

Publications of the Week
CFTR Dysregulation Drives Active Selection of the Gut Microbiome

 First Author: Stacey Meeker (pictured) | Senior Author: Adeline Majjar
 PLOS Pathogens | UW


Patients with cystic fibrosis (CF) have altered fecal microbiomes compared to those of healthy controls. To test the relationships between CFTR dysfunction, microbes, and intestinal health, the authors established a germ-free CF mouse model and demonstrated that CFTR gene mutations were sufficient to alter the gastrointestinal microbiome. [Abstract](#)

Fecal Dysbiosis in Infants with Cystic Fibrosis Is Associated with Early Linear Growth Failure

 Hillary Hayden | Lucas Hoffman (pictured)
 Nature Medicine | UW and Seattle Children's Research Institute


The authors have identified an early, progressive fecal dysbiosis that distinguished infants with cystic fibrosis (CF) and low length from infants with CF and normal length. This dysbiosis included altered abundances of taxa that perform functions that are important for gastrointestinal health, nutrient harvest and growth hormone signaling, including decreased abundance of Bacteroidetes and increased abundance of Proteobacteria. [Abstract](#)

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Local News
Microsoft Launches \$40M Initiative to Solve Global Health Challenges with AI

GeekWire



Microsoft has launched a major health research initiative to address some of the medical world's most confounding challenges using artificial intelligence. Microsoft's first round of Artificial Intelligence (AI) for Health grants will go to Fred Hutch, Seattle Children's Research Institute, BRAC, Intelligent Retinal Imaging Systems, Novartis Foundation, and PATH. [Read More](#)

Understanding the Role of Tumor Microbiota in GI Cancer Progression and Response to Treatment

American Society of Clinical Oncology (ASCO) Daily News



In an interview with ASCO Daily News, Dr. Susan Bullman (pictured), an Assistant Member in the Human Biology Division at Fred Hutch, reflected on her accomplishments to date, trending research in the field of gastrointestinal (GI) malignancies, and ways in which new research could impact the treatment of GI cancers. [Read More](#)

How *Helicobacter* Stays Helical

Fred Hutch



One of the main risk factors for stomach cancer is infection with the bacterium *Helicobacter pylori*. Scientists at Fred Hutch have revealed that *H. pylori* maintains its helical shape by targeting cell-wall synthesis to two areas with opposite curvature properties. They identified two proteins, MreB and CcmA, that balance cell-wall production in the right areas. [Read More](#)

Benaroya Research Institute Receives \$5.4 Million NIH Contract Award to Improve Treatment for Patients with Rheumatoid Arthritis

Benaroya Research Institute at Virginia Mason



Scientists at Benaroya Research Institute at Virginia Mason have received a \$5.4 million, five-year contract award from the National Institutes of Allergy and Infectious Disease, part of the National Institutes of Health (NIH), to identify biomarkers that can predict the success of knee replacement surgery for rheumatoid arthritis. [Read More](#)

Metabolism, mTOR, and the Mysteries of Diapause

Institute for Stem Cell & Regenerative Medicine



A research team led by Dr. Hannele Ruohola-Baker (pictured) has performed a detailed comparison of diapause to non-diapause mouse embryos. The diapause stage stops the development, for a period of days or months, until the time is right for the developing embryo to awaken, implant to the uterus and resume development into a viable offspring. [Read More](#)

ASH President: 'There Is Still So Much to Do'

Healio



Dr. Stephanie Lee's (pictured) experience as a pre-med volunteer at Fred Hutch inspired her to pursue a career in hematology. Thirty-six years later, it continues to guide her approach to scientific research and bedside care. Healio spoke with Lee about the priorities she established for her new role as President of the American Society of Hematology (ASH), the challenges facing the field, and how ASH membership can help make her term a success. [Read More](#)

Kaiser Permanente Research Bank: Why You Should Join

Kaiser Permanente Washington Health Research Institute



The Kaiser Permanente Research Bank aims to recruit 500,000 members, including pregnant women, people with cancer, and members from diverse racial and ethnic backgrounds. Researchers will use the samples to answer important health care questions, such as: Do certain types of cancer increase the risk for other cancers? And how can we develop new drugs or new treatments for conditions like asthma, cancer, and heart disease? [Read More](#)

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Upcoming Events in Seattle

- February 4 9:00 AM **UW Postdoc Association General Assembly**
Loew
- February 4 7:30 PM **Bees, Guts, Soil, and Cancer**
The Forum
- February 9-10 7:00 AM **Microbiome Symposium**
Fred Hutchinson Cancer Research Center
- February 13-17 8:00 AM **American Association for the Advancement of Science (AAAS) Annual Meeting**
Washington State Convention Center
- February 13 9:00 AM **Destination Europe: Research Opportunities in Europe**
Husky Union Building Lyceum

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