Tuesday, April 25, 2017
SOLAR SYSTEM SITES: MARS:
BIOSIGNATURE DETECTION ON MARS II: ANALOGUE EXPLORATION
1:30 p.m. Palo Verde

Chairs: **Nathalie Cabrol**
Leslie Bebout

1:30 p.m. Parro V. * Gallardo-Carreño I. Santos-Severino R. Blanco Y. Moreno-Paz M. Fernández-Sampedro M. Wettergreen D. Warren-Rhodes K. Cabrol N.
Microbial Molecular Markers After a Wet Event in the Atacama: Setting the Timer of Biomarkers Transformation **[#3083]**
Distribution of microbes following space, time, and humidity gradients is important for biomarker detection in planetary exploration.

1:45 p.m. Glamoclija M. * Steele A. Fogel M. L. Sirisena K. Ramirez S. Widanagamage I. Waldron A. Zeidan M. Potochniak S.
Microbial Ecology Within the Top Meter of Playa Sediments at White Sands National Monument (New Mexico) **[#3442]**
Microbial ecology of 1m deep playa sediments from White Sands National Monument (NM). The gradient explored includes surface, sediment, and groundwater table.

2:00 p.m. Lynch K. L. * Jackson W. A. Spear J. R. Rosenzweig R. F. Munakata Marr J.
Investigating the Coexistence of Perchlorate Reducing Bacteria and Naturally-Occurring Perchlorate-Rich Sediments in the Pilot Valley Paleolake Basin **[#3601]**
This presentation will discuss new results indicating co-existence of perchlorate reducing bacteria and naturally occurring perchlorate in Pilot Valley, Utah.

2:15 p.m. Sarbu S. M. * Nealson K. H. Barr C. Flot J. F. Aerts J. Atudorei V. Ionescu A. Baciu C. van Spanning R. Popa R.
Solfatara Gas/Gas Interfaces: A Novel Habitable Mars Environment? **[#3163]**
We show that solfatara-related gas/gas redox interfaces are a potential environment to search for habitability, fossil microbial biofilms, and life on Mars.

2:30 p.m. Cady S. L. * Carrizo D. Davila A. Farmer J. D. Gulick V. Hinman N. Moersch J. Parro V. Quinn R. Sobron P. Sarrazin P. Warren-Rhodes K. Cabrol N. A.
Correlated In Situ and Laboratory-Based Analyses: Key to Understanding Taphonomic Alteration of Biosignatures in Hot Spring Sinters **[#3565]**
We report correlated field and laboratory-based analyses of Mars analog samples for the SETI NAI roadmap for biosignature exploration for 2020 rover missions.

2:45 p.m. Khan A. *
Characterization of Residual Biosignatures in Mars Analog Environments Towards Determination of Extremophilic Microbial Life in a Plausible Sample Return Mission **[#3675]**
To aid in the determination of an ideal sample collection site for analysis and future sample return from Mars, to look for extant signs of life.

3:00 p.m. Lewis J. M. T. * Eigenbrode J. L. Franz H. B. McAdam A. C. Knudson C. A. Andrejkovicova S. Sutter B. Archer P. D. Niles P. B.
Improving our Understanding of the Influence of Iron Oxides on Thermal Experiments Looking for Organic Matter on Mars **[#3173]**
The impact of hematite, magnetite, and perchlorate on the ability of thermal experiments on board Mars rovers to identify organic matter on Mars is assessed.

3:15 p.m. Amador E. S. * Bandfield J. L. Thomas N. H.
Using Serpentine as a Mineral Tracer for Habitable Environments on Mars **[#3149]**
Serpentinization may have played a role in creating habitable locales on Mars. Here we show new evidence for serpentine found more widespread across the planet.

3:30 p.m. Ertem G. * Cooper G. McKay C.
Survivability of Biomolecules on Martian Surface Against Shock Effects and Radiation **[#3385]**
Analysis of biomolecules extracted from mineral-organic mixtures subjected to shock impacts and gamma radiation. Role of oxidants on their survivability.

3:45 p.m. *Coffee Break*