**Ran Shi**

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**Education**

**Ph.D. Microbiology, 2021- present**

University of Georgia, Athens, Georgia

**B.S. Biochemistry, 2018**

University of Oregon, Eugene, Oregon

**B.S. Biology, 2018**

University of Oregon, Eugene, Oregon

**Employment and Experience**

**Research Experience:**

 **PHD Candidate** August 2021 – present

Department of Microbiology, University of Georgia

**Project 1:** Studying the mechanism of mitochondria uniparental inheritance in *Cryptococcus. Neoformans*

**Project 2:** Characterizing mechanism underlying *Cryptococcus* filamentous growth

Graduate advisor: Dr. Xiaorong Lin

**Research Assistance** March 2019 – June 2021

 Innovative Genomic Institute, University of California Berkeley

**Project 1:** Develop methods for high-throughput genetics in *Neurospora. Crassa* by constructing loss of function barcoded mutant library

 Principal Investigator: Dr. N Louise Glass

**Project 2:** Develop gene editing technologies and high-throughput functional genomics approaches for Trichoderma species.

 Principal Investigator: Dr. N Louise Glass

**Undergraduate Researcher** January 2015- January 2018

Department of Chemistry and Biochemistry, University of Oregon

Evolution of arachidonic acid binding by an S100 Protein

Principal Investigator: *Dr. Michael J. Harms*

**Undergraduate Researcher** June 2013 – June 2014

Department of Biology, University of Oregon,

Development of R7 axon in *Drosophila* visual system

Principal Investigator: *Dr. Tory Herman*

**Volunteer experience:**

Volunteer, September- December 2013

Peace Health Sacred Heart Hospital

River Bend, Eugene, Oregon

**Presentations:**

**Posters**

**Ran Shi,** and Xiaorong Lin. Investigating the mechanism of mitochondria uniparental inheritance in *C.neoformans*. The 32nd Fungal Genetic Conference, Pacific Grove, CA. March 2024.

**Ran Shi,** and Xiaorong Lin. Investigating the mechanism of mitochondria uniparental inheritance in *C.neoformans*. The 11th annual Cellular Biology of Eukaryotic Pathogens Conference, Clemson University, SC. October 2023.

**Ran Shi,** Loes, A.N.and M.J. Harms. Evolution of arachidonic acid binding by an S100 protein. *Undergraduate Research Symposium*, Eugene, OR. May 2017.

**Ran Shi,** Loes, A.N.and M.J. Harms. Evolution of multi-functionality in a small innate immune protein. *Genomics In Action*, Eugene, OR. October 2016.

**Oral Presentations**

**Ran Shi** and Xiaorong Lin. Investigating the mechanism of mitochondria uniparental inheritance in *C.neoformans*. The 11th annual Cellular Biology of Eukaryotic Pathogens Conference, Clemson University, SC. October 2023

**Ran Shi** and Xiaorong Lin. Investigating the mechanism of mitochondria uniparental inheritance in *C.neoformans*. UGA fungal group, University of Georgia, GA. October 2022

**Teaching experience**

Serve as a mentor of an undergraduate student January, 2024-now

Assisting the student in studying mitochondria uniparental inheritance in *C.neoformans*, encouraging the student to become interested in science and going to graduate school.

Serve as mentor to REU student June-August, 2022

Assisting the student with exploring genes in the control of filamentation in *Cryptococcus neoformans*, encouraging the student to become interested in going to graduate school.

**Publications**

Shi, Ran, and Xiaorong Lin. "Illuminating the Cryptococcus neoformans species complex: unveiling intracellular structures with fluorescent-protein-based markers." *Genetics* (2024): iyae059.

José Manuel Villalobos-Escobedo1,2 , Lori B. Huberman1 , **Ran Shi**1,

Maria Belen Mercado-Esquivias1,2, Catharine Adams1,2, Adriana María Rico Ramírez1,Adam M. Deutschbauer1,2, and N. Louise Glass1,2 Exploring the genetic basis of interaction between the filamentous fungus *Trichodermaatroviride* and bacteria using a genome-wide loss-of-function approach

Pham T\*, **Shi R**\*, Ambati S\*, Meagher R, and Lin X (submitted) All hands on Dect: Treating Cryptococcosis with DectiSomes **\***co-first authors

# Loes, A.N, **Shi R,** and M.J. Harms. *Zinc-independent activation of Toll-like receptor 4 by S100A9* https://doi.org/10.1101/796219