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Publications of the Week

Defined Neuronal Populations Drive Fatal Phenotype in a Mouse Model of Leigh Syndrome

First Author: Irene Bolea | Senior Author: Albert Quintana *(pictured, back)*
eLife | Seattle Children's Research Institute

Central nervous system affectation is critical in Leigh Syndrome (LS), a common mitochondrial disease presentation, leading to motor and respiratory deficits, seizures and premature death. However, only specific neuronal populations are affected. Using a mouse model of LS lacking the mitochondrial complex I subunit *Ndufs4*, the authors dissected the critical role of genetically-defined neuronal populations in LS progression. **Profile | Abstract**

STING Is Required for Host Defense against Neuropathological West Nile Virus Infection

First Author: Kathryn McGuckin Wuertz | Senior Author: Michael Gale Jr. *(pictured)*
PLOS Pathogens | Fred Hutch and UW

Recent studies have indicated that *ST*imulator of *IN*terferon *G*ene (STING), canonically known for initiating a type I IFN production and innate immune response to cytosolic DNA, is required for host defense against neurotropic RNA viruses. The authors evaluated the role of STING in host defense to control West Nile virus infection and pathology in a murine model of infection. **Abstract**

Prebiotic Amino Acids Bind to and Stabilize Prebiotic Fatty Acid Membranes

First Author: Caitlin Cornell | Senior Author: Sarah Keller *(pictured)*
PNAS | UW

The membranes of the first protocells on the early Earth were likely self-assembled from fatty acids. The authors found that a set of unmodified, prebiotic amino acids binds to prebiotic fatty acid membranes and that a subset stabilizes membranes in the presence of salt and Mg^{2+}. They also found that membrane stabilization persisted after dilution, as would have occurred during the rehydration of dried or partially dried pools. **Abstract**

View All Publications

Awards

A $50 Million Initiative to Fuel the Next Generation of Cancer Research for Generations to Come

The Leukemia & Lymphoma Society

The Leukemia & Lymphoma Society has announced that it has more than doubled its funding of research focused specifically on childhood blood cancers, adding 20 new research grants valued at more than $13.8 million to its research portfolio in 2019. Among the new pediatric research grant recipients are Dr. Soheil Meshinchi *(pictured)* at Fred Hutch, and Drs. Kasey Leger and Todd Cooper at Seattle Children's Hospital. **Read More**

Dr. Keith Jerome of UW Awarded an amfAR Grant to Advance HIV Cure and Post-Treatment Control Studies

The Foundation for AIDS Research

Through the Foundation for AIDS Research (amfAR) Research Consortium on HIV Eradication, a grant program that fosters collaboration among teams of scientists, amfAR has awarded new grants totaling $1.16 million to advance a pair of innovative research studies attacking HIV from very different angles. Dr. Keith Jerome *(pictured)* of UW was awarded $344,000 for a project that aims to advance a gene therapy strategy for curing HIV. **Read More**

Alexander Greninger Awarded the Koichi Yamanishi Young Investigator Award for Basic Science

HHV-6 Foundation

Dr. Alexander Greninger *(pictured)* an Assistant Professor and member of the Department of Laboratory Medicine at UW, was recognized at the 11th International Conference on HHV-6 & 7, for his excellent work in the comparative, genomic, transcriptomic and proteomic reannotation of HHV-6A/B, as well as his analysis of the heterogeneity, large origin tandem repeats and interspecies recombination in HHV-6A/B reference strains. **Read More**

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Local News

New Diagnostic Method Predicts Therapy Response in Lung Cancer Patients

Institute for Systems Biology

By using single-cell analysis to measure metabolic activities in rare disseminated tumor cells taken from non-small cell lung cancer patients, Institute for Systems Biology researchers, including Dr. Wei Wei *(pictured)*, can accurately predict how patients will respond to various cancer therapies, and how treatments will impact a patient’s physiological performance and survival. **Read More**

Non-Small Cell Lung Cancer Responds Well to HIV Drug

UW Medicine

A new study has found that a drug long used to treat HIV, when paired with chemotherapy and radiotherapy, appears to enhance survival for patients with inoperable non-small cell lung cancer. The research was led by Dr. Ramesh Rengan *(pictured)*, a Professor and Interim Chair of Radiation Oncology at the UW School of Medicine. **Read More**

Genomics Pioneer Lee Hood Launches New Institute to Fight Alzheimer’s with Data and Wellness

GeekWire

A new effort backed by Seattle-based genomics pioneer Dr. Lee Hood *(pictured)* wants to fight Alzheimer’s without developing any drugs at all. Dr. Hood is launching the Brain Health and Research Institute in Seattle, which aims to stabilize or improve cognitive function in people with Alzheimer’s by implementing a range of lifestyle changes. **Read More**

