

## Experimental Officer in Metabolomics - School of Biosciences – 99212

### Position Details

- Phenome Centre Birmingham, School of Biosciences
- Location: University of Birmingham, Edgbaston, Birmingham UK
- Full time starting salary is normally in the range of £34,980 to £44,263, with potential progression to £46,974 Grade 7
- Full Time Fixed Term Contract, 2-year post with potential for extension
- Closing date: 30<sup>th</sup> of November 2023

### Background

The post has been created by an exciting collaboration between [Phenome Centre Birmingham](#) and the [Horizon 2020 PrecisionTox](#) consortium and will contribute to fulfilling their shared research objectives with a focus on applying mass spectrometry metabolomics to study human health and toxicology.

Over the past 7 years, **Phenome Centre Birmingham (PCB)** has built an international reputation specialising in toxicological and biomedical metabolomics to improve our mechanistic understanding of the effects of chemicals and disease on human health, and to identify predictive biomarkers. The centre implements and delivers state-of-the-art metabolomics research services to academia, industry, and government, both locally, nationally and internationally. The PCB contributes significantly to the University of Birmingham's international reputation in metabolomics, enabling it to undertake high-impact (inter)national projects that benefit the global population.

The 20 million Euro **PrecisionTox project**, led by the University of Birmingham and involving 15 European and US organisations, blends advanced molecular and computational approaches with law and economics to establish a new cost-effective testing paradigm for assessing the safety of chemicals. The PrecisionTox project seeks to revolutionise toxicology, replace animal testing, and reduce uncertainty in chemical safety assessment. Metabolomics lies at the heart of PrecisionTox, with the PCB providing all of the metabolic phenotyping capability for the world's largest comparative, multi-omics toxicological study.

### Summary of Role

The post holder will primarily be involved in the application of LC-MS metabolomics to multiple toxicological and human health related projects in the Phenome Centre Birmingham, working with eight others in the team whose expertise spans analytical chemistry, bioinformatics and biostatistics to metabolic biochemistry and toxicology. The successful applicant must be highly motivated to contribute to fulfilling the objectives of both the PCB and the PrecisionTox project.

The post will focus on applying high-throughput analytical methods, including advanced robotic sample preparation and state-of-the art hybrid LC-MS metabolomics assays that combine untargeted analyses with targeted measurements of metabolic biomarkers. The metabolomics will be conducted under QA/QC within a CRO-like environment. Sample types that will routinely be analysed include human cell lines, tissues and

biofluids, as well as multiple model organism extracts (*C. elegans*, *Drosophila*, Zebrafish, *D. magna*, *Xenopus*). The post will involve collaborations with scientists within and external to the University of Birmingham (academic, industry, scientific instrument manufacturers), including with other members of the PrecisionTox consortium. It will initially be for 2 years with potential for extension.

This post is one of two currently being recruited (the other being Research Associate in Metabolomics, (102786); please note that only one of these posts will be filled.

### **Main Duties/Responsibilities**

- Perform metabolomics and lipidomics analysis (metabolic phenotyping) by applying hybrid LC-MS(/MS) assays - that combine untargeted and targeted analysis - to various biological sample types related to toxicology and human health.
- Perform sample preparation methods, both manual and using state-of-the-art Beckmann Coulter robotics platforms. The focus is to maximise metabolite extraction while enabling high-throughput sample handling of low biomass samples.
- Maintain accurate and comprehensive records of protocols and procedures applied during study planning, sample preparation, and LC-MS data acquisition – all within a QA/QC environment.
- Ensure optimal operation of PCB instrumentation, including routine maintenance and troubleshooting instrumental problems, to meet goals in a timely and efficient manner.
- Potential to implement novel metabolic phenotyping methodologies to enhance the capabilities and capacity of the PCB.
- Work with the PCB scientific leads and business manager to achieve the objectives of the PCB and manage the expectations of collaborators.
- Apply rigorous and effective project planning and project management, from sample arrival through to assisting with reports to collaborators.
- Contribute to the dissemination of high-quality research in peer-reviewed journals, scientific conferences and to the general public.
- Potential to provide training, where needed, in liquid chromatography and mass spectrometry within the PCB and/or the School of Biosciences.
- Carry out administrative tasks related directly to the delivery of the analytical laboratory work.

### **Person Specification**

- First degree in chemistry/biochemistry (or equivalent field)
- Higher degree (Masters or PhD) in (bio)analytical chemistry or equivalent work-related experience (essential)
- Experience of working in an industrial (e.g. CRO), government or academic laboratory with a focus on liquid chromatography-mass spectrometry for the analysis of small molecules. (essential)
- Hands-on skills in LC-MS, preferably with experience with Thermo Scientific instrumentation. (essential)
- Hands on experience of sample preparation for mass spectrometry.
- Be highly organised with an attention to detail and accuracy.
- Ability to communicate complex information clearly and efficiently.
- Detailed knowledge of laboratory safety and QA/QC practices.



- Good intellectual reasoning.
- Ability to assume responsibility.
- Excellent interpersonal skills for working within the large PCB team.

**Apply**

Apply directly online:

[https://edzz.fa.em3.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX\\_6001/job/3458/?utm\\_medium=jobshare](https://edzz.fa.em3.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX_6001/job/3458/?utm_medium=jobshare)

Informal enquires to Prof Mark Viant ([m.viant@bham.ac.uk](mailto:m.viant@bham.ac.uk)) and Dr Andrew Southam (<mailto:a.d.southam@bham.ac.uk>)

***Valuing excellence, sustaining investment***

***We value diversity and inclusion at the University of Birmingham and welcome applications from all sections of the community and are open to discussions around all forms of flexible working.***

