

Thursday, April 29, 2010
INTEGRATING ASTROBIOLOGY RESEARCH ACROSS AND BEYOND THE COMMUNITY
2:00 p.m. Crystal Salon E

The purpose of this session is to stimulate new research collaborations across the astrobiology community and beyond by presenting broad nascent or ongoing collaborations as well as new collaborative opportunities.

Chairs: Carl Pilcher

- 2:00 p.m. Anbar A. D. * Boyd E. S. Buick R. Claire M. DesMarais D. Domagal-Goldman S. Eigenbrode J. Erwin D. Freeman K. Hazen R. Johnson C. Lyons T. Meadows V. Ohmoto H. Ono S. Peters J. W. Shapiro B. Summons R. Walter M.
[*An Archean Biosphere Initiative*](#) [#5593]
 We propose the creation of a cross-cutting initiative designed to foster research into Earth's Archean biosphere.
- 2:15 p.m. Mumma M. * des Marais D. Baross J. Sherwood Lollar B. Hand K. Villanueva G. House C. Ferry G. McCollom T. Sotin C. Goldman S. Vance S. Painter T.
[*The Astrobiology of Mars: Methane and Other Candidate Biomarker Gases, and Related Interdisciplinary Studies on Earth and Mars*](#) [#5590]
 On Mars, the search for life has been a principal goal for centuries, and it remains so today. We present the results of Strategic Initiative 6, developed at the NAI Workshop in Tempe AZ.
- 2:30 p.m. Meech K. J. * Whittet D.
[*Production of Volatiles/Organics/Water and Their Delivery to the Planets — An Interdisciplinary Strategic Initiative*](#) [#5649]
 This represents the consensus discussion held at an NAI workshop in Tempe AZ during May 2009 regarding the initiative to integrate astrobiology research in the area of 'Production of Volatiles and Organics and Their Delivery to Terrestrial Planets.'
- 2:45 p.m. Slater G. F. * Sherwood Lollar B. Pudritz R. Suttle C. A. Whyte L.
[*Astrobiology Initiatives in Canada: The CIFAR Astrobiology Workshop*](#) [#5299]
 This presentation will report a summary of the recent CIFAR Astrobiology Workshop that brought together leading Canadian and International Researchers from across the range of discipline of astrobiology for interdisciplinary discussion across the research community.
- 3:00 p.m. Carrigan M. A. * Uryasev O. Davis R. W. Chamberlin S. G. Benner S. A.
[*Joining Astrobiology to Medicine, Resurrecting Ancient Alcohol Metabolism*](#) [#5086]
 We apply an astrobiological approach to understand how primates responded to the emergence of ethanol in their environment by resurrecting two enzymes involved in the degradation of ethanol, alcohol dehydrogenase and aldehyde dehydrogenase.
- 3:15 p.m. BREAK
- 3:30 p.m. Peters J. W. * Cody G. Russell M. Ferry J. G. Schoonen M. A. A.
[*Prebiotic Organometallic Catalysis*](#) [#5566]
 We are at the beginning of a renaissance period where integrated efforts can provide rapid advances in the our understanding of the relationships between abiocatalysis and biocatalysis by transition metal sulfide clusters/minerals in the context of the origin of life.
- 3:45 p.m. Cabrol N. A. * Grin E. A. Chong-Diaz G. Demergasso C. HLP Team
[*The High Lakes Project/Shagan Initiative: Bridging Planets — From Mars to Earth and Back*](#) [#5034]
 SHAGAN is an interdisciplinary proposal that will generate data on the impact of environmental change on aquatic habitats and biodiversity in the Central Andes, and maintain a data center that will benefit NASA's Space and Earth Science community.

- 4:00 p.m. Conrad P. Elser J. Hoehler T. Peters J. W. *
[An Integrative Approach for Habitability Cross-Team Discovery and Training](#) [#5589]
From the NAI Tempe workshop we developed a proposal for integrating habitability research data and participating in common *in situ* workshops.
- 4:15 p.m. Ehrenfreund P. * Chung S. Rummel J. Peter N.
[Astrobiology — A Bridge Between Earth Science and Space Exploration](#) [#5292]
Astrobiology, the study of life in the universe, addresses, as an interdisciplinary science field, many questions that are relevant for sustaining life on planet Earth—and in particular, the relationships between a planet and life, and how each affects the other.
- 4:30 p.m. Bandyopadhyay P. S. *
[Astrobiology as an Emerging Science: What Does it Tell us to Philosophers?](#) [#5296]
In this paper, we will contend that the celebrated criteria of theory choice are not applicable to astrobiology when the latter is involved with the origin of life theories.