

Publications of the Week
High-Plex Imaging of RNA and Proteins at Subcellular Resolution in Fixed Tissue by Spatial Molecular Imaging

First Author: Shanshan He | Senior Author: Joseph Beisheim (pictured)
 Nature Biotechnology | Nanospring Technologies



Resolving the spatial distribution of RNA and protein in tissues at subcellular resolution is a challenge in the field of spatial biology. The authors describe spatial molecular imaging, a system that measures RNAs and proteins in intact biological samples at subcellular resolution by performing multiple cycles of nucleic acid hybridization of fluorescent molecular barcodes. [Abstract](#)

Recurrent but Short-Lived Duplications of Centromeric Proteins in Holocentric *Caenorhabditis* Species

First Author: Lewis Cars | Senior Author: Harmit Malik (pictured)
 Molecular Biology and Evolution | UW and Fred Hutch



The authors suggest that centromeric protein duplications occur frequently in *Caenorhabditis* nematodes, are selectively retained for short evolutionary periods, then degenerate or are lost entirely. They hypothesize that unique challenges associated with holocentricity in *Caenorhabditis* may lead to this rapid 'revolving door' of kinetochore protein paralogs. [Abstract](#)

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Awards
Moritz Stolla Receives National Blood Foundation Award for Innovative Research

UW Medicine



Dr. Moritz Stolla (pictured), Assistant Professor of Hematology, has received the National Blood Foundation Award for Innovative Research from the Association for the Advancement of Blood & Biotherapies. This award was established in 2016 to recognize a scientist whose original research resulted in an important contribution to the body of scientific knowledge in transfusion medicine or biotherapies. [Read More](#)

Pediatric Geneticist Earns NIH Early Independence Award

UW Medicine



UW Medicine physician and scientist Dr. Danny Miller (pictured) has received a competitive National Institutes of Health (NIH) Director's Early Independence Award, which provides up to \$1.25 million over five years. Dr. Miller is an Assistant Professor of Pediatrics in the Division of Genetic Medicine and of Laboratory Medicine and Pathology at the UW School of Medicine. [Read More](#)

Dr. Ruth Etzioni Receives \$7.4M NCI Grant to Assess New Cancer Diagnostics

Fred Hutch



Dr. Ruth Etzioni (pictured) has received a seven-year Outstanding Investigator Award from the National Cancer Institute (NCI). The award, which comes with around \$7.4 million in funding, will allow Dr. Etzioni and her team to build frameworks and tools to evaluate novel cancer diagnostics such as new nuclear imaging modalities and multi-cancer early detection tests, commonly referred to as liquid biopsies. [Read More](#)

Merkel Cell Carcinoma Researcher Dr. Nick Salisbury Named Brave Fellow

Fred Hutch



Dr. Nick Salisbury (pictured) was just named the third recipient to receive the Brave Fellowship at Fred Hutch. Funded by Brooks Running on behalf of the Brave Like Gabe Foundation, the goal of the fellowship is to develop scientific leaders who will advocate for a diverse and inclusive biomedical research workforce focused on rare cancer research. [Read More](#)

UW Medicine Honors Jay Shendure as 2022 'Inventor of the Year'

Brotman Baty Institute (BBI)



BBI Scientific Director Dr. Jay Shendure (pictured) has been honored by UW Medicine as the 2022 "Inventor of the Year." In announcing the award, UW Medicine noted that Dr. Shendure's research group "pioneered exome sequencing and its earliest applications to gene discovery for Mendelian disorders and autism, cell-free DNA diagnostics for cancer and reproductive medicine, massively parallel reporter assays, saturation genome editing, whole organism lineage tracing, and massively parallel molecular profiling of single cells." [Read More](#)

NIH Grant Will Support Collaborative Hemophilia Study

Institute for Stem Cell & Regenerative Medicine



A National Institutes of Health (NIH) funded multi-institutional research effort based at UW and led by Dr. Jill Johnson (pictured) will trace the roots of risk for immune complications in newborns with Hemophilia A starting from the time in the womb. In total, the plan is to follow 50 pairs of mothers who have the gene change that leads to factor VIII deficiency and their babies who have severe Hemophilia A. [Read More](#)

MSBL Receives NIH Grant to Expand DEIA Mentorship

Institute for Stem Cell and Regenerative Medicine



The Musculoskeletal Systems Biology Lab (MSBL) has received a \$431,765 award from the National Institutes of Health (NIH) in recognition of excellence in diversity, equity, inclusion, and accessibility (DEIA) mentorship. Co-mentors on the award include Drs. Tamara-Kay Francis (pictured, bottom, middle), Arianna Gómez (top, middle), Jyoti Rai (top, right), Howard Chansky (bottom, right), and Joyce Tang (bottom, left). [Read More](#)

