

Job Description

Job Title:	Bioinformaticist-Statistician		
Location:	Madison, WI		
Reports To:	Chief Scientific Officer	FLSA Status:	Exempt
Entities Served:	Stemina Biomarker Discovery, UW	Direct Reports:	N/A

Company Description

Stemina Biomarker Discovery's pioneering cell based assays arise from the strategic convergence of two groundbreaking technologies: human embryonic stem cells and metabolomics. As a result of the research of University of Wisconsin stem cell scientist Dr. Gabriela Cezar, Stemina discovers and validates biomarkers for high throughput diagnostics and drug screening in a human system. Metabolomics enables the discovery of small molecules that can be used as therapeutic agents or candidate biomarkers of pharmacological efficacy or toxicity. The human embryonic stem cell metabolome provides a source of candidate biomarkers to predict, diagnose or measure the progress of disease or toxic response. 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. In addition, Stemina uses mass spectrometry based metabolomics to identify biomarkers for cancer diagnostics and personalized medicine.

Job Purpose

To develop novel tools for bioinformatic analysis of metabolomic data generated by mass spectrometry and to analyze and manage the data in useful biomarker profiles for drug screening, diagnostic tools and potential therapeutic targets. The candidate should have a track record demonstrating the ability to be self-motivated and self-directing, to develop realistic project plans with timelines, and to solve problems using application of scientific theory.

Essential Job Duties and Responsibilities

- Assist in the experimental design of projects.
- Design and implement statistical analysis of metabolomic data.
- Carryout both multivariate and univariate statistics applicable to biomarker discovery and validation.
- Evaluate and development internal data analysis tools to increase the throughput of discovery based experiments.
- Maintain and analyze very large and dynamic datasets.
- Work closely with biologists and analytical chemists.
- Write grant applications at the direction of the Chief Scientific Officer in collaboration with other scientific staff.
- Keep and maintain accurate and detailed records of data analysis procedures and results.
- Contribute to the development of novel algorithms and data visualization tools.

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:

- Masters degree in Biostatistics or related discipline with a background in "omics" type data analysis methods.
- A strong knowledge of statistical programming in R and experience in Matlab or Mathematica. The ability to use Perl and other scripting languages are desired, but not required.
- At least two years experience in bioinformatics research and development, preferably in metabolomic or proteomic data analysis.
- An understanding of mass spectrometry based data analysis and manipulation is desired, but not required.

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 actions.
- 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: knowledge of multiple platforms and operating systems, including MS Office and research software programs.

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