

**Publications of the Week**

### High Prevalence and Disease Correlation of Autoantibodies against p40 Encoded by Long Interspersed Nuclear Elements (LINE-1) in Systemic Lupus Erythematosus

First Author: Victoria Carter (pictured, third from left) | Senior Author: Tomas Mustelin (right) | Arthritis & Rheumatology | UW



The long interspersed nuclear element 1 (LINE-1) encodes two proteins that are both required for LINE-1 to retrotranspose. In cells expressing LINE-1, these proteins assemble with the LINE-1 RNA and additional RNA-binding proteins, some of which are well-known autoantigens in patients with systemic lupus erythematosus (SLE). The authors asked if SLE patients also make autoantibodies against the LINE-1 p40. [Profile](#) | [Abstract](#)

### Epitope Targeting with Self-Assembled Peptide Vaccines

First Author: David Zeigler (pictured, center) | Senior Author: Christopher Clegg (right) | npj Vaccines | TRIA Bioscience Corp.



Nanoparticle-based delivery systems are being used to simplify and accelerate new vaccine development. Previously, the authors described the solid-phase synthesis of a 61-amino acid conjugate vaccine carrier comprising a  $\alpha$ -helical domain followed by two universal T cell epitopes. Here, they expand the potential of this carrier by appending B cell epitopes to its amino acid sequence, thereby eliminating the need for traditional conjugation reactions. [Abstract](#)

### Rethinking the Role of the Brain in Glucose Homeostasis and Diabetes Pathogenesis

First Author: Jenny Brown | Senior Author: Michael Schwartz (pictured) | The Journal of Clinical Investigation | UW Medicine Diabetes Institute



The brain plays a major role in homeostatic processes ranging from control of body temperature and fat mass to blood pressure and volume. Tight regulation of the circulating glucose level is similarly crucial for survival, and since the brain relies almost exclusively on glucose as a fuel source, it seems counterintuitive to think that the brain does not also play an important role in glucose homeostasis. [Abstract](#)

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**Awards**

### Eight Promising Projects Win Evergreen Fund Grants to Promote Commercialization of Research

Fred Hutch

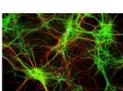


Fred Hutch has awarded eight grants totaling \$1 million to a dozen of its scientists, including Dr. Cyrus Ghajar (pictured), through the Evergreen Fund which supports early research projects thought to be good prospects for commercial partnerships. Since 2017, the Evergreen Fund has awarded \$3 million to projects proposed by researchers seeking a timely boost to help bring their ideas from the lab bench closer to the bedside. [Read More](#)

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**Local News**

### Scientists Manipulate Brain Cells Using a Smartphone

UW Medicine



An international team, including members from the UW School of Medicine, has invented a device that can control neural circuits by using a tiny brain implant managed by a smartphone. The researchers said the soft neural implant is the first wireless neural device capable of delivering multiple drugs and color lights. The device could speed up efforts to uncover brain diseases, such as Parkinson's, Alzheimer's, addiction, depression, and pain. [Read More](#)

### Cell Combo Might Unlock a Heart Repair Strategy

UW Medicine



A combination of two different kinds of heart cells, derived from stem cells, might be key to designing an effective graft for repairing damaged hearts. New research co-led by Dr. Charles Murry at the UW School of Medicine has found that stem-cell derived epicardium augmented the structure and function of engineered human heart tissue in laboratory tests. [Read More](#)

### New Program to Fast-Track Lung Cancer Research from Lab to Clinic

Fred Hutch



A new five-year, \$13 million grant will help scientists and clinicians at Fred Hutch try to improve outcomes for lung cancer patients. Created by the new grant, the Hutch's new Specialized Program of Research Excellence in Lung Cancer will bring together experts from across Fred Hutch and its partner organizations to fast-track the latest breakthroughs in its labs to patients and those at risk of developing the disease. [Read More](#)

### This Is What It's Like to Donate Your Brain to Science

Allen Institute for Brain Science



Casey Schorr is something rare: A brain donor who's lived to tell the tale. His neurons have joined those of less than 200 other patients who have agreed to donate healthy parts of their brain removed during surgery to the Allen Institute research group studying human brain cells, how they work, what makes our brains different from those of other animals — and what might go wrong with brain cells in diseases like Casey's. [Read More](#)

### Alexandria to Pay \$143.5M to Develop New Seattle Life Sciences Campus

MedCity News



A plot of land owned by the city of Seattle will soon turn into a new campus for the Pacific Northwest metropolis' rapidly growing life sciences sector. Life sciences developer Alexandria Real Estate Equities has an agreement with the city government to buy a 2.86-acre parcel known as the Mercer Mega Block, in the South Lake Union neighborhood that is a hub for numerous large and small companies, including Amazon's headquarters. [Read More](#)

### Researchers Create New Tool to Explore Color Vision

UW Medicine



The retina, much like space, is an area of great mystery. Vision problems start at the cellular level. Vision researchers are exploring where those diseases take place and how to repair them. To solve these problems, they need to correctly identify them. Now they have a new tool — a system created at the UW School of Medicine to compensate for chromatic aberrations in how we see color. [Read More](#)

### Cancer-Fighting Startup Neoleukin Merging with Aquinox in \$40M Deal, 8 Months after UW Spinout



Vancouver, B.C.-based Aquinox Pharmaceuticals is set to buy Neoleukin Therapeutics, a Seattle startup that launched out of UW just eight months ago. Neoleukin launched in January with the idea to commercialize a synthetic version of a powerful protein called Interleukin-2, which can fight cancer but is extremely toxic to patients. [Read More](#)

### Virtual Reality Is Helping Neuroscientists Better Understand the Brain

Allen Institute for Brain Science



Researchers at the Allen Institute for Brain Science and Southeast University in Nanjing, China have devised a way to use virtual reality to help neuroscientists like Shen — by literally immersing them in the middle of an image of the brain (or part of it). The new open-source technology, which they dubbed TeraVR, is being used to reconstruct mouse neurons from whole-brain images. [Read More](#)

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**Interesting Articles**

### How Much Info Do You Get, How Much to You Give Away with DNA Health and Ancestry Tests?

Komo News



While most people only send a sample to one DNA testing company, a team at Checkbook.org submitted their samples to eight different companies with surprising results. Dr. Sarah Nelson, a UW research scientist, said that the limitations of DNA tests for ancestry and health are just one factor that makes DNA testing a wild, wild west. [Read More](#)

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**Upcoming Events in Seattle**

August 15 9:00 AM	<b>Innovations in Imaging for Life Sciences Symposium</b> UW NanoEngineering & Sciences Building
August 15 4:00 PM	<b>Life Science Washington 2019 Summer Social</b> Life Science Washington
August 20 7:00 PM	<b>Recompose: Innovation in Death Care</b> Pacific Science Center
August 21 7:00 PM	<b>Medical Angels</b> Seattle Public Library
August 22 - 23 8:00 AM	<b>Conference on Cell &amp; Gene Therapy for HIV Cure</b> Marriott Residence Inn Seattle, Downtown/Convention Center

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Allen Institute for Cell Sciences

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## HOW TO KEEP YOUR LAB STOCKROOM AND COLD REAGENTS ORGANIZED

[READ ARTICLE](#)

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