

## Publications of the Week

**Effective CRISPRa-Mediated Control of Gene Expression in Bacteria Must Overcome Strict Target Site Requirements**

 First Author: Jason Fontana | Senior Author: Jesse Zalatan (pictured)  
 Nature Communications | UW


In bacterial systems, CRISPR-Cas transcriptional activation (CRISPRa) has the potential to dramatically expand our ability to regulate gene expression, but we lack predictive rules for designing effective gRNA target sites. The authors have identified multiple features of bacterial promoters that impose stringent requirements on CRISPRa target sites. [Profile](#) | [Abstract](#)

**Intermediate Progenitors Support Migration of Neural Stem Cells into Dentate Gyrus Outer Neurogenic Niches**

 First Author: Branden Nelson | Senior Author: Robert Hevner (pictured)  
 eLife | Seattle Children's Research Institute and UW


The hippocampal dentate gyrus (DG) is a unique brain region maintaining neural stem cells and neurogenesis into adulthood. The authors used multiphoton imaging to visualize genetically defined progenitor subpopulations in live slices across key stages of mouse DG development, testing decades old static models of DG formation with molecular identification, genetic-lineage tracing, and mutant analyses. [Abstract](#)

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## Awards

**Marie Davis and Yuliang Wang Receive Tietze Research Awards**

Institute for Stem Cell &amp; Regenerative Medicine (ISCRM)



Two ISCRM faculty members, Dr. Marie Davis, Assistant Professor of Neurology, and Dr. Yuliang Wang (pictured), Research Assistant Professor of Computer Science and Engineering, have received prestigious awards from the John H. Tietze Foundation Trust that will help fuel promising research underway in their labs for Parkinson's disease and intercellular communication. [Read More](#)

**Dr. Courtney Schroeder Awarded Five-Year K99 Pathway to Independence Award**

Fred Hutch



Dr. Courtney Schroeder (pictured), a postdoctoral fellow in the lab of Dr. Harmit Malik at Fred Hutch, studies the causes and consequences of changes in protein sequence and function in the context of sperm development. She has received a prestigious, five-year K99 Pathway to Independence Award from the National Institute of General Medical Sciences to support her research. [Read More](#)

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## Local News

**iBio Expands COVID-19 Vaccine Collaboration to Include the Infectious Disease Research Institute**

iBio, Inc.



iBio, Inc. has announced the signing of two Master Services Agreements and a Memorandum of Understanding with the Infectious Disease Research Institute (IDRI) in support of iBio's SARS-CoV-2 Virus-Like Particle vaccine development. IDRI will support pre-clinical development and provide clinical trial oversight, while iBio will provide process development and manufacturing services to IDRI, as needed. [Read More](#)

**Research versus COVID-19**

Kaiser Permanente



Dr. Rita Mangione-Smith (pictured) is the Executive Director of the Kaiser Permanente Washington Health Research Institute, and Kaiser Permanente Washington's Vice President for Research and Health Care Innovation. From clinical trials to technical support, she describes how Kaiser Permanente Washington researchers are fighting the novel coronavirus. [Read More](#)

**Pushing Science Forward While Working from Home**

Fred Hutch



On March 16, Fred Hutch announced a new policy to wind down on-site research to keep employees and the larger community safe during the COVID-19 pandemic. With the epidemic peak forecasted to hit this month in the U.S. and weeks more of physical distancing measures ahead (if not longer), research teams are having to make radical adjustments in the way they work — especially those that do laboratory-based research. [Read More](#)

**How a Seattle Genetics Cancer Drug Could Help Lupus Patients with Kidney Damage**

Fierce Biotech



A group of scientists at Yale University have identified a transcription factor that they say mediates the functioning of T cells in an oxygen-deprived environment. They have found that an experimental cancer drug being developed by Seattle Genetics helps reverse kidney damage in mouse models of lupus nephritis. The drug has shown promise in some patients with advanced solid tumors in a phase I clinical trial. [Read More](#)

**Technique Tracks Gene Expression Changes as Cells Change**

UW Medicine



A new technique has made it possible to track changes in gene activity across a cell's entire genome over time in more detail than has been possible before. Lead author Junyue Cao (pictured) hopes this method will improve understanding of normal cell physiology as well as of cell dynamics during the development of diseases or in response to drug treatments. [Read More](#)

**Syphilis Eludes Immune Attack by Altering a Single Gene**

UW Medicine



*Treponema pallidum*, the bacterium that causes syphilis, likely uses a single gene to escape the immune system. Researchers in Dr. Alex Greninger's (pictured) lab at UW Medicine arrived at this conclusion by comparing the genomes of syphilis bacteria collected from a man who had been infected four times. Their findings revealed changes in one gene within the bacterial genome. [Read More](#)

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- April 21 9:00 AM**  
**Women in Bio National Webinar: Fundraising Boot Camp for Life Science Startups: Successful Partnering**  
 Online
- April 21 12:00 PM**  
**Webinar: From ACE2 to COVID19**  
 Online
- April 22 10:00 AM**  
**STAT Digital Event Series: Combating Covid-19**  
 Online
- April 22 4:00 PM**  
**Science Matters: Curiosity Drives Discovery**  
 Online
- April 23 3:00 PM**  
**Responding to COVID-19: A Ground-Zero Perspective from Washington's Life Science Community**  
 Online

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 Systimmune
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 Seattle Children's Research Institute
- Senior Research Scientist, Genetics**  
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