Posters will be on Display for the Entire Week.
Presenters are Requested to be Present at Their Poster the Last Half-Hour Break of the Evening.

POSTER SESSION: EVOLUTION:
BEFORE AND AFTER LUCA/EVOLUTION OF METABOLISM
Price Center Ballroom East

Reyes-Prieto F. Hernández-Morales R. Jácome R. Becerra A. Lazcano A.
Coenzymes, Viruses and the RNA World **[#4023]**
Bioinformatic search for homologous sequences involved in ribonucleotidyl-coenzyme biosynthesis has shown that they are absent in RNA viral genomes, indicating that RNA viruses may not be direct holdovers from an ancient RNA/protein world.

Broddrick J. T. Yurkovich J. T. Palsson B. O.
Metabolic Modeling of the Last Universal Common Ancestor **[#4215]**
The origin and diversity of life on earth are intimately linked to metabolic processes. Using recent assessments of early metabolic capabilities, we construct a metabolic model of a primordial organism that could be representative of the LUCA.

Palacios-Pérez M. Andrade-Díaz F. José M. V.
A Proposal of the Ur-Proteome **[#4014]**
We uncover the plausible Ur-proteome encoded in RNY chains. The Ur-proteome obtained worked as Cofactor Stabilising Binding Sites (CSBS), i.e. the primitive bindome. CSBSs were the first proteins modules in progenotes.

Guimaraes R. C.
The Logic that Emerges from the Self-Referential Genetic Code **[#4060]**
The Self-Referential Model for the structure & formation of the genetic code is based on (proto)tRNA Dimer-Directed Protein Synthesis. Peptides that are stable and binders of the (proto)tRNAs evolve into the aminoacyl-tRNA synthetases.

Shannon G. Wei C. Pohorille A.
Exploring the Evolutionary Accident Hypothesis: Are Extant Protein Folds the Fittest or the Luckiest? **[#4181]**
Here we aim to test the "Evolutionary Accident Hypothesis" by attempting to prove the evolvability of a synthetic ATP-binding protein with a fold that is not observed in nature.

Campillo-Balderas J. A. Cruz-González-Luna C. Muñoz-Velasco I. Lazcano A. Becerra A.
Host Phylogeny and Viral Genome Size Suggest that Viruses may be Antique, but not Primitive **[#4047]**
Viruses are not relicts from an ancient RNA/protein World and their origin is related to the phylogeny of their hosts. They may be antique, but not primitive.

Jácome R. Becerra A. Ponce de León S. Lazcano A.
Structural Analysis of Monomeric RNA-Dependent Polymerases **[#4099]**
RNA-dependent polymerases are key enzymes in the viral cycle. They all share a right-hand form with three functional subdomains: palm, fingers and thumb. The palm subdomain might be one of the oldest structural domains in extant cells and viruses.

Jheeta S.
Hypothesis: ncRNA — Cellular Activity Controller? **[#4169]**
This is a hypothesis abstract: ncRNA — cellular activity controller?