Virtual Department Seminar Series

UC DAVIS
FOOD SCIENCE AND TECHNOLOGY

Extracellular electron transfer capabilities of lactic acid bacteria

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4:10 PM PST, Wednesday March 2, 2022
Join us live in Room 1207 RMI-South, or virtually

Join URL: https://ucdavis.zoom.us/j/93150248801

BIO: *Eric obtained his B.S. in Chemistry from SUNY-ESF in Syracuse, NY in 2015. He joined the Microbiology Graduate Group at UC Davis in 2016 and joined Dr. Maria Marco's research group to study the diverse metabolic capabilities of lactic acid bacteria. Eric has earned several awards for his research, including the NSF Graduate Research Fellowship and the Henry A. Jastro Research Fellowship. Eric has also interned Zymergen in Emeryville, CA in their strain engineering department and plans to continue biotechnology research after graduating.*

SUMMARY: Lactic acid bacteria (LAB) are a group of phylogenetically and functionally diverse group of microorganisms defined by their production of lactic acid and use in the fermentation of foods and beverages. These bacteria have also been shown to conduct extracellular electron transfer (EET), a process by which organisms can couple intracellular metabolic reactions with the reduction of extracellular electron acceptors. Because EET directly affects LAB metabolism, as well their extracellular environment, this metabolism requires further investigation for the physiological, ecological, and biotechnology implications for LAB. Through this work, we explore the biochemical and genetic aspects of EET among LAB and their potential role in shaping the outcome of food fermentations.