

Tuesday, May 17, 2016
BIOSIGNATURES AND ENVIRONMENTS I:
LOW-TEMPERATURE SURFACE AND SUBSURFACE
8:30 a.m. Regency AB

Times include a 5 minute discussion at the conclusion of each presentation.

Chairs: **Abigail Allwood**
Wendy Calvin
Briony Horgan

- 8:30 a.m. Eigenbrode, J. L. *
Deltas on Earth and Mars: An Environment for Deposition and Preservation of Organic Matter and Biosignatures
- 8:50 a.m. Juarez Rivera M. * Sumner D. Y.
[Recreating Microbial Ecosystems of the Late Archean](#) [#2056]
Microbialites are important deposits for studying early microbial life. Cuspate and plumose microbialites of the Gamohaan Formation provide evidence for multiple microbial communities that grew contemporaneously with different growth rates.
- 9:10 a.m. Graham H. V. * Stern J. C. Baldrige A. M. Thomsen B. J.
[Australian Acid Brine Lake as a Mars Analog: An Analysis of Preserved Lipids in Shore and Lake Sediments](#) [#2063]
This study investigates organic molecules preserved in sediment cores from an acid brine lake. We explore the distribution and stable isotopic composition of lipids in order to understand preservation potential in similar martian environments.
- 9:30 a.m. Break
- 10:00 a.m. Johnson S. S. * Soni M. L. Collins D. J. Benison K. C. Mormile M. R.
Chevrette M. G. Ehlmann B. L.
[Biosignatures in Mars Analog Acid Salt Lakes](#) [#2072]
Paleolake sites on Mars serve as intriguing targets for the search for life. Acid salt lake sediments in Western Australia can offer insights into biosignature preservation in these environments.
- 10:20 a.m. Hausrath E. M. * Harrold Z. Murray A. E. Tschauer O. Garcia A. H.
Bartlett C. L. Raymond J.
[Interactions of Snow Algae, Microorganisms and Minerals in Snowy Mars-Analog Environments Provide Potential Elemental and Mineralogical Biosignatures](#) [#2050]
Interactions between snow algae, microorganisms, and minerals in laboratory and field environments result in Fe-rich phases that may be important biosignatures on Mars.
- 10:40 a.m. Nealson K. *
History of Searching for Biosignatures in the Subsurface
- 11:00 a.m. SESSION DISCUSSION
- 12:00 p.m. Session Adjourns