

## POSITION DESCRIPTION

**Job title:** Postdoctoral Scholar in Biocomputing / Statistics Applied to Gut-brain Axis Datasets

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The David Lab in the Department of Microbiology at Oregon State University seeks a motivated postdoctoral researcher with a background in data science and machine learning and an interest in microbiology or neuroscience. The lab studies the gut-brain axis to understand how microbes can impact our behavior (in Autism Spectrum Disorder or Anxiety for example). We use crowd-source lifestyle type information, diet habits, and samples. We also work with murine models and starting zebrafish behavioral assay with collaborators. We combine 16S amplicon data with multi-Omics (meta-transcriptomics, genomics, -proteomics, metabolomics), as well as electrophysiological recordings. We develop novel methodologies for their annotation and analysis, and optimize molecular methods to unravel the pertinent microbial mechanisms at play.

PI: Dr. Maude M. David: [maude.david@oregonstate.edu](mailto:maude.david@oregonstate.edu)

<https://davidlab.science.oregonstate.edu/>

### Responsibilities for this position include:

- Leading in the development of computational tools and resources/databases to analyze microbial datasets, impact on host physiology, and associated metadata.
- Working with experimentalists to analyze datasets, validate and address findings.
- Leading in the conception and implementation of new studies investigating properties of main microbial players.
- Monitoring and evaluate analytical aspects of new and emerging technologies.
- Write and submit publications .
- Apply for fellowships.

### Required Qualifications:

- Ph.D. in bioinformatics, machine learning, data science or related discipline.
- Proven understanding and experience designing algorithms for small and large datasets.
- Strong understanding of statistical inference.
- Experience with Linux/Unix/HPC environment.
- Programming skills with proficiency in Python, Java, and/or R.

### Preferred Qualifications:

- Experience with biological datasets (sequencing), even familiarity with microbiome analysis.
- Capability of working independently as well as part of a team, in an academic setting.
- Ability to present/visualize outputs to multidisciplinary audience.

**Required Application Materials:**

- CV
- Statement of interest
- List of references

Application materials should be sent to Dr. Maude M David: [maude.david@oregonstate.edu](mailto:maude.david@oregonstate.edu).

Oregon State University is an Affirmative Action / Equal Opportunity Employer.

**Position Available:** Immediately, start can be delayed until summer 2019