

US Department of Energy
REPORT FOR CLOSEOUT OF DOE AWARD DE-SC0006943
PI: Daniel J. Arp; Co-PI: Luis A. Sayavedra-Soto

Papers and other products delivered:

Manuscripts

José Pérez, Alex Buchanan, Brett Mellbye, Rebecca Ferrell, Jeff Chang, Frank Chaplen, Neeraja Vajrala, Peter Bottomley, Daniel Arp, and Luis Sayavedra-Soto. (2015). Interactions of *Nitrosomonas europaea* and *Nitrobacter winogradskyi* grown in co-culture. Archives in Microbiology. Jan; 197(1):79-89

Luis Sayavedra-Soto, Rebecca Ferrell, Michael Dobie, Brett Mellbye, Frank Chaplen, Alex Buchanan, Jeffrey Chang, Peter Bottomley, and Daniel Arp. (2015). *Nitrobacter winogradskyi* transcriptomic response to low and high ammonium concentrations. FEMS Microbiology, Feb;362(3):1-7.

Brett Mellbye, Peter Bottomley and Luis Sayavedra-Soto (2015) The nitrite-oxidizing bacterium *Nitrobacter winogradskyi* produces N-acyl-homoserine lactone autoinducers. Applied and Environmental Microbiology. 81(17):5917-26.

Brett Lewis Mellbye, Mr. Andrew T Giguere , Frank Chaplen , Dr. Peter Bottomley , Dr. Luis Sayavedra-Soto (2016). Steady state growth under inorganic carbon limitation conditions increases maintenance energy and enhances nitrous oxide production in *Nitrosomonas europaea*. Applied and Environmental Microbiology. (2016) May 16;82(11):3310-8.

Abstracts to scientific meetings

Frank W.R. Chaplen, Alex Buchanan, Jeff Chang, Luis Sayavedra-Soto. Constraints-based modeling of the nitrifying bacteria *Nitrosomonas europaea* and *Nitrobacter hamburgensis*. American Chemical Society Meeting; New Orleans, April 7th-11th. 2013.

R. V. Ferrell, J. Pérez, P. Bottomley, D. Arp, L. Sayavedra-Soto. Coculture of *Nitrosomonas europaea* and *Nitrobacter winogradskyi* affects expression of key nitrite metabolism genes. ASM 113th General Meeting, Denver CO May 18-21, 2013.

Frank W.R. Chaplen, Jose Pérez, Peter Bottomley, Alex Buchanan, Ganti S. Murthy, Jeff H. Chang, and Luis A. Sayavedra-Soto. Model integration for elucidating the coupled environmental dynamics of the nitrifying bacteria *Nitrosomonas europaea* and *Nitrobacter winogradskyi* 247th ACS Meeting, Dallas Texas. March 16-20; 2014.

Sayavedra-Soto Luis, Brett Mellbye, Frank Chaplen, Jeff Chang, Peter J. Bottomley, Daniel J. Arp. Responses of and interactions between nitrifying bacteria to environmental changes: a systems level approach. Genomic Science Annual Contractor-Grantee Meeting. Tyson's Corner, VA. February 23-25, 2015.

Brett L. Mellbye, Peter J. Bottomley, Luis A. Sayavedra-Soto. ICoN4, Alberta Canada. The nitrite-oxidizing bacterium *Nitrobacter winogradskyi* produces N-acyl-homoserine lactone autoinducers. June 28-July 1. 2015