

Bioinformatics Core - Informatics and Analysis Core
Michael F. Miles Ph.D., Principal Investigator
Virginia Commonwealth University, Richmond, VA

The Informatics and Analysis Core (BINFO) will provide several distinct functions to serve INIA-Stress investigators and projects. Because of the scope and diversity of INIA-Stress research projects, the general role of the BINFO will be to provide standardized research support and key integrative functions among the research projects. The BINFO will provide support for experimental design, advanced statistical analysis, data warehousing or database storage, and advanced bioinformatics analysis, including development or adaptation of novel algorithms for analysis of gene networks. The BINFO encompasses investigators at four different institutions (Virginia Commonwealth University, Oak Ridge National Laboratory, University of Tennessee at Knoxville and Vanderbilt University) and will be divided into subcores based upon different disciplines and involve expertise from multiple sites. The subcores and related aims of the BINFO are: 1) Provide a web-based information system (www.iniastress.org) that will have both public and INIA-Stress restriction functions; 2) Provide advanced experimental design and statistical support for all INIA-Stress projects; 3) Provide algorithms and assistance for gene-network annotation (INIAGestalt) analysis and gene network integration across INIA-Stress datasets; and 4) Provide expertise and tools for experimental design, analysis and database management of microarray experiments for INIA-Stress. Altogether the BINFO will provide a forum for both data integration and advanced data analysis across all the primary projects of this proposal. In addition, the tools and resources provided by the BINFO will provide service to the alcohol research community and other biomedical researchers.