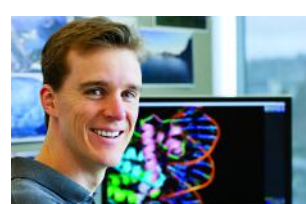


**Publications of the Week**
**Baseline Gut Metagenomic Functional Gene Signature Associated with Variable Weight Loss Responses following a Healthy Lifestyle Intervention in Humans**

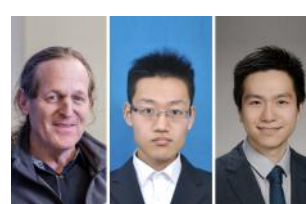
First Author: Christian Diener (pictured, right) | Senior Author: Sean Gibbons (middle) | mSystems | Institute for Systems Biology, eScience Institute, and UW


 The authors report a weight loss response analysis on a cohort of 105 individuals selected from a larger population enrolled in a commercial wellness program. Each individual in the cohort had baseline blood metabolomics, blood proteomics, clinical labs, dietary questionnaires, stool 16S rRNA gene sequencing data, and follow-up data on weight change. [Profile](#) | [Abstract](#) | [Press Release](#)
**Integrating T Cell Receptor Sequences and Transcriptional Profiles by Clonotype Neighbor Graph Analysis (CoNGA)**

First Author: Stefan Schattgen | Senior Authors: Phillip Bradley (pictured) and Paul Thomas | Nature Biotechnology | Fred Hutch, the Institute for Protein Design, and UW


 The authors present CoNGA, a graph theoretic approach that identifies correlations between gene expression (GEX) profile and T cell receptor (TCR) sequence. Using CoNGA, they uncovered associations between TCR sequence and GEX profiles that include a previously undescribed 'natural lymphocyte' population of human circulating CD8<sup>+</sup> T cells and a set of TCR sequence determinants of differentiation in thymocytes. [Abstract](#) | [Press Release](#)
**Integrated Analysis of Plasma and Single Immune Cells Uncovers Metabolic Changes in Individuals with COVID-19**

First Authors: Jihoon Lee (pictured, right) and Yapeng Su (middle) | Senior Authors: Phillip Greenberg and James Heath (left) | Nature Biotechnology | Fred Hutch, UW, Swedish Center for Research and Innovation, and the Institute for Systems Biology


 The authors report the metabolic changes associated with the peripheral immune response of 198 individuals with COVID-19 through an integrated analysis of plasma metabolite and protein levels as well as single-cell multiomics analyses from serial blood draws collected during the first week after clinical diagnosis. They reveal a robust interplay between plasma metabolites and cell-type-specific metabolic reprogramming networks that is associated with disease severity and could predict survival. [Abstract](#) | [Press Release](#)
[View All Publications](#)
**Awards**
**UW Team's Artificial Kidney Prototype Earns Major Prize**

UW Medicine


 A backpack-size kidney-dialysis device, conceived and being developed at the UW Center for Dialysis Innovation (CDI), is one of six winners of a \$650,000 prize in an international competition to create components and systems for artificial kidneys. Dr. Jonathan Himmelfarb (pictured), a Professor of Nephrology at the UW School of Medicine, accepted the award for the CDI, which he co-directs. [Read More](#)
**Bayer Announces Recipients of the Second Annual Pulmonary Hypertension Accelerated Awards**

BioSpace


 Bayer announced the 2020 recipients of the annual Pulmonary Hypertension Accelerated Bayer Awards, a US-based research grant program created to support clinical research in pulmonary hypertension, with a focus on pulmonary arterial hypertension (PAH) and chronic thromboembolic pulmonary hypertension. Among the recipients is Dr. Samuel Rayner (pictured) from UW to study proximal pulmonary vascular compliance and inflammation in PAH. [Read More](#)
**Meet the 2021-2022 ISCRM Fellows**

Institute for Stem Cell and Regenerative Medicine (ISCRM)


 The 2021-2022 ISCRM Fellows were selected from a deep pool of undergraduate students, PhD students, and postdocs making critical contributions to medical research. Among the recipients is Dr. Swati Mishra (pictured), a postdoctoral fellow in Dr. Jessica Young's lab studying the influence of Alzheimer's disease predisposing mutations on endo-lysosomal function of microglia and modeling microglia development in 3D cerebral organoids. [Read More](#)
[View All Awards](#)
**Local News**
**These Rare Human Neurons Generate Electrical Signals in Two Different Cellular Parts**

