

A Postdoc Position in Lin Lab

Position: A Postdoctoral Fellow position is available in Dr. Xiaorong Lin's laboratory in the Department of Microbiology at the University of Georgia (Athens, GA, USA).

<http://mibo.franklin.uga.edu/directory/faculty/xiaorong-lin>. UGA hosts strong research facilities for life sciences (e.g. MS, NMR, crystallography, microscopy, flow cytometry, bioinformatics, genetics, cell biology, infectious diseases, and vaccination center). In addition, the UGA interdisciplinary fungal group offers fantastic support for fungal biology research and training (<http://research.franklin.uga.edu/fungi>).

Research area: Lin lab focuses on key infectious mechanisms of the model human fungal pathogen *Cryptococcus neoformans*. We investigate cryptococcal life cycle and morphogenesis, and how these processes affect the disease progression in animal models. We are also interested in examining the role of cryptococcal mannoproteins in host-pathogen interactions and the molecular mechanisms underpinning cryptococcal adaptation to host conditions. Furthermore, we are working with other groups at UGA in the development of novel antifungal treatments.

Applicant qualification: Highly motivated candidates with a Ph.D. degree and strong skills in genetics, biochemistry, molecular biology, or cell biology are encouraged to apply. Experience with mammalian cell culture, animal models of microbial diseases, or immunology is a plus. Qualified candidates are expected to work independently as well as in an interactive and dynamic team environment, with good written and oral communication skills.

Application: Applicants should send (1) their CV with bibliography, (2) a cover letter with a statement of research interests and career goals, and (3) contact information for three references to Dr. Xiaorong Lin by email: Xiaorong.Lin@uga.edu.

Selected Publications:

- Zhao Y, Wang Y, Upadhyay S, Xue C*, and Lin X*. (2020) Activation of meiotic genes mediates ploidy reduction during cryptococcal infection. *Current Biology* 30, 1-10
- Lin J, Zhao Y, Ferraro AR, Yang E, Lewis ZA, and Lin X*. (2019) Transcription factor Znf2 coordinates with the chromatin remodeling SWI/SNF complex to regulate cryptococcal cellular differentiation. *Communications Biology* DOI: 10.1038/s42003-019-0665-2.
- Krysan D*, Zhai B, Beattie S, Misel K, Wellington M, and Lin X*. (2019) Host CO₂ concentration is an independent stress for *Cryptococcus neoformans* that affects virulence and antifungal susceptibility. *mBio* 10(4). pii: e01410-19
- Zhao Y#, Lin J#, Fan Y# and Lin X*. (2019) Life Cycle of *Cryptococcus neoformans*. *Annual Review of Microbiology* 73.
- Fan Y and Lin X*. (2018) Multiple Applications of a Transient CRISPR-Cas9 Coupled with Electroporation (TRACE) System in the *Cryptococcus neoformans* Species Complex. *Genetics* 208(4):1357-1372
- Xu X#*, Lin J#, Zhao Y, Kirkman E, Yee-Seul So, Bahn Y, and Lin X*. (2017) Glucosamine stimulates pheromone-independent dimorphic transition in *Cryptococcus neoformans* by promoting Crz1 nuclear translocation. *PLoS Genetics* 13(9):e1006982.
- Gyawali R, Zhao Y, Lin J, Fan Y, Xu X, Upadhyay S, and Lin X*. (2017) Pheromone Independent Unisexual Development in *Cryptococcus neoformans*. *PLoS Genetics* 13(5):e1006772.
- Upadhyay S#, Xu X#, Lowry D, Jackson JC, Roberson RW, and Lin X*. (2016) Subcellular compartmentalization and trafficking of the biosynthetic machinery for fungal melanin. *Cell Reports* 14(11): 2511-2518.
- Chacko N#, Zhao Y#, Yang E, Wang L, Cai J, and Lin X*. (2015) The lncRNA *RZE1* controls cryptococcal morphological transition. *PLoS Genetics* 11(11): e1005692.
- Zhai B, Wozniak KL, Masso-Silva J, Upadhyay S, Hole C, Rivera A*, Wormley FL*, and Lin X*. (2015) Development of protective inflammation and cell-mediated immunity against *Cryptococcus neoformans* after exposure to hyphal mutants. *mBio* 6(5):e01433-15.
- Wang L*, Tian X, Upadhyay S, Foyle D, Gyawali R, Yang E, Cai J, and Lin X*. (2014) Morphotype transition and sexual reproduction are genetically associated in a ubiquitous environmental pathogen. *PLoS Pathogens* 10(6):e1004185.
- Upadhyay S, Torres G, and Lin X*. (2013) Laccases involved in 1,8-dihydroxynaphthalene melanin biosynthesis in *Aspergillus fumigatus* are regulated by developmental factors and copper hemostasis. *Eukaryotic Cell* 12(12):1641-52.
- Wang L, Tian X, Gyawali R, and Lin X*. (2013) Fungal adhesion protein guides community behaviors and autoinduction in a paracrine manner. *PNAS* 110(28):11571-6.
- Zhai B, Zhu P, Foyle D, Upadhyay S, Idnurm A*, and Lin X*. (2013) Congenic strains of the filamentous form of *Cryptococcus neoformans* for studies of fungal morphogenesis and virulence. *Infection and Immunity* 81(7): 2626-2637.
- Wang L, Zhai B, and Lin X*. (2012) The link between morphotype transition and virulence in *Cryptococcus neoformans*. *PLoS Pathogens* 8(6): e1002765.
- Zhai B, Cheng W, Wang L, Sachs MS*, and Lin X*. (2012) The antidepressant sertraline provides a promising therapeutic option for neurotropic cryptococcal infections. *Antimicrobial Agents and Chemotherapy* 56(7): 3758-3766.
- Lin X*, Jackson J, Feretzaki M, Xue C, and Heitman J. (2010) Transcription factors Mat2 and Znf2 operate cellular circuits orchestrating opposite and same-sex mating in *Cryptococcus neoformans*. *PLoS Genetics* 13;6(5):e1000953.