

Job Description

Job Title:	Mass Spectrometry Laboratory Scientist		
Department:	Bioanalytical Technologies	Location:	Madison, WI
Reports To:	Director of Operations	FLSA Status:	Exempt
Entities Served:	Stemina Biomarker Discovery, Inc.	Direct Reports:	N/A

Company Description

Stemina Biomarker Discovery, Inc. is a biotechnology company based in Madison, WI and Cambridge, MA that has developed a robust and reproducible proprietary platform for identifying changes in metabolism (“biomarkers”) utilizing highly sensitive analytical instruments and proprietary technologies and algorithms. This platform allows Stemina to identify biomarkers in human cell cultures by analyzing the small molecules secreted by cells in response to toxic substances or in human samples as a response to a disease or disorder. The potential business applications of this platform are significant and diverse. Currently, Stemina is focused on two different business opportunities:

- **Diagnostic Testing and Related Applications:** Stemina’s platform identifies biomarkers in iPS (Induced Pluripotent Stem) cell models of neurological disorders and human samples to identify markers which can be translated to clinical diagnostics, companion Dx/Rx, individualized treatment recommendations and new potential therapies. The first area Stemina is conducting clinical studies is in patients with autism and other neuro-developmental disorders. In September 2015, Stemina launched its Children’s Autism Metabolome Project (CAMP). The CAMP study is the most comprehensive study of the metabolism of children with autism, and other neuro-developmental disorders ever conducted. This study will result in a panel of validated blood tests for autism which will more accurately diagnose and inform individualized treatment decisions based on the child’s own metabolism.
- **Toxicology and Drug Screening Applications:** Stemina’s marketed tests arise from the strategic convergence of two cutting edge technologies: stem cells and proprietary methods for studying changes in the cell’s metabolism. Stemina uses its proprietary platform to analyze the small molecules secreted by human stem cells, as well as heart and neural cells made from stem cells, in response to compounds known to cause toxicity. These biomarkers are then employed in Stemina’s proprietary tests for testing the safety of new compounds in cell based tests in an all human system. Stemina is currently growing revenue on its product, devTOX, for birth defects and recently obtained a \$10.6M contract from the U.S. Environmental Protection Agency (EPA) to test drugs and chemicals using its devTOX test. Other Stemina clients include major pharmaceutical, chemical, cosmetics and tobacco companies both in the US and Europe. In addition, Stemina has a cardiotoxicity test in development using heart cells made from iPS cells.

Job Purpose

The Laboratory Scientist will work across Stemina business lines to support both production assays and research projects to achieve overall Stemina business objectives. The individual will develop and perform sample preparation and LC-MS methods (HPLC/UPLC, ESI-TOF-MS, and MS-MS mass spectrometry) to separate, detect and identify small molecules (biomarkers) present *in vitro* (stem cells and stem cell-derived differentiated cells) and biofluids (serum, urine, CSF, saliva, etc) as a result of toxicity or disease. The Laboratory Scientist reports to the VP for R&D as well as the CLIA Laboratory Supervisor for analysis of clinical samples.

Essential Job Duties and Responsibilities

- Organizes and conducts analyses in compliance with applicable methods, protocols, and SOPs in support of CLIA sample analysis, toxicity screening and biomarker assays.
- Inform Project Leader and/or management of any problems and/or deviations that may affect the integrity of the data and participates in corrective action of problems.
- Operation and routine maintenance of mass spectrometers (LC-MS systems).
- Maintain training and demonstrate assay ongoing proficiency for CLIA assays
- Assist with review/modification/troubleshooting/execution of experimental plans.
- Represent the Bioanalytical Team on cross-functional company and client projects.
- Keep and maintain accurate and detailed records of all research and experiments performed in a laboratory notebook and LIMS.
- Prepare high quality scientific reports for internal and external oral presentation.
- Contribute to vision for long-term planning and laboratory growth.
- Laboratory duties such as chemical solution and sample preparation, lab cleanup and organization, chemicals and supplies inventory and ordering and others.
- 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:

- B.S. or M.S. in biochemistry or chemistry (preferred), or biology, or related discipline.
- At least 3 years of laboratory work experience (not including coursework) with mass spectrometers.
- Practical lab experience and knowledge of biological and small molecule sample prep and handling. Experience in performing sample analysis in a regulated/CLIA lab is a plus.
- Good knowledge of and prior experience in MS data acquisition and processing using MS vendor software (Agilent is preferred but not required) and Excel.
- Practical work experience with laboratory equipment such as balances, pH meters, centrifuges, speed-vac concentrators, micropipettes, etc.
- Demonstrated ability to write and follow SOPs for analytical procedures.
- Experience in MS instrumentation maintenance and trouble-shooting is required.

Knowledge, Skills and Abilities Required:

- Effective interpersonal, verbal and written communication 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.
- Proficient computer skills: knowledge of Microsoft Windows operating systems and software, including MS Office and research software programs. This includes the ability to work and manipulate data in a multi-computer LAN/Server environment.
- Good knowledge and practice of laboratory safety procedures.
- Good knowledge and experience with chemistry principles such as chemical weighing, stoichiometry, molarity, dilution, etc.

- Demonstrated ability to work well under pressure and manage multiple tasks with constantly changing priorities.
- Demonstrated ability to troubleshoot problems and recommend actions.
- Good analytical, organizational, and record-keeping skills.

Contact:

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