

Gordon State College

The logo for the Undergraduate Research Symposium (URS) is centered below the college name. It features the letters 'U', 'R', and 'S' in a large, blue, serif font. To the right of the 'U' is the word 'ndergraduate' (with the 'U' from 'Undergraduate' being the 'U' in the logo). To the right of the 'R' is the word 'esearch' (with the 'R' from 'Research' being the 'R' in the logo). To the right of the 'S' is the word 'ymposium' (with the 'S' from 'Symposium' being the 'S' in the logo).

**Third Annual
2 April 2014**

Nursing and Allied Health Sciences Building (room 123)

10am Panel

Ahmed Foggie, “Liberty, Fraternity and Equality: The Rise of the Three Pashas and the Fall of an Empire.”

Debbie Vaughan, “Convictions of Conscience: The Ministry and Martyrdom of Jan Hus”

Cory Dees, “The Legacy of the Shang Dynasty”

11am Panel

David S. Cromer, “A Series of Unknowns: How Atheism and Predestination Affected Christopher Marlowe and *The Tragical History of the Life and Death of Doctor Faustus*”

Diana E. Horn, “Outside the Comforts of the Perpetuation of Imagination: Internal Deconstruction in *Fury*”

12pm Panel

Emily Mumford, “Post-secondary education: the next generation of ‘dropout factories’”

Donna Brown, “Common Core School Reform”

Lee Brown, “Race to the Top”

1pm – Break

2pm Panel – Keynote Talk

“The Origin of Life on Earth”

Dr. Loren Dean Williams (Georgia Institute of Technology)

Nature records history, in the night sky, the rock record, the rings of trees, and especially in biological molecules. The RiboEvo Center uses biological molecules to study the history of life over vast timescales. The oldest macromolecules in the natural world, and therefore the focus of our efforts, are assemblies of RNA and protein called ribosomes. Ribosomes are abundant in every living system, from microbe to mouse to mammoth. Ribo Evo is looking beyond the event horizon of conventional paleo-biochemical methods and observing primitive biochemistry of the ancient earth. Studying ancient biological assemblies formed billions of years ago allows us to visualize events near the origin of life. We see that history is destiny – our biochemistry is dominated now and forever more by frozen accidents of the archaic earth.

Loren Williams was born in Seattle, Washington. In 1981 he received his B.Sc. in Chemistry from the University of Washington where he worked in the laboratory of Martin Gouterman. In 1985 he received his Ph.D. in Physical Chemistry from Duke University, where he worked the laboratory of Barbara Shaw. He was an American Cancer Society Postdoctoral Fellow first at Duke then at Harvard. From 1988 to 1992 he was an NIH Postdoctoral Fellow with Alex Rich in the Department of Biology at MIT. He joined the School of Chemistry and Biochemistry at

Georgia Tech in 1992 where is he currently a professor. Loren received an NSF CAREER Award in 1995, and a Sigma Xi Award for best paper from Georgia Tech in 1996. He is director of the [NASA Astrobiology Institute](#) funded Ribo Evo Center. The goal of the Center is to rewind the “tape of life”, to understand and recapitulate macromolecular synthesis, folding, assembly and catalysis of primordial biological systems. The Center uses biology's translation system, which contains an interpretable molecular record of the deep and distant evolutionary past, to understand biology before the last universal common ancestor (LUCA).

3pm Panel – Biology Posters

Lucas Newman and Paul Scott, PLANT DNA BARCODING: AN ONGOING RESEARCH PROJECT AT GORDON STATE COLLEGE.

Ashley Dean, AMPHIBIAN AND REPTILE NEW COUNTY RECORDS IN GEORGIA: 2013

Laura West, SNAKE DISTRIBUTIONS IN GEORGIA: PREDICTED VS ACTUAL PATTERNS

Leah Herring and Joseph Nestor, AN EVALUATION OF THE RELATIVE INFLUENCE OF INSECT ORDERS ON BAT ACTIVITY IN BARNESVILLE, GA

Zachary Burke, ALIGNMENT OF HEDGEHOG, NOTCH AND WNT SIGNALING PATHWAY GENES IN CARTILAGINOUS FISH

Ashley Dean, PRESENCE OF THE HEDGEHOG SIGNALING PATHWAY IN THE NURSE SHARK