Job Description

Job Title:	**Metabolomics Data Analyst**		
Department:	Computational Biology	**Location:**	Madison, WI
Reports To:	Associate Director	**FLSA Status:**	Exempt
Entities Served:	Stemina Biomarker Discovery	**Direct Reports:**	N/A

Company Description

Stemina Biomarker Discovery's pioneering cell based assays arise from the strategic convergence of the groundbreaking technologies metabolomics and human embryonic stem cells. In addition to using stem cell culture systems, Stemina is also developing a disease diagnostic platform using human patient samples to understand the metabolic mechanisms involved in health and diseases such as cancer, autism and others. Stemina provides drug screening, drug discovery and diagnostic development services for pharmaceutical and biotechnology companies under service contracts or joint discovery agreements using its proprietary metabolomics platform.

Job Purpose

The data analyst will be engaged in experimental design and analysis of large scale LC-MS based metabolomics experiments for the identification of biomarkers, creation of predictive models, and biological networks based on interpretation of the results. The position will involve working on both client-based projects as well as internal Stemina platform and discovery efforts. The candidate should have a track record demonstrating the ability to be inquisitive, self-motivated and self-directing, to develop realistic project plans with timelines, and to solve problems using the application of scientific theory.

Essential Job Duties and Responsibilities

- Design and implement the analysis for targeted and discovery based metabolomic experiments.
- Assist in design and execution of scientific metabolomics experiments in collaboration with bioinformatics, analytical chemistry and cell biology staff.
- Evaluate metabolomics and other 'omics' data within a biological context to explain the significance of the results.
- Perform comparative analyses of mass spectrometer derived metabolomic data.
- Develop predictive models based on the results of metabolomics experiments.
- Work closely with biologists and analytical chemists in updating and utilizing multiple sources of biological data.
- Follow established SOPs to analyze targeted and discovery based metabolomic experiments
- Write grant applications in collaboration with other scientific staff.
- Keep and maintain accurate and detailed records of all research and experiments performed.
- Maintain current technical procedures and quality assurance.
- Attend staff and lab meetings.

Qualifications:

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or

ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Education and Experience:

- Ph.D in Statistics, Biostatistics, Mathematics, Computational Biology or, a molecular biotechnology or related discipline with a research focus in the area of statistical or mathematical analysis of 'omics' data.
- A minimum of 3 years post graduate experience designing, analyzing, and interperting large "omics" based data sets preferably in the areas of metabolomics, proteomics, or gene expression.
- Demonstrated experience in the generation of predictive models from experimental "omics" data utilizing univariate, multivariate, and machine learning methods.
- Experience with network or pathway based interpretation of "omics" data.
- Strong background in biology or biochemistry, specifically understanding of the metabolic pathways is required.
- Broad understanding of bioinformatics tools used for analysis of metabolic, gene expression, and protein expression data.
- At least 3 years experience using statistics scripting languages such as R to perform data analysis.

Knowledge, Skills and Abilities Required:

- Effective interpersonal, verbal and written communication skills, including public-speaking and presentation skills.
- Ability to maintain high level of confidentiality.
- Ability to effectively communicate with all levels of the organization.
- Demonstrated ability to work well independently as well as a part of a diverse team.
- Ability to maintain experimental consistency.
- Demonstrated ability to work well under pressure and manage multiple tasks with constantly changing priorities.
- Demonstrated ability to troubleshoot problems and recommend resolutions.
- Knowledge of implementation and design of state-of-the-art algorithms for metabolomic, genomic and metagenomic analysis.
- Advanced analytical, organizational, and record-keeping skills.
- Proficient computer skills: Proficiency with the Windows and Linux operating systems and MS Office.

Contact: Bob Burrier

COO AND VP OF R&D

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