

---

## BIOGRAPHICAL SKETCH

---

NAME Lin, Xiaorong		POSITION TITLE Professor	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Dalian University of Technology, China	B.S.	1992-1996	Chemical Engineering
Dalian Institute of Chemical Physics, China	M.S.	1996-1999	Chemical Engineering
University of Georgia	Ph.D.	1999-2003	Molecular Genetics and Fungal Biology
Duke University Medical Center	Postdoc	2003-2007	Medical Mycology

### A. Positions and Honors

#### Positions and Employment

2024 – present	Co-Inventor and Co-founder – Ollabio Inc., Athens, GA
2020 – present	Graduate Coordinator - Recruitment, Department of Microbiology, University of Georgia, GA
2017 – present	Gene E. Michaels Endowed Distinguished Professor of Medical Mycology, University of Georgia
2017 – present	Adjunct faculty, Departments of Plant Biology/ Infectious Diseases, University of Georgia
2014 – 2017	Adjunct faculty, Department of Microbiology and Immunology, Texas A&M Health Science Center, TX
2013 – 2017	Associate Professor, Department of Biology, Texas A&M University, TX (Promoted to Professor in 2017)
2008 – 2013	Assistant Professor, Department of Biology, Texas A&M University, TX
2003 – 2007	Postdoctoral Research Associate, Department of Molecular Genetics and Microbiology, Duke University Medical Center, NC
1999 – 2003	Graduate Research Assistant, Department of Plant Biology, University of Georgia, GA
1996 – 1999	Graduate Research Assistant, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China

#### Honorary Memberships

2019 – present	American Academy of Microbiology (AAM) Fellow
2018 – present	American Association for the Advancement of Science (AAAS) Fellow

#### Professional Membership

2015 – present	Member, Medical Mycological Society of the Americas (MMSA)
2013 – present	Member, American Association for the Advancement of Science (AAAS)
2012 – present	Member, Genetics Society of America (GSA)
2004 – present	Member, American Society of Microbiology (ASM)
2002 – 2003	President, the Mycology Discussion Group, University of Georgia
2001 – 2003	Member, Mycological Society of America (MSA)

#### Service

##### Scientific Community and Conference Service

2023 – 2029	Member: International Fungal Biology Conference Steering Committee
2024 – 2026	Chair, Fungal Genetics Policy Steering Committee
2023 – present	Member, The Steering Committee of The International Fungal Biology Conference (IFBC)
2019 – 2026	Elected Member, Fungal Genetics Policy Steering Committee
2019	Chair, 30 <sup>th</sup> Fungal Genetics Conference, Genetics Society of America (GSA)
2016 – 2021	Scientific Advisory Board, FEBS Advanced Lecture Course: Human Fungal Pathogens (HFP2017, HFP2019, HFP2021)

2017 Session chair, "Human Fungal Pathogens" at 29<sup>th</sup> Fungal Genetics Conference  
2015 – 2019 Director, Molecular Mycology summer course, Marine Biological Laboratory, MA

#### Editorial Service

2020 – 2022 Section editor, *PLoS Pathogens*  
2017 – 2026 Associate editor, *mBio*  
2017 – present Associate editor, *PLoS Genetics*  
2015 – 2019 Associate editor, *Fungal Genetics and Biology*  
2014 – 2020 Associate editor, *PLoS Pathogens*  
2013 – 2021 Faculty member, *Faculty of 1000*  
2009 – 2015 Academic editor, *Eukaryotic Cell*  
2009 – 2013 Associated faculty member, *Faculty of 1000*  
2008 – 2010 Academic editor, *PLoS ONE*

#### Manuscript Review Service

2004 – Present Ad hoc reviewer: *Nature*, *PNAS*, *PLoS Biology*, *PLoS Genetics*, *PLoS Pathogens*, *PLoS Neglected Tropical Diseases*, *PLoS ONE*, *Cellular Microbiology*, *Nature Review Microbiology*, *Microbiology and Molecular Biology Reviews*, *Genetics*, *mBio*, *Infection and Immunity*, *Applied and Environmental Microbiology*, *Eukaryotic Cell*, *Antimicrobial Agents and Chemotherapy*, *Fungal Genetics and Biology*, *BMC Microbiology*, *Microbiology*, *Fungal Biology Reviews*, *Journal of Medical Microbiology*, *FEMS Microbiology Letters*, *Future Microbiology*, *Medical Mycology*, *Mycoses*, *HIV therapy*, *BMC Genomics*, *Environmental Microbiology*, *Molecular Microbiology*, *JoVE*, *mSphere*, *Scientific Reports*, *Journal of Microbiology*, *Journal of Fungi*, *Molecular Plant Pathology*, *Cell Reports*, *Frontiers in Microbiology*, *Cellular Microbiology*, *Computational and Structural Biotechnology Journal*, *Trends in Microbiology*, *Nature Communications*, *Communications Biology*, *Frontiers in Immunology*, *NPJ Antimicrobials and Resistance*

