

Chengsheng Zhu

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Rutgers University, School of Environmental and Biological Sciences
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EDUCATION

Rutgers, the State University of New Jersey, New Brunswick, NJ

Ph.D., Microbiology and Molecular Genetics

2010-2017

Tentative Dissertation Title: Functional analysis of microbial genomes and metagenoms

Advisors: Yana Bromberg

Committee: Max Häggblom, Jeff Boyd, Vikas Nanda

Central Michigan University, Mt. Pleasant, MI

M.S., Biology

2008-2010

Dissertation Title: Prokaryotic diversity in the four stomach chambers of white tailed deer

Advisors: Peter Kourtev

Committee: Gregory Colores, Bradley Swanson

Fudan University, Shanghai, China

B.S., Biology

2006

Dissertation Title: The bacterial and fungal diversity in biofilms on pool sand filters

Advisors: Zhexue Quan

HONORS

The best oral presentation award from Theobald Smith Society meeting

2015

The best oral presentation award from Theobald Smith Society meeting

2014

Travel scholarship from Department of Biochemistry and Microbiology

Rutgers MBS program 1st year fellowship

2010

Central Michigan University summer scholar

2009

PROFESSIONAL ACTIVITY

Member, **American Society for Microbiology**

2009-Now

Member, **International Society for Computational Biology**

2013-Now

Member, **Asia Pacific Bioinformatics Network (APBioNET)**

2015-Now

TEACHING

Rutgers, the State University of New Jersey, New Brunswick, NJ

Tools for genomic analysis (Teaching Assistant)

2016-2017

Rutgers, the State University of New Jersey, New Brunswick, NJ

Nucleotide Sequence Analysis (Teaching Assistant)

2015

Rutgers, the State University of New Jersey, New Brunswick, NJ

Bioinformatics (Lab Instructor/part-time lecturer)

2014-2017

PUBLICATIONS

- Functional sequencing read annotation for high precision microbiome analysis.* **Zhu C**, Miller M, Marpaka S, Vaysberg P, Rühlemann MC, Wu G, Heinsen F-A, Tempel M, Zhao L, Lieb W, Franke A, Bromberg Y. *Nucleic Acids Res.* In Press.
- fusionDB: assessing microbial diversity and environmental preferences via functional similarity networks.* **Zhu C**, Mahlich Y, Miller M, Bromberg Y. *Nucleic Acids Res.* 2017 Nov.
- CLuBBer, removing the bioinformatics bottleneck in big data analysis.* Miller M, **Zhu C**, Bromberg Y. *Journal of Integrative Bioinformatics.* 2017 Jun.
- Functional Basis of Microorganism Classification.* **Zhu C**, Delmont TO, Vogel TM, Bromberg Y. *PLoS. Comput. Biol.* 2015 Aug.
- From mesophilic to thermophilic digestion: The transitions of anaerobic bacterial, archaeal and fungal community structures in sludge and manure samples.* Sun W, Yu G, Louie T, Liu T, **Zhu C**, Xue G, Gao P. *Appl. Microbiol. Biotechnol.* 2015 Aug.
- Mercury Resistance and Mercuric Reductase Activities and Expression among Chemotrophic Thermophilic Aquificae.* Freedman Z, **Zhu C**, Barkay T. *Appl. Environ. Microbiol.* 2012 Sep.

TALKS

- rHSSP, annotate metagenome reads with high accuracy***
Fermentation club, Rutgers University, New Brunswick, NJ, USA 2016
- Functional basis of microorganism classification***
GIW/InCoB, Highlight track, Tokyo, Japan 2015
- GenSpec, genome-based species identification for archaea***
Theobald Smith Society meeting, New Brunswick, NJ, USA 2014
- GenSpec, the prokaryotic taxonomy mapper***
Theobald Smith Society meeting, New Brunswick, NJ, USA 2012

POSTERS

- Zhu C**, Mahlich Y, and Bromberg Y. *FusionDB: Assessing Microbial Diversity and Environmental Preferences Via Functional Similarity Networks* RU Symposium '2017
- Zhu C**, Delmont TO, Vogel TM and Bromberg Y. *Functional basis of microorganism classification* RU Symposium '2016
- Zhu C** and Bromberg Y. *GenSpec, genome-based species identification tool for archaea.* ISMB '2014
- Zhu C**, Surowiec C, Weaver M, Swanson BJ and Kourtev PS. *Prokaryotic diversity in the four stomach chambers of white tailed deer* ASM '2009

Art in Science

- Zhu C**, Delmont TO and Eren AM. *Function network of eight soil metagenomic samples* ISMB '2014