

INSTRUCTIONS FOR COMPLETION OF THE COMPUTERIZED FORM FOR APPLICATION TO THE UAMS GRADUATE FACULTY

1. Please read the form carefully and answer all questions. The form begins on the next page.
2. The form has been designed with fields for your responses, and these are indicated in blue and gray shading. Use the “tab” key to move between fields. The form will automatically expand to accommodate your entries. **IF YOU NEED HELP IN ANY OF THE FIELDS, PRESS THE F1 KEY AND A HELP WINDOW WILL OPEN.**
3. When you have completed the form, save it as a document on your own disk for future reference.
4. Print the document, and then obtain the appropriate signatures before submitting the form to the Graduate Office.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
GRADUATE FACULTY APPLICATION

1. Name: En Huang
2. UAMS Graduate Program Sponsor: Certificate in Regulatory Science Major field: Microbiology/Food Safety
3. Present UAMS academic title or administrative position: Assistant professor
- Date appointed this rank/position: 08/01/2016 Employed by: Environmental and Occupational Health, College of Public Health

4. **Comments of Department Chair/Head or Program Director including: evidence of scholarly development, effectiveness as a teacher, quality of publications and reallocation of duties if this application is approved.**

Dr. Huang recently joined our program as an assistant professor. In the past five years, Dr. Huang's work in natural antimicrobial discovery and development led to one granted U.S. patent and 10 publications in well-recognized journals in the field of microbiology. His newly established microbiology laboratory will focus on research targeting foodborne pathogens and antibiotic-resistant pathogens.

He has been extensively involved in classroom teaching and mentoring students at Ohio State University; one of his undergraduate students received an undergraduate research scholarship in 2015. Dr. Huang will be teaching in our Regulatory Science Graduate Certificate Program, and he plans to recruit and supervise graduate students from the Graduate Program in Interdisciplinary Biomedical Sciences. His involvement in research and teaching will significantly contribute to the development of our program.

Jay Gandy

08/29/2016

Department Chair/Head or Program Director

Date

Graduate Council Representative

I have read the comments of my Department Chair/Head or Program Director and I do, do not (circle one) wish to supply additional information in support of my application.

En Huang

Digitally signed by En Huang
DN: cn=En Huang, o=University of Arkansas for Medical Sciences,
ou=Department of Environmental and Occupational Health, College of
Public Health, email=rehuang@uams.edu, c=US
Date: 2016.08.24 11:13:52 -0500

08/24/2016

Applicant's Signature

Date

Approvals

Jay Gandy

8/31/2016

Chair, Graduate Faculty Committee

Date

Chair, Graduate Council

Date

Dean of the Graduate School

Date

5. **List your planned involvement in graduate education (courses, theses, dissertations):**

I will be teaching two courses, Environmental Biohazards, and FDA Regulations in the Department of Environmental and Occupational Health, College of Public Health.

I'd like to give guest lectures for relevant courses on topics in my area of research: such as foodborne pathogens, antimicrobial peptides, and nonribosomal peptides.

I plan to serve on graduate students' theses/dissertation committees and supervise graduate students on research projects focusing on food microbiology and safety.

6. **Briefly summarize your experience in graduate-level classroom teaching:**

I have 6-year experience in teaching courses for undergraduate and graduate students. My major teaching assignment was Food Microbiology Laboratory, a core course for undergraduate and graduate students in the Department of Microbiology and the Department of Food Science and Technology at the Ohio State University. I played a very critical role in organizing classroom activities, preparing exams, maintaining the eLearning course website, and coordinating teaching meetings.

7. **Briefly summarize your experience in research and student research mentoring:**

I had extensive experience in advising undergraduate and graduate students at Ohio State University. I co-advised an undergraduate, who worked on high pressure food processing. The student was selected to present her research in the 19th Denman Undergraduate Research Forum at the Ohio State University in April 2014. In 2015, I supervised a senior undergraduate student, who worked on fermentation and purification of a promising food antimicrobial agent; this student was awarded an undergraduate research scholarship in 2015 at the Ohio State University. From 2013-2016, I coordinated the antimicrobial discovery team consisting of a visiting scholar and two doctoral students at the Ohio State University.

8. **Attach Curriculum Vita** showing educational background (including institutions attended, degrees awarded and dates), honors or awards received, scholarly or professional organization affiliations, teaching experience (give school, dates and advanced and graduate subjects taught), including student theses and/or dissertations supervised. Cite publications and research in progress.

En Huang, PhD

Department of Environmental and Occupational Health
Fay W. Boozman College of Public Health
University of Arkansas for Medical Sciences
Phone: (614) 282-1369; ehuang@uams.edu

EDUCATION

Ph.D. 2013 **The Ohio State University**, Food Microbiology
M.S. 2009 **Southern Illinois University at Carbondale**, Plant and Soil Science
M.S. 2007 **South China University of Technology**, Fermentation Engineering
B.S. 2004 **Southwest University, China**, Food Science

PROFESSIONAL EXPERIENCE

2016-present **Assistant Professor**, University of Arkansas for Medical Sciences
2013-2016 **Postdoctoral Researcher**, The Ohio State University

TEACHING EXPERIENCE

2009-2016, Course Instructor and Graduate Teaching Assistant, Food Microbiology Laboratory, The Ohio State University

- Coordinated student research projects on food microbiology and safety, and organize poster forum for students to present their research findings
- Organized classroom activities, maintain the eLearning course website, prepare exams and coordinate teaching assistant meetings

2013-2016, Research Project Coordinator, The Ohio State University

- Coordinated research activities for a research team including a visiting scholar and two doctoral students on projects about discovery and development of new antimicrobials for food applications
- Supervised an undergraduate student on a research project “Reduction of *Salmonella* contamination in peanut butter using the combination of high pressure processing (HPP) and antioxidants”. This project was presented at the 19th Denman Undergraduate Research Forum at Ohio State University in 2014.
- Supervised an undergraduate student on a research project “Fermentation and purification of a natural antimicrobial peptide, paenibacillin”. The student was awarded a research scholarship for high quality research proposal in 2015.