#### Grant Review Service

2025 Ad hoc member, NIH in ZAI1-VS-A (M1): NIAID Clinical Trial Planning Grant (R34) and Investigator Initiated Clinical Trial applications (R01 and U01); ZRG1 IIDB-L (55) R: PAR Panel: Topics in HIV-Related Investigator Initiated Clinical Trials; ZRG1 BBBT-X (81): the Nucleic Acid Therapeutic Delivery (NATD) study section.  
2024 Ad hoc member, NIH ZRG1 F07C-Y Fellowships: Immunology and Infectious Diseases C study section; NIH Pathogenic Eukaryotes (PTHE) study section special emphasis panel (SEP); NIH Anti-Infective Resistance and Targets (AIRT) study section special emphasis panel (SEP); NIH Disease Control and Applied Immunology (DCAI) study section special emphasis panel (SEP)  
2023 Ad hoc member, CDC special emphasis panel (SEP), NIH International Research in Infectious Diseases (SEP)  
2022 Committee, T32 applications for UGA CTEGD training program (Center of Tropical and Emerging Global Diseases)  
2020 Chair, NASA Space Biology, ROSBio 2020 Flight and Ground Review  
2018 Ad hoc member, Austrian Science Fund (FWF)  
2016 – 2022 Standing panel member, NIH AOIC/HCAC study section: HIV Coinfections and HIV Associated Cancers, formerly known as the study section (AIDS Associated Infections and Cancer)  
2015 Ad hoc member, Polish-U.S. Fulbright Awards, NIH AOIC study section  
2014 Ad hoc member, NIH F13 Infectious Diseases and Microbiology Fellowship Review Panel, NIH IHD study section, the San Antonio Life Sciences Institute (SALSI) Innovation Challenge grant program  
2013 Ad hoc member, NIH PTHE study section, NIH AOIC study section  
2012 Ad hoc member, ZRG1 IDM S study section

#### Teaching Experience

2022 – present Instructor, MIBO8150 (Fungal Biology Journal Club/ spring & fall), University of Georgia, GA

2020 Instructor, MIBO8610 (Microbial Diversity/ fall), University of Georgia, GA  
 2019 – present Instructor, MIBO4700/6700 (Medical Mycology/ spring), University of Georgia, GA  
 2015 – 2019 Director, Molecular Mycology (MOMY) summer course, Marine Biological Laboratory, MA  
 2013, 2014, 2021 Faculty, Molecular Mycology (MOMY) summer course, Marine Biological Laboratory, MA  
 2010 – 2017 Instructor, BIOL351 (Fundamentals of Microbiology/ fall), Texas A&M University, TX  
 2010 – 2017 Co-Instructor, BIOL681 (Eukaryotic Microbiology/ spring & fall), Texas A&M University, TX  
 2009 – 2017 Instructor, BIOL437 (Molecular and Medical Mycology/ spring), Texas A&M University, TX  
 2009 Instructor, BIOL481 (Departmental Colloquium), Texas A&M University, TX  
 2008 Guest lecturer, BESC489 (Molds and Mushrooms), Texas A&M University, TX  
 2004 Teaching Assistant, Molecular Mycology, Marine Biological Laboratory, MA  
 2000 – 2001 Graduate teaching assistant, BTNY1210 (Introduction to Plant Biology), University of Georgia, GA

