

Publications of the Week

**Crystal Structure of a Membrane-Bound O-Acyltransferase**

First Author: Dan Ma | Senior Author: Wenqing Xu (pictured)  
Nature | UW



Membrane-bound O-acyltransferases (MBOATs) are a superfamily of integral transmembrane enzymes that are found in all kingdoms of life. The authors present crystal structures of DltB, an MBOAT responsible for the D-alanylation of cell-wall teichoic acid in gram-positive bacteria, both alone and in complex with the D-alanyl donor protein DltC. [Abstract](#)

**Entropically Driven Aggregation of Bacteria by Host Polymers Promotes Antibiotic Tolerance in *Pseudomonas aeruginosa***

First Author: Patrick Secor | Senior Author: Pradeep Singh (pictured)  
PNAS | UW



Bacteria-causing chronic infections are generally observed living in cell aggregates suspended in polymer-rich host secretions, and bacterial phenotypes induced by aggregated growth may be key factors in chronic infection pathogenesis. The authors show that polymers that are abundant at chronic infection sites cause bacteria to aggregate by the depletion aggregation mechanism, which does not require biofilm formation functions. [Abstract](#)

**Regulation of Lymphocyte Trafficking in Central Nervous System Autoimmunity**

First Author: Mohamed Oukka | Senior Author: Estelle Bettelli (pictured)  
Current Opinion in Immunology | Seattle Children's Research Institute, Benaroya Research Institute at Virginia Mason, and UW



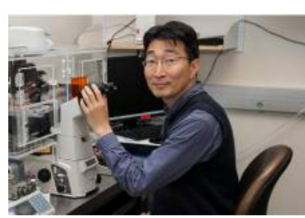
CD4<sup>+</sup> T helper cells play a central role in orchestrating protective immunity and in autoimmunity. Multiple sclerosis is a human autoimmune disease of the central nervous system characterized by the infiltration of inflammatory lymphocytes and myeloid cells into the brain and spinal cord, leading to demyelination, axonal damage, and progressive loss of motor functions. [Abstract](#)

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Awards

**Major NIH-CASIS Grant for Team Led by Dr. Deok-Ho Kim**

Institute for Stem Cell & Regenerative Medicine (ISCRM)



An interdisciplinary team led by ISCRM faculty member Deok-Ho Kim (pictured) has been awarded a new NIH-CASIS Tissue Chips in Space UG3/UH3 grant to support research that aims to improve our understanding of how extended periods in microgravity affect the functional capacity of human myocardial tissue, which could have significant impact on the development of deep space missions in the near future. [Read More](#)

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Local News

**New HIV Vaccine Study Will Test First-of-Its-Kind Tech, with Backing from the Gates Foundation**

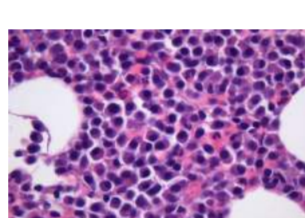
GeekWire



The International AIDS Vaccine Initiative has announced the launch of a first-of-its-kind clinical trial that will test a new HIV vaccine candidate. The candidate, called eOD-GT8 60mer, uses what scientists call a structure-based vaccine approach and the trial marks the first time this approach will be tested in humans. Scientists are hopeful that it could be a key step in developing an HIV vaccine. [Read More](#)

**Standard Myeloma Treatment Reveals Itself as an Immunotherapy**

Fred Hutchinson Cancer Research Center



New research suggests that doctors may have had an incorrect understanding of how a standard treatment for an incurable blood cancer works to prolong lives. The therapy, based around high doses of chemotherapy or radiation, looks like it may actually be an immunotherapy — that is, a treatment that stimulates the patients' own immune systems to help fight their cancers. [Read More](#)

**First Genetic Risk Factor Found for Erectile Dysfunction**

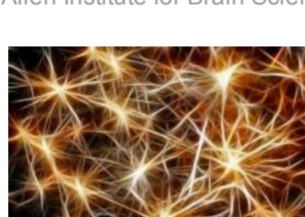
UW Medicine



A team of researchers led by Dr. Hunter Wessells (pictured) has found that variations in a specific place in the genome, near the *SIM1* gene, are significantly associated with an increased risk of erectile dysfunction. By demonstrating a biological role for the genetic location in regulating sexual function, the study strongly suggests that these variations can cause erectile dysfunction. [Read More](#)

