

ADINA CHUANG HOWE, Ph.D.

Email: adina@iastate.edu • adina.github.com

EDUCATION

- 2005 – 2009 University of Iowa, Iowa City, IA
Ph.D., Dept. of Environmental Engineering and Science
Advisor: Timothy Mattes
Doctoral dissertation: *Proteomic investigations of vinyl chloride-assimilating bacteria: from pure cultures to the environment*
- 2003 – 2005 Purdue University, West Lafayette, IN
M.S., Dept. of Civil and Environmental Engineering
Advisors: Larry Nies and Suresh Rao
Thesis: *Life cycle analysis of impacts of new construction*
- 1999 – 2003 Purdue University, West Lafayette, IN B.S., Dept. of Mechanical Engineering

RESEARCH EXPERIENCE

- January, 2015 Iowa State University, Ames, IA
Assistant Professor, Agricultural and Biosystems Engineering
Genomics and Environmental Research in Microbial Systems
<http://germslab.org>
- 2013 – present Argonne National Laboratory, Argonne, IL
Assistant Computational Biologist, Computing and Life Sciences
Project: *Metagenomic analysis of soil and human gut microbial communities*
- 2012 – present Michigan State University, East Lansing, MI
Adjunct Faculty, Dept. of Microbiology and Microbial Genetics
- 2012 – 2013 Argonne National Laboratory, Argonne, IL
Post-doctoral Researcher, Computing and Life Sciences
- 2009 – 2012 Michigan State University, East Lansing, MI
Post-doctoral Fellow, Dept. of Microbiology and Microbial Genetics
Advisors: C. Titus Brown and James Tiedje
Project: *Metagenomic investigations of soil microbial systems*
- 2007 Chinese Academy of Sciences, Beijing, China
Research Center for Eco-Environmental Sciences Supervisor: Guibin Jiang
Project: *Development of vitellogenin protein biomarkers for endocrine disrupting chemicals in zebrafish*

SELECT PUBLICATIONS

1. Aw, T.G., **Howe, A.**, and Rose, J. Metagenomic approaches for direct and cell culture evaluation of the virological quality of wastewater. 2014. *Journal of virological methods* 210(15):15-21. doi:10.1016/j.viromet.2014.09.017 <http://www.sciencedirect.com/science/article/pii/S0166093414003723>
2. **Howe, A.C.**, Jansson, J., Malfattie, S., Tringe, S., Tiedje, J., and Brown, C.T. 2014. Tackling soil diversity with the assembly of large, complex metagenomes. *PNAS*. Accepted February 11, 2014. doi:10.1073/pnas.1402565111. <http://www.pnas.org/content/early/2014/03/13/1402564111.short>
3. Vital, M, **Howe, A.C.**, and Tiedje, J. 2014. Revealing the bacterial butyrate-synthesis pathways from (meta)genomic data. *mBio* 5(2):e00889-14. doi: 10.1128/mBio.00889-14. *Featured in Faculty of 1000 Prime*. <http://mbio.asm.org/content/5/2/e00889-14>
4. Pell, J., Hintze, A., Canino-Koning, R., **Howe, A.C.**, Tiedje, J.M., and Brown, C.T. 2012. Scaling metagenome sequence assembly with probabilistic de Bruijn graphs. *PNAS* 109(33):13272-13277. doi:10.1073/pnas.1121464109. <http://www.pnas.org/content/109/33/13272.full>
5. **Chuang, A.S.**, Jin, Y.O., Schmidt, L.S., Li, Y., and Mattes, T.E. 2010. Proteomic analysis of ethene-enriched groundwater microcosms from a vinyl chloride-contaminated site. *Environ. Sci. Technol.* 44(5):1594-1601. doi: 10.1021/es903033r. <http://pubs.acs.org/doi/abs/10.1021/es903033r>
6. **Chuang, A.S.** and Mattes, T.E. 2007. Identification of polypeptides expressed in response to vinyl chloride, ethene, and epoxyethane in *Nocardioides* sp. strain JS614 by using peptide mass fingerprinting. *Appl. Env. Microbiol.* 73(13):4368-4372. doi: 10.1128/AEM.00086-07. <http://aem.asm.org/content/73/13/4368.full>