### Honors and Awards

2022-2024 Nominee for Creative Research Award by the Franklin College of Arts and Sciences, University of Georgia  
 2019 – present Elected fellow, American Academy of Microbiology (AAM)  
 2018 – present Elected fellow, American Association for the Advancement of Science (AAAS)  
 2017 – present Gene E. Michaels Endowed Distinguished Professor in Medical Mycology, University of Georgia  
 2014, 2016 Nominee of the 2015 Edith and Peter O'Donnell Science Awards (the Academy of Medicine, Engineering & Science of Texas)  
 2013– 2019 The Burroughs Wellcome Fund (BWF) Investigator in Pathogenesis of Infectious Disease  
 2012 Nominee of “40 under Forty”, the University of Georgia Alumni Association  
 2011 Teaching Excellence Award (SRATE), Texas A&M University  
 2009 *Eukaryotic Cell* Outstanding Young Investigator Award, American Society of Microbiology  
 2009 Teaching Excellence Award (SLATE), Texas A&M University  
 2009 ICAAC Young Investigator Award, American Society of Microbiology  
 2005 - 2007 NIH Postdoctoral Fellowship, Tri-Institutional Molecular Mycology and Pathogenesis Training Program (Tri-I MMPTP)  
 2003 Francis A. Uecker Student Mentor Award, Mycological Society of America  
 2002 – 2003 Graduate School Fellowship, University of Georgia  
 2001, 2003 Plant Biology Department Palfrey Award, University of Georgia  
 2002 Best Speaker Award at Plant Biology Graduate Student Symposium, University of Georgia  
 1999 – 2000 Graduate School Fellowship, University of Georgia  
 1997 – 1998 Elite Graduate Student Scholarship, Chinese Academy of Sciences, China  
 1996 Graduate with Distinction, Department of Education, Liaoning Province, China  
 1992 – 1996 Academic Excellence Scholarship (first class), Dalian University of Technology, China

### **B. Peer-reviewed Publications** (\* corresponding author, # co-first author).

#### Published Articles and Articles in Press

113. Li Y and **Lin X\***. (2026) The prospects of mRNA vaccines against fungal infections. *hLife* doi.org/10.1016/j.hlif.2026.02.002
112. Ambati S, **Lin X**, Lewis ZA, Peter JA, Meagher RB\*. (2026, in press) Human Dectin-1 and Dectin-2 Targeted DectiSomes are effective against diverse pathogenic fungi. *Antimicrobial Agents and Chemotherapy*
111. Yao X, Tian X, Liu H, He G, Chen L, Shen L, Teng J, Chen X, Hussein M, Gherbawy Y, Wang L, **Lin X\*** and Hu P\*. (2025) Inhibition of respiration prompts commitment to unisexual reproduction in *Cryptococcus deneoformans*. *Cell Reports* 44(12):116603 PMID: 41275490
110. Blackburn E#, Ristow L#, **Lin X\*** and Krysan DJ\*. (2025) Host-induced climate change: carbon dioxide tolerance as a *Cryptococcus neoformans* virulence trait. *PLoS Pathogens* 21(8):e1013351 PMID: PMC12333976