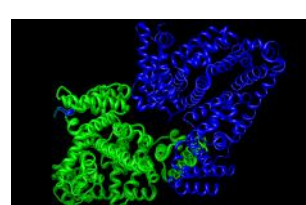
Allen Institute


 With brain tissue samples donated by surgery patients come detailed descriptions of certain rare types of human cells — including new findings about the neurons' unique electrical properties. An Allen Institute team and their collaborators published a study describing the electrical properties, gene expression and 3D shapes of human layer 5 extratelencephalic-projecting neurons, the first such study to capture all these features of these rare human brain cells. [Read More](#)
**Consortium Explores Effects of Genome Variants**

UW Medicine


 The National Institutes of Health has awarded \$1.6 million to UW Medicine scientists and their collaborators to fund two projects within a new research consortium that will address how variations in the DNA sequences in the human genome influence human health and disease. Dr. Jay Shendure (pictured), Professor of Genome Sciences at the UW School of Medicine, a Howard Hughes Medical Institute investigator, and Scientific Director of the Brotman Baty Institute in Seattle, will co-lead one of the projects. [Read More](#)
**Seattle Startup Cyrus Inks Protein-Design Deal with Immune Biotech Selecta Worth Up to \$1.5 Billion**

GeekWire


 Cyrus Biotechnology is entering a protein engineering collaboration with Boston-based Selecta Biosciences that could pull in up to \$1.5 billion for the UW spinout. The partnership will support the development of new agents for immune-related conditions. Its lead program will combine an immune modulating agent developed by Selecta with a protein called IL-2, being engineered by Cyrus. [Read More](#)
**RareCyte® Secures \$24M Financing to Advance the Orion™ Spatial Biology Platform and Expand Global Commercial Channels**

RareCyte


 RareCyte, a life sciences company developing and manufacturing proprietary platforms enabling precision biology solutions, announced the completion of a \$24M financing from new and existing investors. The funding will drive the commercialization and applications for the company's new Orion spatial biology platform and further global expansion for the company's portfolio of instruments and consumables. [Read More](#)
**Icosavax Initiates Phase II/b Trial of VLP Vaccine Candidate against Respiratory Syncytial Virus**

Icosavax


 Icosavax, Inc. announced the initiation of a Phase II/b clinical trial of IVX-121, a virus-like particle (VLP) displaying a Respiratory Syncytial Virus (RSV) stabilized pre-fusion F antigen. Assuming favorable results from the IVX-121 Phase II/b clinical trial and favorable preclinical data from its human Metapneumovirus (hMPV) VLP candidate, Icosavax plans to thereafter initiate a Phase I clinical trial of its IVX-A12 bivalent RSV/hMPV vaccine candidate. [Read More](#)
**Neoleukin Therapeutics Announces Appointment of Dr. Bill Arthur as Vice President and Head of Research**

Neoleukin Therapeutics


 Neoleukin Therapeutics, a biopharmaceutical company utilizing sophisticated computational methods to design *de novo* protein therapeutics, announced the appointment of Dr. Bill Arthur (pictured) as Vice President and Head of Research. Dr. Arthur joins Neoleukin after a decade at Seagen, where he served most recently as Senior Director and Head of Cancer Biology. [Read More](#)
[View All Articles](#) | [Submit an Article](#)
**Upcoming Events in Seattle**

September 21 10:00 AM	<b>Open for (Cell) Science: Allen Cell and Structure Segmenter</b> Online
September 21 3:30 PM	<b>Research Roundtable with Dr. Andrew Magis</b> Online
September 22 11:00 AM	<b>WIB-National and WIB-Seattle: Life Sciences Virtual Career Fair</b> Online
September 23 8:00 AM	<b>2021 Neupixels Workshop</b> Online
September 24 9:00 AM	<b>Center of Excellence Training</b> Online

[View All Events](#) | [Submit an Event](#)
**Science Jobs in Seattle**

- Research Associate, Macrophage Biology**  
OncoResponse
- Scientist/Senior Scientist, Synthetic Biology, Protein Engineering**  
A-Alpha Bio
- Science Writer**  
Fred Hutch
- Clinical Research Coordinator II**  
Seattle Children's
- Associate Specialist, Quality Assurance, Cell Therapy**  
Bristol Myers Squibb

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