A Celebration of Georgia Tech Astrobiology
Friday, September 14, 2018
Parker H. Petit Institute for Bioengineering and Bioscience
Suddath Seminar Room 1128

8:00 a.m. **BREAKFAST**

8:30 a.m. Penny Boston, Ph.D. – NAI Director
*Welcome Remarks*

8:40 a.m. Thom Orlando, Ph.D. – CSTAR, SSERVI REVEALS, PI
“An Overview of REVEALS and CSTAR programs”

9:00 a.m. Amanda Stockton, Ph.D. – PICASSO and PSTAR, PI; CCE, co-I
“High Impact Chemistry: The Icy Moons Penetrator Organic Analyzer”

9:20 a.m. Loren Williams, Ph.D. – COOL, PI
“Visualizing the Origin of Life – In Biopolymers”

9:40 a.m. Nick Hud, Ph.D. – CCE, PI
“Some Highlights of CCE Discoveries on the Possible Origins and Early Evolution of Biopolymers”

10:00 a.m. Martha Grover, Ph.D. – CCE, co-I
“Prebiotic Replication of an RNA Duplex Containing an Active Ribozyme”

10:20 a.m. Chris Reinhard, Ph.D. – NAI Alternative Earths, co-I
“Climate and Atmospheric Biosignatures on Reducing Worlds”

10:40 a.m. **COFFEE BREAK**

11:10 a.m. Jeff Bowman, Ph.D., for Britney Schmidt, Ph.D. – PI for the CLD
“Oceans Across Space and Time: A Multi-institutional Effort to Understand and Identify Life in Extraterrestrial Oceans”

11:30 a.m. Jennifer Glass, Ph.D. – NAI Alternative Earths and COOL, co-I
“Laughing Gas as a Precursor to Aerobic Life”

11:50 a.m. Will Ratcliff, Ph.D. – NAI Reliving the Past, co-I
“Solving Physical Challenges during the Origin of Multicellularity by Evolving Simple Development”

12:10 p.m. James Wray, Ph.D. – SETI, co-I and SSERVI, co-I
“Orbital Spectral Signatures of Changing Habitable Environments on Mars”
12:30 p.m.  **LUNCH (12:30 P.M.) AND POSTER SESSION (1:00 P.M.)**

**Poster presenters:**
- Marcus Bray (Glass)  
- Ozan Bozdağ, Ph.D. (Ratcliff)  
- Kimberly Chen, Ph.D. (Rosenzweig)  
- Angela Dapremont (Wray)  
- Quinn Dickinson (Rosenzweig)  
- Zach Duca (Stockton)  
- Jay Haynes (Williams)  
- Zijian Li (Reinhard)  
- kenned Lynch, Ph.D. (Wray and Rosenzweig)  
- Lauren Kimbrough (Wray)  
- Ahmad Mohamed (Williams)  
- Petar Penev (Williams)  
- Aaron Pital (Stockton)  
- Kenneth Seaton (Stockton)  
- Alexander Sessa (Wray)  
- Yi Sun (Grover)  
- Scot Sutton (Stockton)  
- Pedro Marquez-Zacarias (Ratcliff)  
- George Dragos Zaharescu (Reinhard)

2 – 3:45 p.m.  **The Faces of Astrobiology’s Future: NASA Postdoctoral Fellows, Graduate Students, and Postdocs**

- 2:00 p.m.  Pedram Samani, Ph.D. – Postdoc (Rosenzweig)  
  “Experimental Evolution as Anisogamy: An Inquiry into the Origins of Sexes”
- 2:15 p.m.  Peter Conlin, NPP Fellow (Ratcliff)  
  “Experimental Evolution of Adaptive Phenotypic Plasticity in a Temporally Varying Environment”
- 2:30 p.m.  Caroline Turner, NPP Fellow (Vaughn Cooper, Univ. of Pittsburgh)  
  “Environmental Similarity (mostly) Predicts Genetic Similarity”

2:45 p.m.  **Coffee Break**

- 3:00 p.m.  Nadia Szeinbaum, NPP Fellow (Glass)  
  “A Microbial Ecology Perspective on the Success of Oxygenic Photosynthesis”
- 3:15 p.m.  Moran Frankel-Pinter, NPP Fellow (Hud, Grover, and Williams)  
  “Dynamic Polymerization of Prebiotic Depsipeptides Allows Selection of Stable Structures”
- 3:30 p.m.  Micah Schaible, NPP Fellow (Orlando)  
  “Ionizing Radiation Effects on the Surfaces of Airless Bodies”

3:45 p.m.  Frank Rosenzweig, Ph.D. – NAI Reliving the Past PI  
**Concluding Remarks**

CCE: Center for Chemical Evolution  
CLD: Center for Life Detection  
CRE: Center for Ribosome Evolution  
CSTAR: Center for Space, Technology and Research  
COOL: Center for the Origin of Life  
NPP: NASA Postdoctoral Program  

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