109. Li Y, Meagher R and **Lin X\***. (2025) Tailoring mRNA lipid nanoparticles for antifungal vaccines. **PLoS Pathogens** 21(4):e1013091 PMID: PMC12036839
108. Li Y, Pham N, Hipsher K, Lee C, Jiao J, Penninger J, Kronstad J, Fan Y, Zhao Y, Ambati S, Meagher R, Xie X, and **Lin X\***. (2025) Identification of a protective antigen reveals the trade-off between iron acquisition and antigen exposure in a global fungal pathogen. **Proc. Natl. Acad. Sci USA (PNAS)** 122 (7) e2420898122 PMID: PMC11848283
107. Ambati S, **Lin X**, Lewis Z, and Meagher R\*. (2025) Altering the ligand specificity of DectiSomes **Journal of Biological Chemistry** DOI: 10.1016/j.jbc.2025.108566 PMID: PMC12159679
106. Alder-Rangel A., et al. (2025) Celebrating the fifth edition of the International Symposium on Fungal Stress – ISFUS, a decade after its 2014 debut. **Fungal Biology** 129(5). 10.1016/j.funbio.2025.101590
105. Ambati S, Choudhury Q, Peter J, Moremen K, Chapla D, Lewis Z, **Lin X**, and Meagher R. (2025) Siglec-Targeted Liposomes to Identify Sialoglycans Present on Fungal Pathogens. **Antimicrobial Agents and Chemotherapy** 69(4):e0172024 PMID: PMC11963605
104. Li Y<sup>#</sup>, Ambati S<sup>#</sup>, Meagher R\*, and **Lin X\***. (2025) Developing mRNA lipid nanoparticle vaccine for cryptococcosis in a murine model. **NPJ vaccines** 4;10(1):24. PMID: PMC11794474
103. Chadwick BJ<sup>#</sup>, Ristow L<sup>#</sup>, Blackburn E<sup>#</sup>, Xie X, Krysan DJ\*. and **Lin X\***. (2025) Microevolution of *Cryptococcus neoformans* in high CO<sub>2</sub> converges on mutations isolated from patients with relapsed cryptococcosis. **Cell Reports** 43(11):114904 PMID: PMC12911315
102. Ambati S, Li Y, Whittaker M.K., Kennedy E.J., **Lin X**, Lewis Z.A. and Meagher R.B. (2025) Anionic lipids direct efficient stable microfluidic encapsulation of active proteins in lipid nanoparticles. **Communication Materials** 6(1), 1-18. DOI: 10.1038/s43246-025-00749-8 PMID: PMC12553553
101. Pham N<sup>#</sup>, Peter Zhang<sup>#</sup>, Ambati S<sup>#</sup>, Meagher R\*, and **Lin X\***. (2024) Small but mighty: Targeted antifungal liposomes of a smaller size are superior in treating cryptococcal meningitis. **mBio** DOI: 10.1128/mbio.02507-24 PMID: PMC11633377
100. Glueck N, Xie X, and **Lin X\***. (2024) Alternative isoforms and phase separation of Ref1 repress morphogenesis in *Cryptococcus*. **Cell Reports** 43(11):114904 doi: 10.1016/j.celrep.2024.114904. PMID: PMC11661864
99. Matha A, Xie X, Maier R, and **Lin X\***. (2024) Nickel tolerance is channeled through C-4 methyl sterol oxidase Erg25 in the sterol biosynthesis pathway. **PLoS Genetics** 20(9): e1011413 <https://doi.org/10.1371/journal.pgen.1011413>. PMID: PMC11426505
98. Chadwick BJ, Xie X, Ristow L, Krysan DJ, and **Lin X\***. (2024) Discovery of CO<sub>2</sub> tolerance genes associated with virulence in the opportunistic fungal pathogen *Cryptococcus neoformans*. **Nature Microbiology** DOI: 10.1038/s41564-024-01792-w PMID: PMC12883045
97. Pham N<sup>#</sup>, Shi R<sup>#</sup>, Ambati S<sup>#</sup>, Meagher R\*, and **Lin X\***. (2024) All hands on Dec: treating cryptococcosis with dectin decorated liposomes loaded with antifungals. **iScience** 27, 110349. PMID: PMC11269288
96. Chadwick BJ and **Lin X\***. (2024) Effects of CO<sub>2</sub> in fungi. **Current Opinion in Microbiology** 79:102488. doi: 10.1016/j.mib.2024.102488. PMID: PMC11162916
95. Shi R and **Lin X\***. (2024) Illuminating *Cryptococcus neoformans*: Unveiling Intracellular Structures with Fluorescent-Protein-Based Markers. **Genetics** DOI: 10.1093/genetics/iyae059. PMID: PMC11228865
94. Li Y, Chadwick B, Pham T, Xie X, and **Lin X\***. (2024) Aspartyl peptidase May1 induces host inflammatory response by altering cell wall composition in the fungal pathogen *Cryptococcus neoformans*. **mBio** 10.1128/mbio.00920-24. PMID: PMC11237595
93. Matha A, Xie X and **Lin X\***. (2024) Ergosterol is critical for sporogenesis in *Cryptococcus neoformans*. In the special issue: Fifty Years of Fungi: A Special Issue Honoring the Contributions of Dr. June Kwon-Chung to the Field of Medical Mycology **Journal of Fungi** 10(2), 106; <https://doi.org/10.3390/jof10020106> PMID: PMC10890046
92. Chen L, Tian X, Zhang L, Wang W, Hu P, Ma Z, Li Y, Li S, Shen Z, Fan X, Ye L, Ke W, Wu Y, Shui G, Xiao M, He G, Yang Y, Bai F, Liao G, Chen M, **Lin X**, Li C, Wang L\*. (2024) Host glucose induces cryptococcal

tolerance of fungicidal drugs during fungal meningitis. **Nature Microbiology** DOI: 10.1038/s41564-023-01561-1

