

**Monday, July 17, 2017**  
**EXOPLANETS FROM AN ORIGIN OF LIFE PERSPECTIVE AND**  
**THE SEARCH FOR LIFE AND ITS PRECURSORS IN THE SOLAR SYSTEM**  
**8:30 a.m. Price Center Theatre**

**Chair: Dimitar Sasselov**

- 8:30 a.m. Seager S. \*  
[\*Searching for Signs of Life on Exoplanets\*](#) [#4227]  
The search for life in other planetary systems is a relatively new but exciting endeavor. The ambitious goal of identifying a habitable or inhabited exoplanet is within reach.
- 9:25 a.m. Tian F. \*  
[\*Exoplanet Habitability and Biosignature Detection\*](#) [#4076]  
In this talk the most recent developments on planetary habitability and biosignature detections will be discussed.
- 9:50 a.m. Lineweaver C. H. \* Chopra A.  
[\*The Case for a Gaian Bottleneck: The Biology of Habitability \(i.e. The Potential Non-Dominance of Abiotic Factors in Creating Circumstellar Habitable Zones\)\*](#) [#4148]  
We present the Gaian Bottleneck Hypothesis: If life emerges on a planet, it only rarely evolves quickly enough to regulate greenhouse gases and albedo, thereby maintaining surface temperatures compatible with liquid water and habitability.
- 10:15 a.m. *Coffee Break*
- 10:45 a.m. Des Marais D. J. \*  
[\*Exploring Mars for Evidence of Habitable Environments and Life\*](#) [#4214]  
The climate of Mars has been more similar to Earth's climate than to that of any other planet in our solar system. Still, Mars represents a different example of how planetary environments and processes might affect the presence of life.
- 11:40 a.m. Hand K. P. \*  
[\*The Search for Signs of a Second Origin of Life in Ocean Worlds of the Outer Solar System\*](#) [#4205]  
The best places to test the 'biology hypothesis' are ocean worlds of our outer solar system (e.g. Europa and Enceladus). Experiments to characterize organics on ocean worlds, pathways for origins, and future in situ missions will be described.
- 12:05 p.m. Le Sergeant d Hendecourt L. \*  
[\*From Astrochemistry to Astrobiology: The Importance of Cosmic Ices for the Exogeneous Delivery of Organic Matter onto Telluric Planets Toward the Onset of Prebiotic Chemistry\*](#) [#4101]  
Cosmic ices are observed in molecular clouds out of which stars, planets and debris form. Ices, submitted to energetic and thermal processes in the laboratory form a rich organic chemistry in which bricks of biological importance are detected.
- 12:30 p.m. *Lunch*