

Publications of the Week

Development of Decreased-Gluten Wheat Enabled by Determination of the Genetic Basis of *lys3a* Barley

First Author: Charles Moehs (pictured) | Senior Author: Cate McGuire
Plant Physiology | Arcadia Biosciences



Celiac disease is induced by digestion-resistant, proline- and glutamine-rich seed storage proteins, collectively referred to as "gluten", found in wheat. The authors used bulked segregant RNA-seq and map-based cloning to identify the genetic lesion underlying a recessive, low prolamin mutation (*lys3a*) in diploid barley. [Abstract](#)

Merkel Cell Polyomavirus Tumor Antigens Expressed in Merkel Cell Carcinoma Function Independently of the Ubiquitin Ligases Fbw7 and β-TrCP

First Author: Kristine Dye | Senior Author: Denise Galloway (pictured)
PLOS Pathogens | Fred Hutch and UW



Merkel cell polyomavirus (MCPyV) accounts for 80% of all Merkel cell carcinoma cases through expression of two viral oncoproteins: the truncated large T antigen (LT-T) and small T antigen (ST). MCPyV ST is thought to be the main driver of cellular transformation and has also been shown to increase LT protein levels through the activity of its large-T stabilization domain. The authors investigated the proposed model of ST stabilization of LT-T and transformation. [Abstract](#)

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Awards

Organoid Research Garners Young Investigator Award

UW Medicine



Benjamin "Beno" Freedman (pictured) has been named STEM CELLS' Young Investigator of 2018. Freedman is an Assistant Professor of Medicine in the Division of Nephrology at the UW School of Medicine. His award-winning work combines induced pluripotent stem cells and CRISPR gene editing to establish human kidney organoids for disease modeling and regenerative medicine studies. [Read More](#)

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Local News

Using Virtual Reality, Researchers Get a Closer Look at Autoimmune Disease

R&D Magazine



Viewing images of diseased cells on a computer screen means limited detail and restricted angles, prohibiting researchers from fully analyzing specimens. Researchers from Benaroya Research Institute at Virginia Mason (BRI) are taking a different approach. For more than a year, BRI researchers in Adam Lacy-Hulbert's (pictured) lab have used virtual reality tools to conduct detailed experiments about autoimmune and immune system diseases. [Read More](#)

Aided by Stem Cells, ISCRM Researchers Identify a Suspect in the Case of Infertility

Institute for Stem Cell & Regenerative Medicine



For women who are unable to get pregnant, what is happening at the cellular level that is preventing life from taking hold? Research led by Dr. Hannele Ruohola-Baker (pictured, second from left) from the Institute for Stem Cell and Regenerative Medicine (ISCRM) has identified a gene that may be complicit in many cases of human infertility. [Read More](#)

ISCRM Labs Collaborate to Grow Heart Tissue *In Vitro*

Institute for Stem Cell & Regenerative Medicine



Drs. Ying Zheng (pictured) and Charles Murry are determined to develop new ways to help the heart rebuild after a major trauma, like a heart attack. They have shown that by growing stem cell-derived heart tissue *in vitro* – and by building the tissue's blood vessels properly – they could improve integration with the heart's blood vessels and improve tissue blood flow. [Read More](#)

Q&A: A New Focus on Small Cell Lung Cancer

Fred Hutch



Fred Hutch small cell lung cancer expert Dr. David MacPherson (pictured) is working to understand the biology of the aggressive and deadly disease in order to develop more effective, targeted therapies. In this Q&A, he chatted about his most recent work as well as the state of small cell lung cancer research and what gives him hope for the future. [Read More](#)

Immunotherapy for Rare Skin Cancer Inspires Optimism

UW Medicine



More than two-thirds of people with an advanced form of a rare skin cancer are on track to survive at least two years, after starting an immunotherapy drug on a landmark clinical trial. The investigators are "thrilled" that so many of the trial participants are doing well, compared with what historical data would predict, said Martin "Mac" Cheever (pictured) of Fred Hutch, one of the leaders of this first-of-its-kind study. [Read More](#)

Do Deep Neural Networks 'See' Like You and I Do?

UW Medicine



UW medicine researchers have found that computer components designed to recognize images behave surprisingly like neurons in the brain. "We found that deep neural networks used for recognizing images actually have single units within them that respond in remarkably similar ways as do neurons within the visual system of the brain," said lead author Dean A Pospisil, a neuroscience doctoral candidate in the laboratory of Wyeth Bair. [Read More](#)

IDRI Therapeutic Vaccine for TB to Enter Clinical Trial

Infectious Disease Research Institute (IDRI)



A clinical trial testing two new therapeutic vaccines, one developed by IDRI, was given the green light to proceed at the inaugural meeting of the *In Silico* Trial for Tuberculosis (TB) consortium held in New Delhi, India. The consortium is focused on demonstrating how advanced computer modeling and simulation can be used to reduce the costs of clinical trials to test the efficacy of new therapies for TB. [Read More](#)

Sustainable Squalene Replacement Needed for Pharma

Infectious Disease Research Institute (IDRI)



IDRI has received a \$4.4 million, five-year grant from the National Institute of Allergy and Infectious Diseases to discover sustainable alternatives to shark squalene to use as vaccine adjuvants. Funding is provided by a special bioengineering research grant aimed at bringing engineering expertise to focus on a biomedical problem and ultimately develop a new solution. [Read More](#)

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Interesting Articles

Thousands of Scientists Run Up against Elsevier's Paywall

Nature News



Researchers at German institutions that have let their Elsevier subscriptions lapse while negotiating a new deal are hitting the paywall for the publisher's most recent articles around 10,000 times a day, according to Elsevier — which publishes more than 400,000 papers each year. National library consortia in several countries have previously struck such deals with other publishers, but negotiations with Elsevier seem to be more fraught. [Read More](#)

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Upcoming Events in Seattle

- February 20 7:00 PM **10th Annual Galileo Dialogues: "Time and Time Again, Part II"**
Seattle University Student Center, Room 160
- February 21 5:00 PM **Life Science Industry Networking Event**
Agora Conference Center
- February 25 7 PM **Science On Tap: Emerging Science at the Intersection of Ecology, Genetics and Policy**
Ravenna Third Place – Cafe Arta
- February 25 - 26 **Training in Multi-Disciplinary Team Science**
Seattle Children's Sand Point Learning Center
- March 3 3:30 PM **Exploring Frontiers Seminar: Christopher Mason**
Allen Institute

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Science Jobs in Seattle

- Translational Medicine Specialist, Antigen Map**
Adaptive Biotechnologies
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Fred Hutch
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- Post-Doctoral Research Fellow, Structural Biology**
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