**Allen Institute Releases Data from 30,000 Brain Cells in Action**

Allen Institute for Brain Science



The Allen Institute for Brain Science has new data aimed at helping researchers understand the various types of cells in the brain and how cells compute visual information. Joining these new data is a software toolkit for building models of the neuronal networks making up the brain more easily and more reproducibly. Scientists around the world can find these resources at the newly redesigned Allen Brain Atlas portal. [Read More](#)

**New Approach Explored to Treat Childhood Leukemia**

The Huddle



Matt Hart (pictured), a postdoc in pathology in the lab of Marshall Horwitz at the Institute for Stem Cell and Regenerative Medicine, is exploring a potential new approach to treating the common childhood cancer acute lymphocyte leukemia, or ALL. More than 3,000 new cases of ALL are diagnosed every year in the United States, and the incidence is rising. [Read More](#)

**Two Years Cancer-Free, Erin Advocates for T-Cell Immunotherapy**

Seattle Children's Hospital



CAR T-cell immunotherapy is one of the most promising experimental cancer therapies of our time. The therapy reprograms a patient's own immune system to seek out and destroy cancer without harming normal, healthy cells. Researchers at Seattle Children's are also seeing promising results – 93% of patients who had relapsed or refractory ALL in the phase 1 PLAT-02 trial achieved complete initial remission. Erin Cross (pictured) is one of those patients. [Read More](#)

**New Study Aims to Improve Quality of Life and Survival in Older, Sicker Bone Marrow Transplant Patients**

Fred Hutchinson Cancer Research Center



A new five-year, \$3.5 million grant from the National Cancer Institute will kick off a large clinical trial aimed at improving the quality of life and survival of medically vulnerable patients after they receive a transplant of donated blood-forming stem cells. Grantee Dr. Mohamed Soror (pictured) of the Fred Hutchinson Cancer Research Center will lead the new trial. [Read More](#)

**Dr. Leslie R. Walker-Harding, New Chair of Pediatrics**

The Huddle



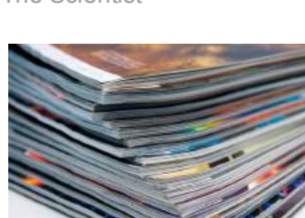
UW Medicine and Seattle Children's has announced that Dr. Leslie R. Walker-Harding (pictured) has been named Chair of the UW School of Medicine Department of Pediatrics, Associate Dean for the UW School of Medicine, and Senior Vice President/Chief Academic Officer for Seattle Children's. Walker-Harding will assume her new position on Feb. 15, 2019. [Read More](#)

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Interesting Articles

**Major Publishers File Second Lawsuit against ResearchGate**

The Scientist



ResearchGate, a popular networking platform where scientists can post their published work, has a complicated relationship with academic publishers. A number of them have accused the site of illicitly disseminating copyrighted work, and two of these—Elsevier and the American Chemical Society—filed a lawsuit in Germany last year to try to force ResearchGate to change its practices. [Read More](#)

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**Upcoming Events in Seattle**

- October 22 - 24 8:00 AM **3<sup>rd</sup> Seattle Symposium on Health Care Data Analytics**  
Hyatt Olive 8
- October 23 7:00 PM **Science in the City – Breast Cancer: Deciding a Course of Action**  
Pacific Science Center
- October 24 8:30 AM **From the Laboratory to Leadership**  
Agora Conference Center
- October 26 7:00 AM **Washington State Life Science Summit**  
Meydenbauer Center
- October 29 6:00 PM **Science on Tap: Hematology and Blood Transfusion Research**  
Ravenna Third Place Bookstore

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**Science Jobs in Seattle**

- Faculty Position, Cancer Metastasis/Tumor Microenvironment**  
Fred Hutchinson Cancer Research Center
- Scientist, Hematopoietic Cell Differentiation**  
Astellas Pharma
- Bioinformatics Engineer**  
TwinStrand Biosciences
- Research Associate, Cell Sciences**  
Juno Therapeutics
- Research Lab Manager, Immunology**  
Fred Hutchinson Cancer Research Center

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**HOW IS DRUG SCREENING BEING REVOLUTIONIZED FOR CYSTIC FIBROSIS? WITH ORGANOIDs.**  
Webinar by Sylvia Boj

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