Thursday, April 27, 2017
ORIGIN AND EVOLUTION OF LIFE: PREBIOTIC CHEMISTRY:
LIFE WITHOUT LIGHT: NEW DEVELOPMENTS AND PERSPECTIVES IN CHEMOLITHOTROPHIC METABOLISM AND ITS GEOCHEMICAL SIGNATURES
4:15 p.m. Arizona Ballroom D

Chairs: **Eric Roden**
Eric Boyd

4:15 p.m. Colman D. R. * Lindsay M. R. Roden E. R. Boyd E. S.
Transitioning Metagenomes into Interactomes in a Chemosynthetic Sulfur-Based Hot Spring Community **[#3398]**
We show a genome-guided model of biogeochemical interactions among populations of a sulfur-based hot spring microbial community and their environment.

4:30 p.m. Emerson D. * Barco R. A. Scott J. J. Chan C. S.
Metabolic Pathway(s) Coupled to Energy Conservation in Neutrophilic Iron-Oxidizing Bacteria **[#3420]**
This presentation addresses current research on the mechanism of iron-oxidation in chemolithoautotrophic bacteria.

4:45 p.m. Lindsay M. R. * Fristad K. E. Amenabar M. J. Urschel M. R. Debes R. V. Spear J. R. Hoehler T. M. Shock E. L. Boyd E. S.
Subsurface Source and Biological Fate of Hydrogen in Hot Spring Ecosystems **[#3151]**
The subsurface source and biological fate of hydrogen are investigated in hot springs, where it is an important substrate for chemosynthetic communities.

5:00 p.m. Fortney N. W. * He S. Boyd E. S. Roden E. E.
Geochemical and Genomic Evidence for an In Situ Lithoautotrophic Fe-Oxidizing Microbial Community at Chocolate Pots Hot Springs, Yellowstone National Park, USA **[#3756]**
Microbes native to a Yellowstone hot spring are able to reduce Fe(III) oxides. Organisms capable of lithoautotrophic Fe(II)-oxidation are being searched for.

5:15 p.m. Napieralski S. A. * Buss H. L. Roden E. E.
Microbiological and Genomic Analysis of a Terrestrial Subsurface Fe(II)-Silicate Based Lithotrophic Microbial Community **[#3146]**
This study addresses the role of lithotrophic iron oxidizing bacteria in the weathering of subsurface silicates through genomic and geochemical analysis.

5:30 p.m. Skidmore M. L. * Mitchell R. Steigmeyer A. van Gelder W. Dunham E. Lindsay M. Hamilton T. L. Boyd E. S.
Mineral Dependent Chemolithotrophy in Subglacial Systems **[#3678]**
Evaluating the role of iron cycling and hydrogen as predominant modes of metabolism in subglacial systems in Iceland.