Jiefei Wang

Email: jiefwang@indiana.edu
Phone: (812)-325-5956
Homepage: http://jiefwang.github.io

EDUCATION

September 2013 – present	**Ph.D candidate, Biochemistry, Indiana University Bloomington** **Advisor: David P. Giedroc**
September 2009 – May 2013	**B.S., Biosciences, University of Science and Technology of China**

RESEARCH EXPERIENCE

Indiana University Bloomington ***Sep. 2013 – now***
Ph.D candidate, Biochemistry
Graduate Research Assistant *Advisor: Prof. David P. Giedroc* *Jan. 2014 – now*
Project: The response of *Acinetobacter baumannii* to human-mediated metal starvation

- Purified recombinant proteins utilizing FPLC (AKTA) systems (affinity chromatography, IEX, SEC) and characterized enzymatic activity, metal binding, ligand binding and DNA binding affinity using UV-visible spectroscopy, fluorometer, plate reader, HPLC and isothermal titration calorimetry (ITC).
- Acquired basic skills working under anaerobic conditions with anaerobic chamber.
- Conducted growth, prepared and analyzed samples of *Acinetobacter baumannii* ATCC 17978 (biosafety level II) with ICP-MS, UPLC-MS based peptidoglycan profiling and metabolites quantification, LC-MS based proteome and quantitative RT-PCR.
- Experienced user and maintenance of inductively coupled plasma mass spectrometry (ICP-MS) and atomic absorption spectroscopy (AAS).
- Experienced user of common mass spectrometry techniques and analysis (ESI-MS, MALDI-TOF MS, UPLC-MS).
- Gained experience with NMR (2D HSQC and backbone assignment)/X-ray crystallography/SAXS on protein samples.
- Gained experience with Python and R for data analysis and visualization.
- Gained experience with DNA oligomer (automated amidite synthesis) synthesis, peptide synthesis and purification.
- Collaborated closely with graduate students, postdoctoral associates and technicians.
- In charge of and trained graduate students on laboratory duties including laboratory safety, preparation of competent cells, ICP-MS and AA.

University of Science and Technology of China ***Sep. 2009 – May. 2013***
Bachelor of Science in Biosciences
Research Assistant *Advisor: Prof. Changlin Tian* *July. 2012 – May. 2013*
Project: Site-specific incorporation of unnatural amino acid at two sites and distance measurement by ^{19}F NMR

- Gained general molecular cloning techniques: site-directed mutagenesis and construct formation.
- Inspected protein-protein interaction by ^{19}F NMR.
- Gained experience with Western blot, Sf9 insect cell expression system and mammalian cell culture.

Internship at Institute of Biophysics, Chinese Academy of Sciences ***Jun. 2010***

PUBLICATIONS

1. **Wang, J.***, Lonergan, Z. R.*, Gonzalez-Guitierrez, G., Nairn, B. L., Maxwell, C. N., Zhang, Y., Andreini, C., Karty, J. A., Chazin, W. J., Trinidad, J. C., Skaar, E. P., and Giedroc, D. P. (2019) Multi-metal restriction by calprotectin impacts *de novo* flavin biosynthesis in *Acinetobacter baumannii*. Cell Chem Biol, in the press
2. Lonergan, Z. R., Nairn, B. L., **Wang, J.**, Hsu, Y. P., Hesse, L. E., Beavers, W. N., Chazin, W. J., Trinidad, J. C., VanNieuwenhze, M. S., Giedroc, D. P., and Skaar, E. P. (2019) An *Acinetobacter baumannii*, zinc-regulated peptidase maintains cell wall integrity during immune-mediated nutrient sequestration. Cell Rep 26, 2009-2018
3. Capdevila, D. A., **Wang, J.**,and Giedroc, D. P. (2016) Bacterial strategies to maintain zinc metallostasis at the host-pathogen interface. J Biol Chem 291, 20858-20868
4. Nairn, B. L., Lonergan, Z. R., **Wang, J.**, Braymer, J. J., Zhang, Y., Calcutt, M. W., Lisher, J. P., Gilston, B. A., Chazin, W. J., de Crecy-Lagard, V., Giedroc, D. P., and Skaar, E. P. (2016) The response of *Acinetobacter baumannii* to zinc starvation. Cell Host & Microbe 19, 826-836

MANUSCRIPT

1. **Wang, J**.*, Capdevila, D. A.*, and Giedroc, D. P. (2019) Metal ion homeostasis. Invitated chapter for Comprehensive Coordination Chemistry III (Editors: Yi Lu & Lawrence Que Jr.), Elsevier

PROFESSIONAL ACTIVITIES

Oral Presentations

March 2019 BMB series seminar, Department of Molecular and Cellular Biochemistry, Indiana University
July 2016 Gordon Research Seminar (GRS) - Cell Biology of Metals, West Dover, VT
March 2016 BMB series seminar, Department of Molecular and Cellular Biochemistry, Indiana University

Poster Presentations

June 2018 Summer Symposium in Molecular Biology, State College, PA
July 2016 Gordon Research Conference (GRC) - Cell Biology of Metals, West Dover, VT

TEACHING EXPERIENCE

Associate Instructor **Department of Chemistry, Indiana University, Bloomington, IN**

C127 Principles of Chemistry and Biochemistry I (undergraduate course)
Laboratory instructor *2014 Spring, Summer & Fall*

- Lectured, instructed and trained students on scientific principles common to all science disciplines and to teach specific laboratory skills and software important in the study of chemistry and biochemistry.
- Graded assignments and exams.

C487 Biochemistry (upper level undergraduate course)
Laboratory instructor *2015 Spring*

- Lectured, instructed and trained students on fundamental laboratory approaches for biochemistry and biotechnology.
- Graded assignments and exams.

REFERENCES

David P. Giedroc

Lilly Chemistry Alumni Professor
Department of Chemistry
Indiana University,
Bloomington, IN, USA

Phone: +1 (812)856-3178
giedroc@indiana.edu

Charles E. Dann III

Associate Professor
Department of Chemistry
Indiana University,
Bloomington, IN, USA

Phone: +1 (812)856-1704
cedann@inidana.edu

Eric P. Skaar

Ernest W. Goodpasture Professor
Department of Pathology,
Microbiology, and Immunology
Vanderbilt University Medical Center
Nashville, TN, USA
Phone: +1 (615)343-0002
eric.skaar@vanderbilt.edu