

NASA geneLAB workshop

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The International Space Station (ISS) represents a significant achievement in space flight technology that was built to function as an International Laboratory in space. NASA is currently in the planning stages of an ISS "Science Campaign" called geneLAB. The purpose of the campaign is to establish a modern open source science platform for life sciences research on the ISS. The geneLAB campaign serves as a direct response to the recommendations set forth in the National Research Council Life and Physical Sciences Decadal Survey, which called for expanded multi-investigator collaborations that take advantage of new, high-throughput research technologies, such as genomics, proteomics, and metabolomics. NASA has solicited Request for Information (RFI) for the Development of Strategies for the Collection, Management, and Distribution, or access to, 'Omics-type' Data Collected in the Course of Space Biology Research. The goal of the NASA geneLAB workshop is to discuss how NASA might leverage existing resources, identify implementation issues in the program planning, and to identify existing models and best practices for the analysis and collection of Omics data.

Biography

Viktor Stolc is the director of the NASA Ames Genome Research Facility, where he has pioneered the development of large-scale functional genomics projects, including high-resolution tiling arrays for the entire human genome and various model organisms. Prior to joining NASA in 2000, Stolc worked as a Damon Runyon Cancer Research post-doctoral fellow at Stanford University Genome Technology Center (Palo Alto, CA), where he co-invented a method for direct multiplex characterization of genomic DNA. Stolc received his doctoral degree from Yale University School of Medicine, Department of Cell Biology (New Haven, CT), where he identified and characterized the protein components of the human and yeast RNase P enzymes. Defining the time-setting basis of the biochemical reduction-oxidation cycle by a feedback mechanism at the electron transport chain is the subject under investigation.

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