



Channing Microbiome Seminar

September 29 (Friday), 2023, 9AM (ET)

Zoom: <https://us02web.zoom.us/j/81070959105?pwd=RFJNd3dSZmR6dXJZNjJiYVVzQ3NEQT09>

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Developing a Defined Bacterial Consortium for *Clostridioides Difficile* Infection (CDI)

Antibiotics used to treat *C. difficile* infection (CDI) perturb the gut microbiome, increasing susceptibility to recurrent CDI (rCDI). Fecal microbiota transplants and donor-derived treatments promote the establishment of a gut environment resistant to CDI, but the composition and quality attributes of these are inherently variable; they are difficult to scale up, and have resulted in transfer of emerging pathogens. Vedanta Biosciences is developing rationally defined bacterial consortia that are manufactured from clonal cell banks, obviating the need for donors and overcoming the limitations of donor-derived treatments. Vedanta is developing VE303 for the prevention of rCDI and in the Phase 2 CONSORTIUM Study, the VE303 high dose arm was well tolerated and significantly reduced the odds of rCDI compared with placebo. The high dose also induced superior VE303 strain colonization at 14 days, achieved long-term engraftment, were significantly associated with nonrecurrence, and promoted early restoration of the microbiota and beneficial metabolites following antibiotic treatment for CDI. The Phase 3 RestoratiVE303 Study is expected to begin in the coming months to determine VE303 efficacy in a larger number of patients.

Bio: Dr. Jason Norman joined Vedanta in 2015 and is the Senior Director, Systems Biology, where he leads a team of bioinformaticians and statisticians researching complex microbial communities in human health and disease. In this role he has led the establishment of protocols for metagenomic analysis of microbial communities in human clinical studies and in animal models, determining the colonization of live bacterial product strains in human subjects, *de novo* assembly of bacterial isolate genomes, genome characterization, and model microbial community interactions. At Vedanta he has supported the clinical development of defined bacterial consortia for the prevention of *C. difficile* recurrence and treatments of cancer and inflammatory bowel disease. Dr. Norman completed his post-doctoral training with Dr. Herbert "Skip" Virgin at Washington University in St. Louis, where he discovered that the human virome was altered and may contribute to bacterial dysbiosis in inflammatory bowel disease patients. He completed his graduate training at the University of Michigan in the Department of Microbiology and Immunology where he studied HIV immune evasion mechanisms. Dr. Norman received his B.Sci. in Microbiology from Auburn University. He has published his work in several top tier journals including JAMA, Cell, Science, Nature, Cell Host & Microbe, and Nature Immunology.

