pictured) won a Breakthrough Fellowship Award from the Department of Defense Breast Cancer Research Program, and Dr. Mark Headley received an Early Career Investigator Award from METAvivor, a nonprofit organization dedicated to funding research for stage 4 metastatic breast cancer. [Read More](#)

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Local News

**Seattle Genetics Drug Rides FDA Fast-Track to the Front Lines in Fight against Rare Form of Cancer**

GeekWire



Seattle Genetics' star cancer drug, Adcetris, has won FDA approval for treatment of a fast-growing type of non-Hodgkin lymphoma. The approval comes after the drug showed better results in patients than the standard treatment for the cancer. This is the first time the FDA has approved a drug for treatment of newly diagnosed peripheral T-cell lymphoma, and it did so in under two weeks. [Read More](#)

**UW Professor Discovers New Cannabinoid Compound that Slows Cancer Cell Growth**

The Daily



An exciting licensing agreement between UW and Pascal Biosciences means that a cancer treatment derived from cannabinoids could become FDA-approved as soon as 2019. The agreement licenses the production, use, and sale of a cannabinoid-based compound, developed at the UW by Professor of Pharmacology and Psychiatry Dr. Nephi Stella, to Pascal Biosciences. [Read More](#)

**Self-Assembling Protein Filaments Created from Scratch**

UW Medicine



For the first time, scientists have created from scratch self-assembling protein filaments built from identical protein subunits that snap together spontaneously to form long, helical, thread-like structures. To design the filaments, the Baker lab used a computer program, called Rosetta, that can predict the shape of a protein from its amino acid sequence. [Read More](#)

**Dodging Antibiotic Resistance by Curbing Bacterial Evolution**

UW Medicine



With many disease-causing bacteria ratcheting up their shields against current drugs, new tactics are vital to protect people from treatment-resistant infections. Lowering mutation rates in harmful bacteria might be an as yet untried way to hinder the emergence of antimicrobial-resistant pathogens. This proposed strategy comes from recent findings in infectious disease research at UW Medicine. [Read More](#)

**University of Washington Seeing Success with Nerve Stimulation Trial**

KINGS News



There have been several breakthroughs using electrical stimulation on damaged nerves, but they have required surgeries to implant wires and stimulator inside the body. Dr. Chet Moritz (pictured) at UW's Center for Neurotechnology is working on a study that would attempt to reconnect or rebuild severed electrical pathways from the brain to the body's uncontrollable extremities, with non-invasive electrical stimulation. [Read More](#)

**Precision Medicine Looks beyond DNA Sequences**

Genetic Engineering & Biotechnology News



The structural variation of the genome is a hot topic, with many companies developing novel ways of making strides in this area. Phase Genomics has developed a library preparation kit that has the potential to transform genome science. Their approach to study the 3D architecture of genomes comes from work done in the laboratory of Dr. Jay Shendure, Professor of Genome Sciences at UW. [Read More](#)

**Persistent HIV Infection Works a Lot Like Cancer, Study Shows**

Fred Hutchinson Cancer Research Center



Scientists at Fred Hutch have strengthened the case that HIV, the virus that causes AIDS, may take a page from cancer's playbook. The research, led by Drs. Joshua Schiffer and Dan Reeves, has significant implications for strategies to cleanse remaining reservoirs of HIV infection, which, if ever achieved, would amount to a functional cure for HIV. [Read More](#)

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Interesting Articles

**The Kilogram Will Now Be Defined by a Scientific Formula**

KINGS News



In a historic vote, nations have unanimously approved a ground-breaking overhaul to the international system of measurements, approving the use of a scientific formula to define the exact weight of a kilogram. The new formula-based definition of the kilogram will have multiple advantages over the cylinder of platinum-iridium alloy that has set the standard for more than a century. [Read More](#)

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**Upcoming Events in Seattle**

- November 26 6:00 PM **Science on Tap: Jeff Duda**  
Ravenna Third Place Bookstore
- November 27 7:00 PM **Science in the City: Humans and Their Leftovers**  
Pacific Science Center
- December 1 5:30 PM **Hutch Holiday Gala**  
Sheraton Grand Seattle
- December 4 - 5 8:00 AM **Allen Institute Showcase Symposium 2018**  
Allen Institute
- December 4 7:00 PM **Science in the City: The Art of Healing**  
Pacific Science Center

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**Science Jobs in Seattle**

- Blood Collection Specialist, Associate Phlebotomist**  
Bloodworks Northwest
- Postdoctoral Research Fellow, Biostatistics**  
Fred Hutchinson Cancer Research Center
- Postdoctoral Research Associate**  
Benaroya Research Institute at Virginia Mason
- Research Associate, Immuno-Oncology**  
OncoResponse
- Mobile Science Lab Scientist**  
Seattle Children's Research Institute

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