91. Alanazi AH, Chastain DB, Rudraraju M, Parvathagiri V, Shan S, **Lin X**, Henao-Martínez AF, Franco-Paredes C, Narayanan SP, and Somanath PR. (2023) A multi-arm, parallel, preclinical study investigating the potential benefits of acetazolamide, candesartan, and triciribine in combination with fluconazole for the treatment of cryptococcal meningoencephalitis. **European Journal of Pharmacology** DOI: 10.1016/j.ejphar.2023.176177 PMID: PMC10985624
90. Ristow L, Jezewski A, Chadwick BJ, Stamnes MA, **Lin X**, Krysan DJ. (2023) The fungal pathogen *Cryptococcus neoformans* adapts to the host environment through TOR-mediated remodeling of phospholipid asymmetry. **Nature Communications** 18;14(1):6587. doi: 10.1038/s41467-023-42318-y PMID: PMC10584969
89. Choudhury QJ, Ambati S, Link CD, **Lin X**, Lewis ZA, Meagher RB\*. (2023) Dectin-3-targeted antifungal liposomes efficiently bind and kill diverse fungal pathogens. **Molecular Microbiology** DOI: 10.1111/mmi.15174 PMID: PMC10823756
88. Alder-Rangel A... **Lin X**, Rangel D. (2023) The IV International Symposium on Fungal Stress and the XIII International Fungal Biology Conference. **Fungal Biology** 127(7-8):1157-1179 DOI: 10.1016/j.funbio.2023.04.006
87. Pham T<sup>#</sup>, Li Y<sup>#</sup>, Watford W, and **Lin X**\*. (2023) Vaccination with a *ZNF2<sup>oe</sup>* strain provides long-lasting protection against cryptococcosis and is effective in immunocompromised hosts. **Infection and Immunity** 91(7):e0019823. doi: 10.1128/iai.00198-23 PMID: PMC10353382
86. Meagher R\*, Lewis Z, Ambati S, and **Lin X**\*. (2023) DectiSomes: C-Type Lectin Receptor-Targeted Liposomes as Pan-Antifungal Drugs. **Advanced Drug Delivery Reviews** 196:114776 (page 1-20) <https://doi.org/10.1016/j.addr.2023.114776> PMID: PMC10133202
85. Chadwick BJ, Ross BE, **Lin X**\*. (2023) Molecular dissection of Crz1 and its dynamic subcellular localization in *Cryptococcus neoformans*. Special Issue: Women in Mycology. **Journal of Fungi** 9(252):1-12 <https://doi.org/10.3390/jof9020252> PMID: PMC9963361
84. Del Poeta M\*, Wormley F\*, **Lin X**\*. (2023) Host populations, challenges, and commercialization of cryptococcal vaccines. **PLoS Pathogens** 19(2): e1011115. doi: 10.1371/journal.ppat.1011115 PMID: PMC9910758
83. Chadwick BJ, Pham T, Xie X, Ristow LC, Krysan D, and **Lin X**\*. (2022). The RAM signaling pathway links morphology, thermotolerance, and CO<sub>2</sub> tolerance in the global fungal pathogen *Cryptococcus neoformans*. **eLife** 11:e82563 (1-22). DOI: <https://doi.org/10.7554/eLife.82563> PMID: PMC9708076
82. Alanazi AH, Adil MS, **Lin X**, Chastain DB, Henao-Martínez AF, Franco-Paredes C, and Somanath PR\*. (2022) Elevated Intracranial Pressure in Cryptococcal Meningoencephalitis: Examining Old, New, and Promising Drug Therapies. **Pathogens** 11(7), 783; doi.org/10.3390/pathogens11070783 PMID: PMC9321092
81. Breuer MR, Dasgupta A, Vasselli JG, **Lin X**, Shaw BD, Sachs MS\*. (2022) The antidepressant sertraline induces the formation of supersized lipid droplets in the human pathogen *Cryptococcus neoformans*. **Journal of Fungi** 8(6):642. doi: 10.3390/jof8060642. PMID: PMC9224953
80. Li Y, Pham T, Xie X, and **Lin X**\*. (2022) Identification and characterization of an intergenic “safe haven” region in human fungal pathogen *Cryptococcus gattii*. **Journal of Fungi** 8(2):178. doi: 10.3390/jof8020178. PMID: PMC8874978
79. Lin J<sup>#</sup>, Pham T<sup>#</sup>, Hipsher K, Glueck N, Fan Y, and **Lin X**\*. (2022) Immunoprotection against cryptococcosis offered by *Znf2* depends on capsule and the hyphal morphology. **mBio** 13(1), e02785-21. PMID: PMC8749420
78. Ambati S\*, Pham T, Lewis Z, **Lin X**, and Meagher R. (2021) DC-SIGN targets amphotericin B-loaded liposomes to diverse pathogenic fungi. **Fungal Biology and Biotechnology** 8(1), 22 doi: 10.1186/s40694-021-00126-3. PMID: PMC8709943

