

**Publications of the Week**
**Integrated Intracellular Organization and Its Variations in Human iPS Cells**

 First Author: Matheus Viana | Senior Author: Susanne Rafelski (pictured)  
 Nature | Allen Institute for Cell Science, Howard Hughes Medical Institute, and UW


Understanding how a subset of expressed genes dictates cellular phenotype is a considerable challenge owing to the large numbers of molecules involved, their combinatorics and the plethora of cellular behaviors that they determine. The authors reduced this complexity by focusing on cellular organization at the level of major cellular structures that represent distinct organelles and functional machines.

[Abstract](#)
**Longitudinal Immune Profiling After Radiation-Attenuated Sporozoite Vaccination Reveals Coordinated Immune Processes Correlated with Malaria Protection**

 First Author: Fergal Duffy | Senior Author: Ken Stuart (pictured)  
 Frontiers in Immunology | Seattle Children's Hospital


To identify correlates of vaccination and protection, the authors performed detailed systems immunology longitudinal profiling of the entire trial time course including whole blood transcriptomics, detailed peripheral blood mononuclear cell phenotyping, and serum antigen array profiling of 11 IMRAS radiation-attenuated sporozoite vaccinees at up to 21 timepoints each.

[Abstract](#)
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**Awards**
**Irl Hirsch to Receive President's Award for Innovation**

UW Medicine



Dr. Irl Hirsch (pictured), Professor of Metabolism, Endocrinology, and Nutrition, is the 2023 recipient of the President's Award for Innovation from Children with Diabetes. Nominated by members of the type 1 diabetes community, the President's Award for Innovation is presented to the health care professional who exemplifies extraordinary leadership in using innovation and advancements in technology for insulin delivery and devices that help people with diabetes to thrive.

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**2022 Mentorship Awards**

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Congratulations to the 2022 William J. Bremner Endowed Mentorship Award recipients, Dr. Thomas Gallagher, Professor of General Internal Medicine and Associate Chair for Patient Care Quality Improvement, Safety and Value, and Dr. W. Conrad Liles (pictured), Professor of Allergy and Infectious Diseases and Associate Chair for Research.

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**Local News**
**The Interior Design of Our Cells**

Allen Institute for Cell Science



Scientists have just debuted a new way to see how cells organize themselves. Working with hundreds of thousands of high-resolution images, the team at the Allen Institute for Cell Science, a division of the Allen Institute, put numbers on the internal organization of human cells — a biological concept that has to date proven exceptionally difficult to quantify.

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**Study Illuminates Sugar's Role in Common Kidney Disease**

UW Medicine



A study of kidney organoids in a novel lab environment might have downstream implications for the treatment of polycystic kidney disease (PKD), an incurable condition that affects more than 12 million people worldwide. One key discovery of the study led by Dr. Benjamin Freedman (pictured): Sugar appears to play a role in the formation of fluid-filled cysts that are PKD's hallmark.

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**A-Alpha Bio's David Younger on Machine Learning in Biotech, Building Cross-Functional Teams**

Founded &amp; Funded



This episode of *Founded & Funded* features A-Alpha Bio Co-Founder and CEO David Younger (pictured). The company's proprietary platform — AlphaSeq — uses genetically engineered cells to experimentally measure millions of protein-protein interactions simultaneously, generating enormous amounts of data to inform the discovery and development of therapeutics.

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**Lupus Nephritis: New Approach Could Pave the Way for Innovative Treatments**

Benaroya Research Institute (BRI)



Dr. Jessica Hamerman (pictured) is teaming up with BRI genetics expert Dr. John Ray. Together, they're examining if certain genes allow patrolling monocytes to move into the kidneys — and if blocking those genes could treat or even prevent lupus nephritis. Drs. Hamerman and Ray will combine their unique skill sets to examine and manipulate genes in lifelike models. This approach has never been done at BRI and is very new in immunology.

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**BioLife Solutions Named One of Seattle Business Magazine's Washington's Best Companies to Work For**

Biolife Solutions



BioLife Solutions, a leading developer and supplier of class-defining bioproduction products and services for the cell and gene therapy and the broader biopharma markets, has announced that the company was recently named as one of *Seattle Business Magazine's* Washington's Best Companies to Work for. This annual program was created by *Seattle Business Magazine* and Best Companies Group to identify, recognize, and honor the best employers in Washington.

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**Miller Lab Offering Targeted, Whole Genome, and Single-Cell Long-Read Sequencing Services**

Brotman Baty Institute (BBI)



BBI's Dr. Danny Miller and the UW's Nanopore Sequencing Core are providing targeted and whole genome long-read sequencing of both DNA and RNA to assist researchers with projects that could benefit from long-read sequencing technology. As new DNA and RNA sequencing technologies are developed that provide a more comprehensive view of genetic variation, it is imperative that researchers and clinicians have access to leading-edge services.

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**Enrollees Sought for Study of Diets' Effect on the Brain**

UW Medicine



Want to eat for science? Recruiting starts this month for the first test in humans of whether higher-caloric diets spur MRI-detectable inflammation in the hypothalamus, the brain structure that regulates body weight. Enrollees will be randomly assigned to one of three diets: one whose meals are 130% of estimated daily caloric needs, one whose meals are 150% of estimated daily caloric needs, and a control group whose meals are 100% of daily caloric needs.

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**Upcoming Events in Seattle**

- |                        |  |
|------------------------|--|
| January 19<br>12:00 pm | <b>Grant Writing Bootcamp Part II – Essentials for SBIR/STTR Proposals</b><br>Online   |
| January 19<br>7:30 pm  | <b>Ginny Ruffner with Dr. Jim Heath: The Intersection of Art and Science</b><br>The Forum  |
| January 24<br>4:00 pm  | <b>Research Roundtable with Dr. Anna Kuchina</b><br>Online   |
| January 25<br>12:00 pm | <b>What Every Medtech Startup Leader Needs to Know About Attempting a Commercial Launch: Report from the Frontline</b><br>Online |
| January 25<br>12:00 pm | <b>PNRI's Science Matters Seminar</b><br>Online  |

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**Science Jobs in Seattle**

- Research Associate I, Image-Based Assay Developer**  
Allen Institute
- Postdoctoral Research Fellow, Bricker Studies**  
Fred Hutch
- Scientist I/II, Targeted Protein Degradation**  
A-Alpha Bio
- Senior Scientist, Upstream Process Development**  
Zymeworks
- Assistant Professor**  
Institute for Systems Biology

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