

**Origins of Life**  
**The RNA World Revisited**  
ASU Origins Project  
Arizona State University/Tempe Mission Palms Hotel  
February 11-13, 2011

**Friday, February 11**

Noon	LUNCH
1pm	Welcome and introduction: Lawrence Krauss and Ariel Anbar
1:15-1:30pm	Brief Introduction to the RNA World and the Origins of Life <i>Sidney Altman, ASU Origins Project Distinguished Visiting Professor</i>
1:30-2:00pm	An Historical Perspective on Origins-of-Life Research <i>Antonio Lazcano, National University of Mexico</i>
2:00-2:15 pm	Definitions of "Life": A Philosophical perspective <i>Carol Cleland, University of Colorado</i>
2:15-2:30 pm	DISCUSSION
2:30-3:00 pm	Break
3:00-3:30 pm	Life as a Geochemical Process <i>Everett Shock, Arizona State University</i>
3:30 -4:00 pm	Metabolism and the Early Earth <i>Roger Buick, University of Washington</i>
4:00-4:30	The Habitability of the Early Earth <i>Steve Mojzsis, University of Colorado</i>
4:30-5:00 pm	Open discussion
5:00-5:15	Break
5:15-6:00 pm	Enzyme Metallocenters and Origins/sulfides <i>John Peters, Montana State University</i> <i>George Cody, Carnegie Inst.</i>
6:00-6:15 pm	Open Discussion
6:30 pm	Dinner—House of Tricks, Tempe, Arizona

**Saturday, February 12**

9am-2:30pm	RNA WORLD AND BEFORE
9-9:30am	Prebiotic Synthesis of RNA and RNA analogues <i>Steve Benner, Foundation for Applied Molecular Evolution</i>
9:30-10:00	Synthesis of Ribonucleotides <i>John Sutherland, University of Cambridge</i>
10:00-10:15	Discussion
10:15-10:30	BREAK
10:30-11:30	Origins of the Ribosome <i>Eric Smith, Santa Fe Institute</i> <i>Loren Williams, Georgia Institute of Technology</i>
11:30-noon	Open discussion
12:00-1:00pm	LUNCH
1:00-1:30	RNase P and Ancient Function <i>Sidney Altman, ASU Origins Distinguished Visiting Professor</i>
1:30-2:00	New results on RNA Catalysis <i>M. Yarus, U. Colorado Boulder</i>
2:00-2:15	OPEN DISCUSSION
2:15-5:15pm	TOPIC: LIFE ELSEWHERE
2:15-2:45	Extraterrestrial Amino Acids <i>Sandra Pizzarello, Arizona State University</i>
2:45 – 3:00 PM	BREAK
3:00-4:30pm	Astrobiological aspects <i>Chris McKay, NASA, Arizona State University</i> <i>Peter Ward, NASA, University of Washington</i> <i>Mike Russell, JPL, California Institute of Technology</i>
4:30-5:00	Open discussion

5:15-6:30pm	RECEPTION- Light food
6:30pm	Pickup for hotel transportation to ASU Gammage
7-9:30pm	The Great Debate: What is Life? ASU Gammage Auditorium
9:30pm	Pickup at ASU Gammage for transportation to Tempe Mission Palms

**Sunday, February 13**

9am-noon	TOPIC: ALTERNATIVES TO LIFE AS WE KNOW IT
9-9:30am	Alternative RNA <i>Ron Oremland, US Geological Survey</i>
9:30-10am	OPEN DISCUSSION
10:00-10:15	BREAK
10:15-11 AM	Artificial Life <i>J. Craig Venter, J. Craig Venter Institute</i>
11:00-11:30	OPEN DISCUSSION:
1130-12:00	R. Dawkins, TBA
12:00-1:00 PM	LUNCH