**Monday, April 24, 2017**
**POSTER SESSION II:**
**SOLAR SYSTEM SITES: MARS:**
**BIOSIGNATURE DETECTION ON MARS**
**8:00 p.m. Main Hall**

Abans R. A. O. Rodrigues F. Paulino-Lima I. G. Galante D.
*Redesign of the Winogradsky's Column as an Experimental Chamber for Evaluating the Effect of Martian Atmosphere on the Ecology of a Hipersaline Microcommunity* **[#3112]**
A hipersaline microbiome is in an adapted Winogradsky's column under Mars-like atmosphere to evaluate changes in dolomite precipitation and microbial diversity.

Cavalcante L. L. Yamaguchi L. F. Paulino-Lima I. G. Rodrigues F.
*Implications of the Variation on the Pigment Profile of the Polyextremophile Bacterium Deinococcus Radiodurans Under Simulated Extreme Environmental Conditions for the Biosignature Detection Problem* **[#3143]**
Changes on carotenoid profile produced by Deinococcus radiodurans, related to the metabolic response due to simulated martian conditions were analyzed.

Wong G. M. Eigenbrode J. L. McAdam A. C. House C. H.
*Sulfide Minerals not Necessary for Hydrogen Sulfide Evolution in Laboratory SAM-Like EGA* **[#3308]**
Description of ongoing laboratory work evaluating possible sources of hydrogen sulfide observed in Sample Analysis at Mars experiments.

Phillips M. S. Moersch J. E. Cabrol N. A.
*Thresholds of Detectability for Habitable Environments in the Altiplano of Chile, with Implications for Mars Exploration* **[#3373]**
If gypsum structures / like Earth's exist on Mars we / have not yet seen them.

Brinckerhoff W. Arevalo R. Jr. Danell R. van Amerom F. Grubisic A. Li X. Pinnick V. Chu P. Zacny K. Rogacki S. Miller R. McKague D. Tan F. Getty S. Gundersen C. Hovmand L. Carrigan D. Barciniak M. Noreiga M. Budinoff C. Castillo M. Johnson C. Wilkinson R.
*Linear Ion Trap Mass Spectrometer for In Situ Astrobiology* **[#3529]**
We describe the latest status of the Linear Ion Trap Mass Spectrometer (LITMS) development for analysis of organic compounds on missions to Mars and beyond.

Steele A. Benning L. Wirth R. Fries M. D. F..
*Martian Organic Synthesis by Electrochemical Reduction of Aqueous $CO_2$* **[#3711]**
We show new data that points towards galvanic corrosion processes causing electrochemical reduction of $CO_2$ as an organic synthesis mechanism on Mars.

Hinman N. W. Cabrol N. A. Gulick V. Warren-Rhodes K. Tebes C. Chong G. Demergasso C. SETI NAI Team
*Initial Investigations of Endoevaporitic Gypsum Habitats of Salar de Pajonales, Chile* **[#3568]**
Multi-scale techniques were used to distinguish and probe for biosignatures among monomineralic micro-habitats across multiple scales.

Hargitai H. I. Gulick V. C. Glines N. H.
*Navua Valles and Hadriacus Mons: Discontinuous Channels, Paleolakes, Knobby Terrains, and Mound Fields* **[#3621]**
We describe potentially habitable environments in the East Hellas Region.

Summers D. P. Quinn R. C. Gulick V. C. Angel J.
*Mid-IR Spectroscopy of Perchlorates* **[#3658]**
To support the detection and characterization of perchlorates on Mars, they were studied to provide spectral data by mid-IR microscopy and Raman spectroscopy.

Caudill C. M. Greenberger R. N. Sapers H. M. Tornabene L. L. Osinski G. R. Ehlmann B. L.
*Investigation of Post-Impact Hydrothermal Alteration in the Ries Ejecta Deposits with Comparisons to Early Mars* **[#3660]**
Quantitative terrestrial in situ spectral mineral mapping offers promising comparisons to Mars spectral data, and may identify past habitable environments.

Gulick V. Hinman N. W. Cabrol N. A. Warren-Rhodes K. Cady S. L.
*Morphological and Spectral Characteristics of El Tatio Sinter Nodules* **[#3680]**
Techniques across multiple scales demonstrate capabilities for identifying biosignatures in El Tatio hot springs.

Gulick V. C. Morkner P. Angell J. Johnsen T. Freeman P. Bello J.
*Building a Biosignature, Imaging, Spectral, and Thin Section Library to Support Upcoming Mars Surface Missions* **[#3728]**
We report on our progress to build a biosignature library to support future Mars mission.