NIH Office of Dietary Supplements (ODS) 2023–2024 Seminar Series

Microbiota-Immune Interactions and Health

June Round, Ph.D. University of Utah Salt Lake City, UT

Wednesday, February 28 • 11 a.m. - 12 p.m. ET

Join the Webinar

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June Round, Ph.D., trained in immunology at UCLA and conducted her postdoctoral studies at Caltech with Sarkis Mazmanian, studying how a polysaccharide on *B. fragilis* could induce immune tolerance and protect from intestinal disease.

In September 2011, Dr. Round opened her own lab at the University of Utah, studying the interaction between the immune system and the microbiota. Her lab utilizes microbiology, immunology, bioinformatics, and mouse models of disease to study this relationship. Although most people view our interactions with microbes through the lens of pathogenesis, most human interactions with microbes are benign or even beneficial. The research goal in the Round lab is to uncover the microbes, viral as

well as bacterial, that confer these benefits, and understand the mechanistic underpinnings of these relationships so that we can harness them therapeutically.

Recent Publications

- Petersen C, Bell R, Klag K, Lee S, Soto R, Ghazaryan A, Buhrke K, Ekiz HA, Ost K, Boudina S, O'Connell RM, Cox J, Villanueva C, Stephens WZ, Round JL. T cell mediated regulation of the microbiota protects against obesity. *Science*. 2019 Jul 26;365(6451):eaat9351. PMID: 31346040 PMCID: PMC7294966 DOI: 10.1126/science.att9351.
- Gogokhia L, Buhrke K, Bell R, Hoffman B, Brown DG, Hanke-Gogokhia C, Ajami N, Wong MC, Ghazaryan A, Valentine J, Porter N, Martens E, O'Connell R, Jacob V, Scherl E, Crawford C, Stephens WZ, Casjens S, Longman R, Round JL. Expansion of bacteriophages is linked to aggravated intestinal inflammation and colitis. *Cell Host Microbe*. 2019 Feb 13;25(2)285–299. PMID: 30763538 PMCID: PMC6885004 DOI: 10.1016/jchom.2019.01.008.
- 3. Ost K, O'Meara T, Stephens WZ, Chiaro T, Zhou H, Penman J, Bell R, Catanzaro JR, Song D, Singh S, Call DH, Hwang-Wong E, Hanson KE, Valentine JF, Christensen KA, O'Connell RM, Cormack B, Ibrahim A, Palm N, Noble S, Round JL. Adaptive immunity induces mutualism between commensal eukaryotes. *Nature*. 2021 Aug;596(7870):114–118. PMID: 34262174 PMCID: PMC8904204 DOI: 10.1038/s415856-021-03722-w.



Strengthening Knowledge and Understanding of Dietary Supplements