



Faculty Capabilities and Interests

Name: Yong Jin Lee

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Discipline: Microbiology

Subdiscipline(s): Microbial Ecology

Areas of Research Interests: Microbial Ecology, Environmental Genomics, Microbial Water Quality, Anaerobic Microbiology, Human Microbiome, Climate Change Biology

Skills: Microarray, DNA sequencing, RNA sequencing, Real-time PCR, DGGE, T-RFLP and other genotyping and cutting-edge omics technologies.

Research Summary
(current, performed in the past 5 year; 300 words or less)

I currently participate as a co-principal investigator (co-PI) in a research project recently approved by FDA/National Center for Toxicological Research (NCTR), exploring *Burkholderia cepacia* complex (BCC) strains as objectionable organisms in pharmaceutical grade waters. I developed BCC-specific PCR assays that will be validated using surface waters. Other ongoing researches include 1) detecting human/environmental pathogens using molecular assays, 2) monitoring microbial water quality in agricultural waters, and 3) characterizing a novel strain JW/YJL-CPRB1 Isolated from Coal Pile Runoff Basin. A research to investigate the associations and interactions between gut microbiota and obesity and the pathogenic potential of gut microbiota according to the development of obesity is also proposed (submitted for HU-TCC:MMHI Pilot Project Award).

Keywords (5 maximum) Microbial diversity, Pathogen detection, Water quality, Gut microbiota