Expanding the Search for New Kidney Diseases and Therapeutic Targets

UW Medicine



Dr. Jonathan Himmelfarb (pictured) and Dr. Matthias Kretzler are Co-Principal Investigators for two new awards totaling \$30.8 million from the National Institutes of Health's National Institute of Diabetes and Digestive and Kidney Diseases for the Kidney Precision Medicine Project (KPMP). The awards will fund the KPMP Central Hub and the Kidney Mapping Atlas Project providing the administrative leadership, data coordination, data integration, and atlas development in KPMP. [Read More](#)

Unlocking More Information from Liquid Biopsies

Fred Hutch



Fred Hutch computational biologist Dr. Gavin Ha (pictured) received a 2022 National Institutes of Health Director's New Innovator Award to fund his work aimed at unlocking new and useful information from cell-free tumor DNA in cancer patients' blood. Dr. Ha is working to enhance the information that scientists and cancer doctors can glean from liquid biopsies to improve cancer diagnosis, treatment selection, and disease monitoring. [Read More](#)

[View All Awards](#)

Local News

ISB and Seattle Science Foundation Partner to Create Video Series

Institute for Systems Biology



What are multi-omics? Why does our microbiome matter? What's the difference between genetics and genomics? What is a digital twin? The Institute for Systems Biology (ISB) and Seattle Science Foundation have partnered to create videos answering questions like these and more, showcasing ISB scientists and their work. [Read More](#)

TwinStrand CEO and Co-Founder Steps Down from Seattle Biotech Startup

GeekWire



TwinStrand Biosciences' Co-Founder Dr. Jesse Salk (pictured) has stepped down from the CEO role, according to a statement issued by the Seattle biotech company. Dr. Salk will remain as Chief Scientific Officer and a member of the board. Healthcare industry veteran Chad Brown, a former exec at Nanoscribe and Qiagen, has stepped in as interim CEO. Brown is also a board member at TwinStrand. [Read More](#)

Islet-Homing Engineered T Regs Protect against Type 1 Diabetes

Pierce Biotech



With the advent of T-cell therapies, scientists have been looking to the body's own defense against renegade T effector cells to see if they can prevent or even reverse type 1 diabetes. Researchers from Benaroya Research Institute and Seattle Children's Research Institute have engineered regulatory T cells — or Tregs, cells that police the immune system if it begins attacking host tissues — that home to the pancreas, where they successfully block diabetes development in mice. [Read More](#)

Vaginal Immune System May Hint at Prime Vaccine Timing

UW Medicine



Levels of key immune-signaling molecules in the vagina "undergo clear and consistent" fluctuations during the menstrual cycle, a UW Medicine-led team reports in a study published in the *Journal BMC Medicine*. The findings might help researchers better understand the immune system's role in fertility, and guide scientists' efforts to develop vaccines and treatments for infectious disease. [Read More](#)

Study: 'Bionic Pancreas' Improves Type 1 Diabetes Control

UW Medicine



A pocket-size wearable device known as a bionic pancreas, which uses next-generation technology to automatically deliver insulin, was more effective at maintaining blood glucose levels within normal range than standard-of-care management among people with type 1 diabetes, a new multicenter clinical trial led by Dr. Il Hirsch (pictured) has found. [Read More](#)

Understanding Adenoma Progression

UW Medicine



Colorectal cancer arises from early lesions that are pre-cancerous: these early lesions are colon adenomas and serrated sessile lesions. In light of the well characterized clinical natural history of adenomas, researchers, including Drs. Naelendu Day (pictured) and William Grady, plan to study them as early lesions and to determine the mechanisms involved in the formation and progression of early precancerous lesions. [Read More](#)

Dr. Danny Miller Leads BBI Project Sequencing a Child Within Three Hours of Birth

Brotman Baty Institute (BBI)



BBI's Dr. Danny Miller (pictured), in collaboration with other BBI faculty, has used whole-genome sequencing to assess genetic risk of a newborn by three hours of life, an unprecedented procedure on such a young infant and an important milestone in advancing precision medicine. Prior to the sequencing in July, the quickest a whole human genome had been sequenced and analyzed was eight hours. [Read More](#)

A New Study to Treat Methamphetamine Use Disorder

UW Medicine



Dr. Judith Tsui (pictured) is leading the Monthly Injectable Buprenorphine for Methamphetamine Use Disorder study, a multi-site study sponsored by the National Institutes of Health and National Institute on Drug Abuse. This study will investigate the use of injectable buprenorphine compared to injectable placebo for the treatment of methamphetamine use disorder among individuals with mild co-use of opioids. [Read More](#)

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Upcoming Events in Seattle

- October 17 - 20 **CytoData 2022**
12:00 pm Allen Institute
- October 19 **Seattle AWIS: Project Management in STEM**
8:00 pm Fred Hutch
- October 20 **Washington State Life Science Summit 2022**
4:30 pm Life Science Washington
- October 20 **Life Sciences Leadership Gala**
5:00 pm 188 E. Blaine St.
- October 22 **PacSci 60th Birthday Party**
8:00 pm Pacific Science Center

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