

## Postdoctoral Fellow, GC-MS Metabolomics

The Olivier Lab at the Center for Precision Medicine at Wake Forest University Health Sciences in Winston-Salem, NC (<https://www.wfcenterforprecisionmedicine.com/new-page-1>) has an NIH-funded position for a postdoctoral fellow to conduct mass spectrometry-based analyses of plasma and tissue metabolites as part of several ongoing studies (e.g. NIH U19AG057758 and NIH U54DA049113). The position will be part of the metabolomics efforts at the Center for Precision Medicine, that houses multiple state-of-the art equipment including several high resolution GC-MS and LC-MS instruments. The position is available immediately.

The Center for Precision Medicine (<https://www.wfcenterforprecisionmedicine.com/>) was founded in 2017, and has over 60 faculty members focusing on basic and translational research of human disorders, with a special emphasis on state-of-the-art integrated multi-omics characterizations of clinical and model organism samples. Studies focus on cardiometabolic disorders, aging, Alzheimer's Disease, cancer, and pain/drug addiction.

The Olivier laboratory uses untargeted and targeted metabolomics along with various model systems for biomedical research, and has established GC-MS approaches in recent years for discovery metabolomics (for references, please see PMID:30951537, PMID:30830353, PMID:29874398). The team develops and employs diverse open source tools and methods to integrate metabolomics data sets with proteomics, lipidomics, genomics, and transcriptomics for multi-omics/ integrated omics efforts in both clinical and basic research.

**Expertise:** A PhD in Biochemistry, Analytical Chemistry, Metabolomics, with demonstrated experimental experience with mass-spectrometry and metabolomics is required. Preference will be given to individuals with expertise in GC-MS analysis. Applicants need to be familiar with common statistical and analytical computational tools for metabolomics. This includes metabolite annotation tools, (e.g. the xcms package), open source metabolomics data processing and annotation analysis tools (e.g. MS-DIAL, MZMine, AMDIS, MS-FINDER, OpenMS), commercial tools (e.g. Compound Discoverer, XCalibur, TraceFinder) and data visualization tools (such as Cytoscape or Gephi). Experience with generating in house libraries of compounds and handling multiple libraries for enhanced annotation for unknown discovery will be a key aspect of the position.

Basic laboratory skill sets (sample storage, handling, extraction, derivatization) for acquiring metabolomics data from samples of diverse biological origin (such as plasma, serum, tissue biopsies, urine, fecal samples, or breath) are expected. Familiarity with GC-MS instruments, preferably high-resolution instruments such as QE-Orbitrap-MS (Thermo Fischer Scientific)/ GC-ToFs used for high quality GC-EI data generation would be beneficial.

**How to apply:** Please send your CV, a cover letter summarizing your expertise and past experience, and the names and contact information for 3 references that can discuss your mass spectrometry and metabolomics expertise to

**Dr. Michael Olivier**  
Center for Precision Medicine  
Wake Forest University Health Sciences  
Winston-Salem, NC  
molivier@wakehealth.edu