

**Postdoctoral Scholar: Computational Fluid Dynamic Modeling & Systems Microbiology of Gastrointestinal Systems**

Departments of Animal Science and Biological & Agricultural Engineering  
University of California, Davis

The Bornhorst and Hess Labs in the Department of Biological & Agricultural Engineering and the Department of Animal Science at the University of California, Davis seek applications for a Postdoctoral Scholar in the area of computational fluid dynamic modeling of complex fluid flows applied to microbiome analysis in gastrointestinal systems. The position is initially for 12-months at 100% FTE with potential of an extension based on performance. The posting will remain open until a suitable candidate has been identified. ***Initial review of applications will occur on March 31, 2017 with a start date as early as April 15, 2017.***

**POSITION DESCRIPTION:** The successful candidate will work on an interdisciplinary project in the Departments of Biological & Agricultural Engineering and Animal Science under the supervision of Profs. Bornhorst and Hess. The primary responsibility of the candidate will be to develop computational fluid dynamic models of complex fluid flows found in *in vivo* and *in vitro* systems as well as mentor students in the development of experimental models and analyses of these systems. The candidate is expected to write manuscripts and present research findings in appropriate venues. The candidate will report to Profs. Bornhorst and Hess and will collaborate closely with other postdoctoral scholars, graduate, and undergraduate students in both labs. Additional information about the research conducted in the Bornhorst and Hess Labs can be found at <https://faculty.engineering.ucdavis.edu/bornhorst/> and [www.HessLab.com](http://www.HessLab.com), respectively.

**BASIC QUALIFICATIONS:** The minimum qualification required is a PhD in Biological or Chemical Engineering or related field by time of application; PhD in Microbiology, Microbial Ecology, or other related discipline with strong engineering/computational experience acceptable. Strong oral and written communication skills necessary. Experience in molecular microbiology or molecular biology techniques preferred.

**ADDITIONAL QUALIFICATIONS:** Experience with computational fluid dynamic modeling, molecular biology or microbiology techniques, familiarity with GC analysis.

**PREFERRED QUALIFICATIONS:** Experience with bioreactors, experience with analysis of 16S rRNA profiles, experience with QIIME, experience with metagenome and metatranscriptome analysis.

**APPLICATIONS:** Application materials must be submitted to [gbornhorst@ucdavis.edu](mailto:gbornhorst@ucdavis.edu). The position will remain open until filled. To ensure consideration, application materials should be received by March 31, 2017.

**MATERIALS REQUESTED TO INCLUDE:** To apply, please send the following application materials:

- 1) Cover letter
- 2) Curriculum vitae
- 3) Writing sample (most significant publication)
- 4) Names of 3 references

**QUESTIONS:** Please direct questions to Prof. Bornhorst ([gbornhorst@ucdavis.edu](mailto:gbornhorst@ucdavis.edu)).