**GENERIC JOB SUMMARY**

**JOB TITLE:** RESEARCH POSTDOCTORAL SCIENTIST

**JOB PURPOSE:** The Research Postdoctoral Scientist position is to enhance professional skills under the mentorship of a principal investigator/scientist/professor. The incumbent plans and conducts assigned and/or original research projects autonomously while working collaboratively with faculty, staff, post docs, and students. The Research Postdoctoral Scientist will work on numerous mass spectrometry based metabolomics projects investigating a variety of neurodegenerative diseases.

**MAIN ACTIVITIES/RESPONSIBILITIES:**

- Conduct research involving LC-MS metabolomics, and apply these techniques to the study of human diseases.
- Perform metabolite analyses on biofluid and tissue specimens using accurate mass LC-Orbitrap-MS including sample preparation, data acquisition and data processing with commercial and in-house software.
- Perform metabolite analyses on biofluid and tissue specimens using commercially available kits (Biocrates) for in-house and fee for service studies using a Waters TQ-S coupled with an Acquity I-Class chromatography unit.
- Design, develop and refine experimental protocols to differentiate disease states from control groups.
- Operate, maintain and troubleshoot issues with liquid chromatography, mass spectrometers and auxiliary instruments.
- Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
- Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
- Assist grant holder in the preparation of funding proposals and applications to external bodies.
- Carry out routine administrative tasks associated with the research project/s to ensure those project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
- Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

**PLANNING AND ORGANISING:**

- Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.
- Plan for the use of research resources, laboratories and workshops where appropriate.
- Plan own day-to-day activity within framework of the agreed research programme.
- Plan up to a year in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
- Coordinate and liaise with other members of the research group over work progress.

**RESOURCE MANAGEMENT RESPONSIBILITIES (e.g. finance, people, equipment, etc):**

- Ensure research resources are used in an effective and efficient manner.
- Provide guidance as required to support staff and any students who may be assisting with research.
- Contribute to commercial study contracts.

**INTERNAL AND EXTERNAL RELATIONSHIPS:**

- Liaise with research colleagues and support staff on routine matters.
- Make internal and external contacts to develop knowledge and understanding and form relationships for future collaboration.
- Attend and contribute to relevant meetings

**QUALIFICATIONS, KNOWLEDGE, SKILLS AND EXPERIENCE:**

**Education / Training:** PhD, MD or DO and basic laboratory research experience required.

**ESSENTIAL CRITERIA:**

1. At least 3 years’ experience of using and maintaining mass spectrometers.
2. Understanding of the issues pertaining to LC-MS analysis of small molecule metabolites.
3. Have experience using Biocrates based kits with Waters equipment.
4. Capable of developing and optimizing chromatography methods for a range of
metabolites/tissues, whether that is targeted or untargeted analyses.
5. Comfortable working with a range of biological specimens.
6. Experience working with animal models.
7. Capable of multitasking and prioritizing work.
8. Strong work ethic, clear thinker and strong sense of urgency.
9. Strong Interpersonal skills.
10. Ability to work seamlessly as part of a diverse and multidisciplinary team (scientists and physicians).
11. Demonstrate a willingness to teach others in the lab/research institute.

DESIRABLE CRITERIA:
1. A background in metabolomics research.
2. A background in neurodegenerative disease research.
3. Hands-on experience in applying LC-MS (Orbitrap-MS) to untargeted and targeted (Waters TQ-S) small molecule metabolite analysis.
4. Experience with 1H NMR metabolomics.
5. Hands-on experience in using chemical/metabolomics databases to identify unknown metabolites.
6. Hands-on experience with multivariate statistical software packages (e.g. SIMCA, MATLAB, R etc.).
7. Experience attracting external funding.

For further information please contact Dr. Stewart Graham (stewart.graham@beaumont.org).

Apply online: https://www.beaumont.org/careers

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Company Information:
Beaumont Health is Michigan's largest health care system (based on inpatient admissions and net patient revenue) formed in 2014 to provide patients with compassionate, extraordinary care, no matter where they live in Southeast Michigan. Our culture of caring partnerships and care delivery model of patient and family-centered care demonstrates our commitment to engaging our patients, their family, and our community to promote continuous health care improvements.

With eight hospitals, 168 health centers, nearly 5,000 physicians and 35,000 employees, Beaumont Health contributes to the health and well-being of residents throughout southeast Michigan and beyond. Beaumont is an academic health system with numerous residency and fellowship programs. Beaumont research is heavily oriented towards translational research, investigating new treatments, pharmaceuticals and scientific approaches aimed at enhancing the excellence and safety of patient care.