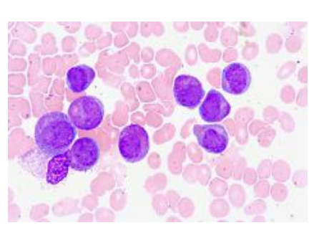
Alexandria Doubles Down on Decades-Long Seattle Biotech Bet with Mercer ‘Mega Block’ Deal

GeekWire

As it closes in on one of the most valuable land deals in Seattle history, Alexandria Real Estate Equities is betting that biotech can thrive in a real estate market dominated by big tech. The real estate firm has reached an agreement with the city of Seattle to buy the Mercer Mega Block, a trio of development sites that lie between Amazon’s campus and the cluster of life sciences institutions around Lake Union. **Read More**

WT1 T-Cell Receptor Transduced T Cells Prevent Acute Myeloid Leukemia Relapse

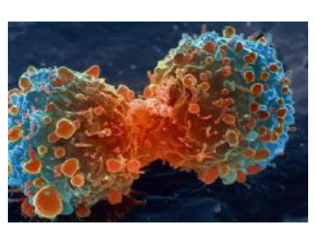
Fred Hutch



The Greenberg and Chapuis labs in the Clinical Research Division at Fred Hutch have collaborated on a study treating patients with T cells transduced to express a T cell receptors specific for WT1, a protein involved in proliferation which is expressed highly on leukemic cells compared to other cells. This Science Spotlight article provides a summary of the findings. **Read More**

New Research Allows Scientists to Observe Abnormal Cell Mutation in Myelodysplastic Syndromes Disease Progression

The Daily



Myelodysplastic syndromes (MDS) is a form of blood cancer that is caused by a range of failures of the bone marrow to produce normal functional blood cells. Although MDS is not a terminal disease, it possibly leads to other blood cancers including leukemia. Through reprogramming patient blood cells, researchers at UW have recently found a new pathway to study the progression and appropriate treatment of this disease. **Read More**

The Cancer Paradox

Institute for Systems Biology

“Paradoxes have been suppressed in cancer research because they challenge paradigms and they’re not good for business,” says Dr. Sui Huang *(pictured)*, a cancer researcher and Professor at the Institute for Systems Biology. “But they play a central role in understanding therapy.” In this video Q&A, Huang discusses what he calls the cancer paradox. **Read More**

Fred Hutch Program Inspires Teens Interested in Science

KING 5 News

"The Pathways Explorers Program at Fred Hutch, funded by the National Cancer Institute, provides students going into 10th or 11th grade in the fall with an experience at a world-class cancer research center," says Jeanne Ting Chowning, Senior Director of Science Education for Fred Hutch. Hundreds of students apply for the two-week immersion program, with an emphasis given to applicants who are underrepresented in health science fields. **Read More**

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Interesting Articles

Department of Justice Moves to Add More Marijuana Growers for Research

PA Homepage

The Justice Department has said that it would move forward to expand the number of marijuana growers for federally authorized cannabis research. The Drug Enforcement Administration began accepting applications to grow marijuana for federally approved research about three years ago, but the agency hasn’t acted on the applications. **Read More**

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Upcoming Events in Seattle

September 10 7:00 PM	**One Doctor, Two Million Patients: Mental Health Care in Sub-Saharan Africa** PACCAR Theater
September 17, 2019 7:00 PM	**News You Can Snooze: New Studies on Sleep** PACCAR Theater
September 19 7:00 PM	**Let’s Get in Formation: Empowering Girls and Women in STEM** Pacific Science Center
September 23 1:00 PM	**Genome Startup Day** Foege Hall
September 25 8:00 AM	**Northwest Gynecological Cancer Symposium** Orin Smith Auditorium

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Science Jobs in Seattle

Assistant/Associate Member Faculty Position, Computational Biology and Biomedical Data Science
Fred Hutchinson Cancer Research Center

Development Scientist
Adaptive Biotechnologies

Scientist, Oncology Discovery
Bluebird Bio

Senior Fellow, Neuroscience
UW Medicine

Postdoctoral Research Fellow, Post-Transcriptional Control in Cancer
Fred Hutchinson Cancer Research Center

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STEMCELL Technologies

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STEMCELL Technologies

Scientist, Particle Chemistry (Vancouver, BC)
STEMCELL Technologies

Product and Scientific Support Specialist, Stem Cell Biology (Vancouver, BC)
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Quality Control Operations Specialist (Vancouver, BC)
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