**Tuesday, May 17, 2016**
**POSTER SESSION: SURFACE ENVIRONMENTS, SHALLOW, AND DEEP SUBSURFACE ENVIRONMENTS — PALEOBIOLOGICAL PROSPECTS**
**5:30 p.m. Regency C**

Glamoclija M. Steele A. Starke V. Zeidan M. Potochniak S. Sirisena K. Widanagamage I. H. ***POSTER LOCATION #52***
*Microbial Signatures In Sulfate-Rich Playas* **[#2051]**
Microbes that live in playas represent organisms able to cope with transient environments, ranging from fresh to hyper-saline water settings and from wet to dry. We will try to identify mineral and chemical signatures of their presence.

Shkolyar S. Farmer J. D. ***POSTER LOCATION #53***
*Impact of Diagenesis on Biosignature Preservation Potential in Playa Lake Evaporites of the Verde Formation, Arizona: Implications for Mars Exploration* **[#2003]**
We studied evaporite subfacies in the Verde Fmn., AZ. We identified diagenetic pathways and assessed how diagenesis affected biosignature preservation potential (BPP) in each. Results revealed eight pathways, each with diverse impacts on BPP.

Mitchell J. L. Christensen P. R. ***POSTER LOCATION #54***
*Bristol Dry Lake, California: An Analog for Ancient Lacustrine Environments on Mars* **[#2081]**
This study investigates Bristol Dry Lake, CA, as an analog site for ancient lakes on Mars. Water chemistry and spectra were used to explore the geology and chemistry of chlorides at Bristol and their impact on possible habitable environments on Mars.

Lynch K. L. Biddle J. F. Schneider R. J. Rey K. A. Wray J. J. Rosenzweig R. F. ***POSTER LOCATION #55***
*The Pilot Valley Basin, Utah: A Modern Habitability and Preservation Model for Groundwater-Fed Martian Paleolake Basins* **[#2075]**
The Pilot Valley basin in northwestern Utah serves as an excellent modern environment for habitability and biosignature preservation analog studies of groundwater-fed martian paleolake basins.

Smith H. D. Duncan A. G. Davilla A. F. McKay C. P. ***POSTER LOCATION #56***
*Biosignatures of Hypersaline Environments (Salt Crusts) an Analog for Mars* **[#2060]**
Halophilic ecosystems are models for life in extreme environments including planetary surfaces such as Mars. Our research focuses on biosignatures in a salt crusts and the detection of these biomarkers by ground and orbital assests.

Uceda E. R. Fairen A. G. Rodriguez J. A. P. Woodworth-Lynas C. ***POSTER LOCATION #57***
*Ocean Fertilization from Giant Icebergs on Earth and Early Mars* **[#2042]**
Assuming that life existed on Mars coeval to glacial activity, enhanced concentrations of organic carbon could be anticipated near iceberg trails, analogous to what is observed in polar oceans on Earth.

Bishop J. L. Englert P. ***POSTER LOCATION #58***
*Antarctic Dry Valley Sediments as Analogs for Microbial Systems in a Cold Mars-Like Environment* **[#2017]**
Investigations of surface and lake bottom sediments in the Antarctic Dry Valleys have revealed microbial life nearly everywhere and some evidence for clays, carbonates, sulfates and other minerals associated with microbes in the sediments.

Wilhelm M. B. Davila A. F. Eigenbrode J. L. Parenteau M. N. ***POSTER LOCATION #59***
Jahnke L. L. Liu X. Summons R. E. Stamos B. N.
Wray J. J. O'Reilly S. S. Williams A. J.
*Xeropreservation of Functionalized Lipid Biomarkers in Hyperarid Soils in the Atacama Desert, Chile* **[#2019]**
The preservation of lipid biomarkers was investigated in hyperarid soils with depth in the Atacama Desert. Clays sealed from rainwater for 2 Ma contained functionalized lipids, indicating that minimal degradation has occurred since their deposition.

Sapers H. M. Pontefract A. Osinski G. R. Cannon K. M. Mustard J. F. ***POSTER LOCATION #60***
*Habitability and Biosignature Preservation in Impact-Derived Materials* **[#2059]**
Meteorite impacts create environments conducive to microbial colonization. Biosignatures in impact-derived materials have been characterized on Earth. Impact environments comprise candidates for biosignature detection and preservation on Mars.

McCollom T. M. Hynek B. M. Rogers K. L. ***POSTER LOCATION #61***
*Potential for Preservation of Biosignatures from Endolithic Photosynthetic Communities in a Mars Analog Fumarole Environment* **[#2006]**
Thermophilic photosynthetic communities inhabit the moist interiors of mineral deposits in volcanic fumaroles. Contemporaneous mineral precipitation provides a high potential for preservation of morphological and chemical biosignatures.

Skok J. R. Farmer J. D. Jerman G. Gaskin J. Lindsey N.
Munoz-Saez C. Kaasalainen H. Tobler D. Parente M. Craft K. L. ***POSTER LOCATION #62***
*Seeking Signs of Life in Ancient Martian Hot Springs with Icelandic Analogs* **[#2021]**
Using Icelandic analogs to develop a mission profile for biosignature detection in ancient siliceous hydrothermal systems on Mars.

Hinman N. W. Kendall T. A. MacKenzie L. A. Cady S. D. ***POSTER LOCATION #63***
*Diagenetic Changes in Common Hot Spring Microfacies* **[#2047]**
The friable nature of silica hot spring deposits makes them susceptible to mechanical weathering. Rapid diagenesis must take place for these rocks to persist in the geologic record. The properties of two microfacies at two deposits were compared.

Mustard J. F. Sapers H. M. ***POSTER LOCATION #64***
*Biosignatures from a Deep Biosphere: The Largest and Longest-Lived Habitable Environments on Mars* **[#2086]**