**Edna Chiang**  
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**EDUCATION**

**University of Wisconsin-Madison** Madison, WI  
 - 3rd year PhD student, Microbiology Doctoral Training Program *Sep 2016 - Present*  
 - Microbiology Major, Life Sciences Communication and Biotechnology Minors GPA: 4.00/4.00   
 - Advisors: Dr. Garret Suen and Dr. Hannah Carey   
**University of Michigan**  Ann Arbor, MI  
 - BS with High Distinction in Microbiology (High Honors) and Spanish (double major) *Graduation: Apr 30, 2015* - Honors Thesis: Ecology of Verrucomicrobia in a Freshwater Estuary

**RELEVANT GRADUATE COURSEWORK**

Public Opinion of Life Science Issues Communicating Science with Everyone  
Scientific Writing Writing Science as a Story   
Current Issues in Microbiology Improv for Scientists

**PROFESSIONAL EMPLOYMENT**

***Graduate Research Assistant,* Dr. Garret Suen and Dr. Hannah Carey**,University of Wisconsin-Madison  
 - Investigated microbe-host interactions in hibernating mammals to understand the link *Jan 2017 – Present*  
 between bacterial taxonomy and function  
 - Worked with an interdisciplinary team to perform *in vivo* stable isotope assisted labeling experiments  
 - Increased bioinformatics proficiency by analyzing amplicon sequencing and metagenomic data  
***Undergraduate Researcher / Lab Technician*, Dr. Vincent Denef**, University of Michigan *Sep 2012 – Aug 2016*  
 - Studied freshwater microbial ecology to understand the role of bacteria in Great Lakes carbon cycling  
 - Optimized fluorescent *in situ* hybridization microscopy protocol, extracted DNA/RNA, prepared samples  
 for amplicon sequencing, created cultures, collected water and sediment sample from the Great Lakes  
 - Applied statistical and bioinformatics techniques to analyze bacterial 16S rRNA data using mother and R  
***Biochemistry Study Group Leader*, Science Learning Center**, University of Michigan *Sep 2013 – Apr 2015*  
 - Created engaging activities to help students enhance their understanding of biochemistry  
 - Cultivated strong sense of community to encourage collaborative discussion between students

**SCIENTIFIC PUBLICATIONS**

Regan MD, **Chiang E**, Martin SL, Porter WP, Assadi-Porter FM, Carey HV. (2019) Shifts in metabolic fuel use coincide  
 with maximal rates of ventilation and body surface rewarming in an arousing hibernation. *Am. J. Physiol. Regul.  
 Integr. Comp. Physiol.* (*In press*). **Chiang E**, Schmidt ML, Berry MA, Biddanda BA, Burtner AM, Johengen TH, Palladino D, Denef VJ  
 (2018) Verrucomicrobia are prevalent in north-temperate freshwater lakes and display class-level  
 preferences between lake habitats. *PLoS ONE* 13(3):e0195112. doi:10.1371/journal.pone.0195112   
Schmidt ML, Biddanda, BA, Weinke AD, **Chiang E**, Januska F, Props R, Denef VJ (2017) Microhabitats shape  
 diversity-productivity relationships in freshwater bacterial communities. *bioRxiv*.   
Denef VJ, Carrick HJ, Cavaletto J, **Chiang E**, Johengen TH, Palladino D, Vanderploeg HA (2017) Lake  
 bacterial assemblage composition is sensitive to biological disturbance caused by an invasive filter  
 feeder. *mSphere* 2:e00189-17. doi:10.1128/mSphere.00189-17  
Denef VJ, Mueller RS, **Chiang E**, Liebig JR, Vanderploeg HA (2016) Chloroflexi CL500 11 populations  
 that predominate deep lake hypolimnion bacterioplankton rely on nitrogen-rich DOM metabolism  
 and C1 compound oxidation. *Appl. Environ. Microbiol.* 82(5):1423-1432. doi:10.1128/AEM.03014-15.  
McCarthy A, **Chiang E**, Schmidt ML, Denef VJ (2015) RNA Preservation Agents and Nucleic Acid  
 Extraction Method Bias Perceived Bacterial Community Composition. *PLoS ONE* 10(3):e0121659.  
 doi:10.1371/journal.pone.0121659

**SELECTED SCIENTIFIC PRESENTATIONS**

Presentation, “Winter is Coming: A Stark Look at the Hibernator Microbiota.” Microbiology Doctoral Training  
 Program Student Seminar, Sep 26, 2018, Madison, WI.  
Poster, “The hibernating squirrel microbiome responds to seasonal dietary shifts by altering its functional potential.”  
 17th International Symposium on Microbial Ecology, Aug 12, 2018, Leipzig, Germany.  
Poster, “Ecology of Verrucomicrobia in a Freshwater Estuary.” American Society of Microbiology General Meeting,  
 Jun 2, 2015, New Orleans, LA.

**SCIENCE COMMUNICATION EXPERIENCE**

*Invited Speaker*, Science On Tap – Minocqua *Jan 2, 2019*  
 - Presented two stories about hibernation from the perspective of a hibernating squirrel and its gut microbes  
 - Engaged in informal discussion with local Minocqua, WI residents about implications of hibernation research *Gaining STEAM! Scientist*, JKX Comics, University of Wisconsin-Madison  *Oct 2018 – Present* - Created a comic book about hibernation microbiology by integrating science, story-telling, and art through  
 a collaboration with JKX Comics and local Madison artists  
 - Incorporated the comic into outreach activities to improve participant engagement and learning *Wisconsin Idea STEM Fellow*, University of Wisconsin-Madison *Jun 2018 – Present* - Learned interactive teaching strategies and outreach evaluation techniques  
 - and Designed implemented an interactive hibernation microbiology outreach activity for elementary  
 school-aged children  
 - Worked with fellows-in-training to develop and improve their outreach activities  
***Designer and Volunteer*, Science Saturday**, University of Wisconsin-Madison *Sep 2017 - Present* - Co-developed and executed outreach activities to teach hibernation physiology and microbe-host interactions  
 to Madison children in elementary through high school  
 - Collaborated with the Wisconsin Institute for Discovery and the Morgridge Research Institute

**SELECTED AWARDS**

- NSF Graduate Research Fellowship *Sep 2018 – Aug 2023*  
- NIH Biotechnology Training Program Traineeship *Jan 2017 – Aug 2019*

- University of Wisconsin-Madison Student Research Travel Grant *Sep 2018*

- American Society of Microbiology Undergraduate Research Fellowship *May 2014 – Dec 2014*- Beckman Scholars Fellowship *May 2014 – Aug 2015*