

Publications of the Week

**Acquisition of the L452R Mutation in the ACE2-Binding Interface of Spike Protein Triggers Recent Massive Expansion of SARS-CoV-2 Variants**

First Author: Veronika Tchesnokova | Senior Author: Evgeni Sokurenko *(pictured)*  
Journal of Clinical Microbiology | UW and ID Genomics



The authors report that there is a recent global expansion of numerous independent SARS-CoV-2 variants with mutation L452R in the receptor-binding domain of the Spike protein. Global analysis revealed that L452R is nearly omnipresent in a dozen independently emerged lineages, including the most recent variants of concern/interest Delta, Kappa, Epsilon and Iota, with the Lambda variant carrying L452Q. [Profile](#) | [Abstract](#) | [Press Release](#)

**Therapeutic Targeting of Mesothelin with Chimeric Antigen Receptor T Cells in Acute Myeloid Leukemia**

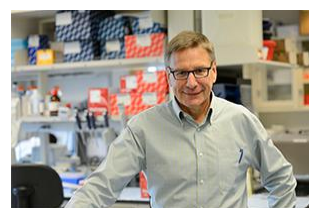
First Author: Quy Le *(pictured, sixth from left, back)* | Senior Author: Soheli Meshinchi *(third from right, front)*  
Clinical Cancer Research | Fred Hutch



The pre-clinical efficacy of mesothelin (MSLN) chimeric antigen receptor T cells was evaluated against acute myeloid leukemia (AML) cell lines and patient samples expressing various levels of MSLN *in vitro* and *in vivo*. The authors demonstrate that MSLN is expressed on the cell surface of AML blasts and leukemic stem cell-enriched CD34<sup>+</sup>CD38<sup>-</sup> subset but not on normal hematopoietic stem and progenitor cells. [Profile](#) | [Abstract](#)

**Comparative Analysis of TCR and CAR Signaling Informs CAR Designs with Superior Antigen Sensitivity and *In Vivo* Function**

First Author: Alexander Salter | Senior Author: Stanley Riddell *(pictured)*  
Science Signaling | Fred Hutch and UW



To design a chimeric antigen receptor (CAR) with improved antigen sensitivity, the authors directly compared T cell receptor (TCR) and CAR signaling in primary human T cells. Global phosphoproteomic analysis revealed that key T cell signaling proteins — such as CD3 $\delta$ , CD3 $\epsilon$ , and CD3 $\gamma$ , which comprise a portion of the T cell co-receptor, as well as the TCR adaptor protein LAT — were either not phosphorylated or were only weakly phosphorylated by CAR stimulation. [Abstract](#)

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Local News

**Could Gene Twins Team Up against Cancer?**

Fred Hutch



In work published in the journal *Cell Reports*, Fred Hutch scientists describe an approach that allows them to knock out genes in tandem, which could help identify which gene pairs may play a role in cancer, and which could make for attractive therapeutic targets. The team will validate their top twin hits to confirm that cells that have lost one twin are more sensitive to inhibitors of the other twin as compared to cells that have both twins to rely on. [Read More](#)

**HDT Bio Corporation and Gennova Complete Phase I Trial of COVID-19 RNA Vaccine in India**

HDT Bio Corporation



HDT Bio Corporation, a developer of immunotherapies for oncology and infectious diseases, announced that its development partner in India, Gennova Biopharmaceuticals, successfully completed a Phase I trial of its COVID-19 RNA vaccine candidate HGCO19 and Indian regulatory authorities have approved the start of pivotal Phase II/III trials. This vaccine uses HDT Bio's proprietary LION™ RNA-delivery technology. [Read More](#)

**Obliterate 2021 Unites Record Number of Participants Worldwide**

Fred Hutch



On August 14, more than 5,000 people worldwide rode their bikes, cooked, kayaked and more for Fred Hutchinson Cancer Research Center's annual Obliterate. From Seattle to Singapore, the community fundraiser united people to honor loved ones, have fun and raise money for lifesaving research. This year and in 2020, the COVID-19 pandemic led Fred Hutch to shift Obliterate from its traditional in-person bike ride, walk and run to a virtual platform, allowing people to choose their own activity and join in from anywhere. [Read More](#)

**Faculty Spotlight: Dr. Lisa Vande Vusse**

UW Medicine



Originally from upstate New York, Dr. Lisa Vande Vusse is a graduate of Dartmouth Medical School in Hanover, New Hampshire. She currently sees patients as a pulmonary and critical care physician and is an attending physician in the Oncology/Bone Marrow Transplant Intensive Care Unit at UW Medical Center-Montlake. Dr. Vande Vusse created and directs the Physician-Scientist Learning Pathway — an elective three-year curriculum for residents committed to research-intensive careers. [Read More](#)

**Investment in Business Development Pays Dividends for Research, Patients**

Fred Hutch



Scientists are trained in making discoveries, not in writing patents, scoping out business opportunities or making connections with venture capitalists. Fred Hutch business development staffers guide researchers at every step, as a steady pipeline of successful biotech ventures, whether new spinouts or licensing deals to established companies, could provide a reliable research-supporting revenue stream alongside grants from the National Institutes of Health and philanthropic donations. [Read More](#)

**Lumen Bioscience Launches Phase I Trial of Oral Biologic Drug for Preventing *C. difficile* Infection Recurrence**

Lumen Biosciences



Lumen Bioscience announced the start of a Phase I trial of LMN-Cdiff01, an orally delivered investigational biologic for treatment and prevention of recurrent *C. difficile* infection (CDI). The open-label trial is evaluating the delivery of LMN-Cdiff01 via enteric capsules in the gut in healthy volunteers with mature ileostomies. The company is currently planning a Phase II trial to study the safety, tolerability, and efficacy of LMN-Cdiff01 in preventing CDI recurrence. [Read More](#)

**Bristol Myers Squibb Nabs Priority Review Tag for \$3.15B Arthritis Drug Orencia to Prevent Transplant Rejection**

Pierce Pharma



Bristol Myers Squibb got some good news on its quest to transform aging arthritis med Orencia into a preventive therapy for transplant rejection. The FDA has blessed abatacept — approved as Orencia in rheumatoid arthritis since 2005 — with a priority review tag for approval to prevent moderate-to-severe acute graft-versus-host disease. If it passes muster with the FDA, the drug would be cleared for patients ages six and up receiving hematopoietic stem cell transplants from unrelated donors. [Read More](#)

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 **Upcoming Events in Seattle**

- September 7  
12:00 PM **Race and Ethnicity in Analyses of Health Care Data: Reflections from KPWHRI Researchers**  
Online
- September 7  
3:00 PM **VIDD Scientific Seminar Series**  
Online
- September 9  
7:30 AM **East West Life Science Summit**  
Online
- September 10  
5:00 PM **CELLEBRATION**  
Online
- September 16  
10:30 AM **Distinguished Seminar: Kay Tye**  
Online

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 **Science Jobs in Seattle**

- Senior Research Associate, Genomics Specialist**  
Allen Institute
- Clinical Research Coordinator, Concussion Research Collaborative**  
Seattle Children's
- Associate Scientist, Cell Therapy Process Development**  
Bristol Myers Squibb
- Postdoctoral Research Associate**  
Benaroya Research Institute at Virginia Mason
- Senior Director, Clinical Research Pulmonary Medicine**  
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