PUBLICATIONS

Yang X., **Huang E.**, Yuan C., Zhang L., and Yousef A.E. 2016. Isolation and structural elucidation of Brevibacillin, an antimicrobial lipopeptide from *Brevibacillus laterosporus* that combats drug-resistant Gram-positive bacteria. *Applied and Environmental Microbiology* 82,2763-2772

Guo Y., **Huang E.**, Yang X., Zhang L., Yousef A.E., Zhong J. 2016. Isolation and characterization of a *Bacillus atrophaeus* strain and its potential use in food preservation. *Food Control*, 60, 511-518.

Huang E. and Yousef A.E. 2015. Biosynthesis of paenibacillin, a lantibiotic with N-terminal acetylation, by *Paenibacillus polymyxa*. *Microbiological Research*. 181, 15-21.

Gerst M.M., **Huang E.**, Zhang L., and Yousef A.E. 2015. Development of a new paenibacillin-producing strain and testing its usability in improving food safety. *Journal of Food Science*, 80, M1538-M1543.

Huang E. and Yousef A.E. 2014. Lipopeptide antibiotic, paenibacterin, binds to bacterial outer membrane and exerts bactericidal activity through cytoplasmic membrane damage. *Applied and Environmental Microbiology*, 80, 2700-2704.

Huang E. and Yousef A.E. 2014. Paenibacterin, a Novel broad-spectrum lipopeptide antibiotic, neutralizes endotoxins and promotes survival in a murine model of *Pseudomonas aeruginosa*-induced sepsis. *International Journal of Antimicrobial Agents*, 44: 74-77.

Huang E., Guo Y. and Yousef A.E. 2014. Biosynthesis of the new broad-spectrum lipopeptide antibiotic paenibacterin in *Paenibacillus thiaminolyticus* OSY-SE. *Research in Microbiology*, 165, 243-251.

Huang E., Zhang L., Chung Y.C., Zheng Z, and Yousef A.E. 2013. Characterization and application of enterocin RM6, a bacteriocin from *Enterococcus faecalis*. *Biomed Research International*, vol. 2013, Article ID 206917.

Huang E., Guo Y., and Yousef, A.E. 2012. Draft genome sequence of *Paenibacillus* sp. OSY-SE, a bacterium produces a novel broad-spectrum lipopeptide antibiotic, paenibacterin. *Journal of Bacteriology*, 194: 6306-6306.

Guo Y., **Huang E.**, Yuan C., Zhang L., and Yousef A.E. 2012. Isolation of a *Paenibacillus* sp. strain and structural elucidation of its broad-spectrum lipopeptide antibiotic. *Applied and Environmental Microbiology*, 78: 3156-3165.

Huang E. and Yousef A.E. 2012. Draft genome sequence of *Paenibacillus polymyxa* OSY-DF that coproduces a lantibiotic, paenibacillin, and polymyxin E1. *Journal of Bacteriology*, 194: 4739-4740.

PATENTS

Yousef A.E., Guo, Y., **Huang E.**, Yuan C. and Zhang L. 2011. Antimicrobial agent, bacterial strain, biosynthesis, and methods of use. (Patent number: US 9,017,692 B2)

Yousef A.E., Guo, Y., and **Huang E.** 2013. Biosynthesis of paenibacillin. (Publication number: WO/2013/180699)

GRANTS

Yousef A.E. and **Huang E.** Large-scale production of the new bacteriocin, paenibacillin, and its application against *Alicyclobacillus acidoterrestris* in juices. Center for Advanced Processing and Packaging Studies (**CAPPS**), 2014-2015, \$80,000.

HONORS & AWARDS

Outstanding Research Award, Department of Food Science and Technology, The Ohio State University, 2013

The 27th Annual Edward F. Hayes Graduate Research Forum, 3rd Place in Food, Agricultural and Environmental Science Oral Presentation, The Ohio State University, 2013

American Society of Microbiology (ASM) Student and Post-Doctoral Fellow Travel Grant, 2012

PROFESSIONAL ACTIVITIES

Professional Service

Associate Editor: Microbiological Research

Ad-hoc reviewer for the following Journals:

Applied Microbiology and Biotechnology, Enzyme and Microbial Technology, Food and Bioprocess Technology, Food Control, Foodborne Pathogens and Disease, Journal of Food Safety, Journal of Food Science and Technology, Meat Science, Microbial Pathogenesis

Professional Affiliations

Institute of Food Technologists, 2010-present

International Association of Food Protection, 2011-present

American Society of Microbiology, 2012-present