77. Strycker BD\*, Han Z, Bahari A, Pham T, **Lin X**, Shaw BD, Sokolov AV, and Scully M. Raman (2021) Characterization of fungal DHN and DOPA melanin biosynthesis pathways. *Journal of Fungi* 7(10), 841 doi: 10.3390/jof7100841 PMID: PMC8540899
76. Ambati S\*, Pham T, Lewis Z, **Lin X**, and Meagher R. (2021) DectiSomes: Glycan targeting of liposomal drugs improves the treatment of disseminated candidiasis. *Antimicrobial Agents and Chemotherapy* doi: 10.1128/AAC.01467-21. PMID: PMC8765427
75. Meagher R, Lewis Z, Ambati S, and **Lin X\***. (2021) Aiming for a bull's eye: targeting antifungals to fungi with dectin-decorated liposomes. *PLoS Pathogens* 17(7):e1009699 PMID: PMC8297870
74. Zhao Y\* and **Lin X\***. (2021) A PAS protein directs metabolic reprogramming during cryptococcal adaptation to hypoxia. *mBio* 12(2):e03602-20. doi: 10.1128/mBio.03602-20. PMID: PMC8092316
73. Ambati S, Ellis E, Pham T, Lewis Z, **Lin X\***, and Meagher R\*. (2021) Antifungal-liposomes directed by Dectin-2 offer a promising therapeutic option for pulmonary aspergillosis. *mBio* DOI: 10.1128/mBio.00030-21. PMID: PMC8545082
72. Zhao Y\* and **Lin X\***. (2021) *Cryptococcus neoformans*: sex, morphogenesis, and virulence. *Infection, Genetics and Evolution* DOI: 10.1016/j.meegid.2021.104731 PMID: PMC8092418
71. Bahn Y, Sun S, Heitman J, and **Lin X\***. (2020) *Cryptococcus neoformans* species complex. *Microbiology* 166(9):797-799. PMID: PMC7717486
70. Chadwick BJ and **Lin X\***. (2020) On the history and applications of congenic strains in *Cryptococcus* research. *Pathogens* 9 (9), 750. PMID: PMC7560043
69. Fan Y and **Lin X\***. (2020) An intergenic "safe haven" region in *Cryptococcus neoformans* serotype D genomes. *Fungal Genetics and Biology* 103464. PMID: PMC7726056
68. Matha AR and **Lin X\***. (2020) Current perspectives on uniparental mitochondrial inheritance in *Cryptococcus neoformans*. *Pathogens* 9 (9), 743. PMID: PMC7559238
67. Lin J#, Fan Y#, and **Lin X\***. (2020) Transformation of *Cryptococcus neoformans* by electroporation using a transient CRISPR-Cas9 expression (TRACE) system *Fungal Genetics and Biology* DOI: 10.1016/j.fgb.2020.103364. PMID: PMC7153975
66. Pham T, Xie X, and **Lin X\***. (2020) An intergenic "safe-haven" region in *Aspergillus fumigatus*. *Medical Mycology* DOI: 10.1093/mmy/myaa009.
65. 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 <https://doi.org/10.1016/j.cub.2020.01.081> PMID: PMC7228024
64. 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* 2:412 DOI: 10.1038/s42003-019-0665-2. PMID: PMC6856107
63. Ambati S, Ellis E, Lin J, **Lin X**, Lewis Z, and Meagher R. (2019) Dectin-2-targeted antifungal liposomes exhibit enhanced efficacy. *mSphere* 4:e00715-19. DOI: 10.1128/mSphere.00715-19. PMID: PMC6821932
62. Sun S#, **Lin X**#, Coelho M, and Heitman J\*. (2019) Mating-System Evolution: all roads lead to selfing. *Current Biology* 29(15):R743-R746. doi: 10.1016/j.cub.2019.06.073. PMID: PMC7033744
61. Krysan D\*, Zhai B, Beattie S, Misel K, Wellington M, and **Lin X\***. (2019) Host carbon dioxide concentration is an independent stress for *Cryptococcus neoformans* that affects virulence and antifungal susceptibility. *mBio* 10(4). pii: e01410-19 PMID: PMC6606813 (Recommended by *Faculty of 1000*)
60. Zhao Y#, Lin J#, Fan Y# and **Lin X\***. (2019) Life Cycle of *Cryptococcus neoformans*. *Annual Review of Microbiology* 73. DOI: 10.1146/annurev-micro-020518-120210 PMID: PMC12860491
59. Ambati S, Ferraro A, