**Edna Chiang**  
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**EDUCATION**

**University of Wisconsin-Madison** Madison, WI  
 - PhD Student, Microbiology Doctoral Training Program, Department of Bacteriology *Sep 2016 - Present*  
 - Advisors: Dr. Garret Suen and Dr. Hannah Carey  
**University of Michigan**  Ann Arbor, MI  
 - Bachelor of Science with High Distinction *Graduation: Apr 30, 2015* - Microbiology (High Honors) and Spanish GPA: 3.85/4.00  
 - Honors Thesis: Ecology of Verrucomicrobia in a Freshwater Estuary

**SCIENTIFIC PUBLICATIONS**

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*.  
**Chiang E**, Schmidt ML, Berry MA, Biddanda BA, Burtner AM, Johengen TH, Palladino D, Denef VJ  
 (*Submitted*) Verrucomicrobia are prevalent in north-temperate freshwater lakes and display class-level  
 preferences between lake habitats. *PLoS ONE*.   
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

**SCIENTIFICIC PRESENTATIONS**

Poster, “Ecology of freshwater Verrucomicrobia, an abundant yet understudied bacterial phylum.” Beckman  
 Symposium, Aug 8, 2015, Irvine, CA.  
Poster, “Ecology of Verrucomicrobia in a Freshwater Estuary.” American Society of Microbiology General  
 Meeting, Jun 2, 2015, New Orleans, LA.  
Poster, “Ecology of Verrucomicrobia in a Freshwater Estuary.” Program in Biology Undergraduate Research  
 Poster Session, Jun 2, 2015, Ann Arbor, MI.  
Presentation, “RNA Preservation Agents and Nucleic Acid Extraction Method Bias Perceived Bacterial  
 Community Composition.” University of Michigan Microbial Ecology Working Group, Oct 30, 2014,  
 Ann Arbor, MI  
Poster, “Deceptive sexual swellings as a counterstrategy to infanticide.” Undergraduate Research  
 Opportunity Symposium, Apr 18, 2012, Ann Arbor, MI.

**RESEARCH EXPERIENCE**

***Graduate Research Assistant,* Dr. Garret Suen and Dr. Hannah Carey**,University of Wisconsin-Madison  
 - Linked bacterial taxonomy to function in hibernating 13-lined ground squirrels *Jan 2017 – Present*  (*Ictidomys tridecemlineatus*)  
 - Prepared DNA libraries for Illumina MiSeq sequencing  
 - Analyzed bacterial and fungal amplicon sequencing data using mothur and R, and analyzed metagenomics  
 - Performed stable isotope assisted labeling experiments  
***Undergraduate Researcher / Lab Technician*, Dr. Vincent Denef**, University of Michigan *Sep 2012 – Aug 2016*  
 - Optimized fluorescent *in situ* hybridization microscopy protocol, extracted DNA/RNA, prepared samples  
 for amplicon sequencing, created cultures  
 - Collected water and sediment sample from Muskegon Lake and Lake Michigan  
 - Applied statistical and bioinformatics techniques to analyze bacterial 16S rRNA data using mother and R  
***Undergraduate Researcher*, Ruthven Museum of Natural History**, University of Michigan *May 2012 – Jul 2012*  
 - Analyzed mite abundance and distribution on preserved lizard specimens  
***Undergraduate Research Opportunity Student*, Dr. Jacinta Beehner**, University of Michigan *Sep 2011 – Apr 2011* - Compared hormone levels with chest patch sexual swellings in gelada baboons (*Theropithecus gelada*)  
 - Conducted hormone elutions and assays, analyzed chest patch color using Photoshop

**AWARDS**

- NIH Biotechnology Training Program Traineeship *Jan 2017*  
- Romance Languages and Literatures Student Achievement Award *Apr 2015*

- Phi Beta Kappa *Mar 2015*

- Beckman Scholars Fellowship *May 2014 – Aug 2015*

- American Society of Microbiology Undergraduate Research Fellowship *May 2014 – Dec 2014*

- University of Michigan Honors Summer Fellowship  *May 2014 – Aug 2014*

- Sophomore Honors Award *Nov 2013*

- Summer Vincenti Study Abroad Scholarship *Apr 2013*

- Honors Travel Grant *Mar 2013*

- James B. Angell Scholar *Mar 2013*

**TEACHING EXPERIENCE**

***Co-Instructor*, Biotechnology Center**, University of Wisconsin-Madison *Nov 2017 – Present* - Co-instructed workshops on analyzing amplicon sequencing data with mother and R ***Graduate Teaching Assistant*, University of Wisconsin-Madison** *Sep 2017 – Dec 2017* - Assisted in teaching Emerging Infectious Diseases and Bioterrorism (MM&I 554)  
 - Encouraged student discussion, graded exams and homework  
***Guest Instructor*, Microbiology Capstone Course**, University of Wisconsin-Madison *Jan 2017 – May 2017* - Designed student research projects in collaboration with Dr. Robin Kurtz and Dr. Melissa Christopherson  
 - Collected samples for students, taught bioinformatics, and directly aided in bacterial genome assembly  
***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  
 - Formed strong sense of community to encourage collaborative discussion between students

**VOLUNTEER EXPERIENCE**

***Designer and Volunteer*, Science Saturday**, University of Wisconsin-Madison *Sep 2017 - Present* - Co-developed and implemented outreach activities with the Wisconsin Institute for Discovery and  
 Morgridge Research Institute to teach hibernation physiology and microbe-host physiology  
***Volunteer*, Biology Outreach Club**, University of Wisconsin-Madison *Mar 31, 2017* - Led “Disco Microbes” activity teaching the importance of proper hand washing at Science Expeditions  
***Judge*, Capital Science & Engineering Fair** *Feb 18, 2017* - Evaluated science projects from Wisconsin high school students and determined prize winners  
***Volunteer*, Wisconsin Science Festival**, University of Wisconsin-Madison *Oct 21, 2016* - Led interactive activity employing color-sensing robots  
***Spanish Translator*, Tanslate-a-thon**, University of Michigan *Oct 2014*  
 - Translated multiple documents from English to Spanish for local non-profit organizations aiding  
 immigrants and low-income families  
***Worker and Interpreter*, Jatun Sacha**, Galapagos Islands *Jul 2013 – Aug 2013*  
 - Participated in environmental conservation by working with local farmers to develop sustainable farming  
 practices, removing invasive species, and cleaning tortoise nest sites  
 - Facilitated communication between volunteers and staff by interpreting English and Spanish

**LEADERSHIP EXPERIENCE**

***Editorial Board Member*, University of Michigan Undergraduate Research Journal** *Sep 2012 – Apr 2015* - Assisted students in improving writing submissions for publication  
 - Coordinated meetings with corporate sponsors and university departments to increase journal funding  
 - Performed outreach by conducting presentations to inform undergraduates about research opportunities  
***Co-President*, Arabian Dance Ensemble**, University of Michigan *Sep 2011 – Apr 2015*  
 - Instructed beginning belly dance class and created choreography to teach students  
 - Oversaw usage of group funds, coordinated costume purchases, and organized performances

**SKILLS**

- **Lab Skills:** DNA/RNA extraction, PCR, gel electrophoresis, DNA library preparation, Illumina MiSeq  
 sequencing, fluorescent *in situ* hybridization microscopy, limnology field work and sample collection,  
 squirrel trapping  
- **Bioinformatics:** R (intermediate), perl (beginner), mothur, amplicon sequencing analysis, metagenomic analysis- **Languages:** English (fluent), Spanish (fluent), Mandarin Chinese (intermediate)

**CAREER DEVELOPMENT**

Empowering People to Break the Prejudice Habit: Creating Including and Overcoming Bias *Dec 14, 2017*  
Building Your Networking Confidence *Nov 30, 2017*  
DELTA – Communicating Science with Everyone *Sep 2017 – Dec 2017*  
Improv for Scientists (Medicine 710) *Sep 2017 – Oct 2017*DELTA – NSF Application Broader Impacts Workshop *Oct 4, 2017*  
Oral Science Communication Through Improv Workshop *Jun 26, 2017*  
CIRTL – Developing a CV or Resume *Jun 22, 2017*  
What Graduate Students Need to Know about Successful Negotiation *Apr 13, 2017*  
Science Writing as a Career *Apr 06, 2017*  
Careers in Government Research Labs *Mar 28, 2017*Public Opinion of Life Science Issues (LSC 902) *Sep 2016 – Dec 2016*  
Writing Science as a Story (Comp Bio 675) *Nov 2016 – Dec 2016*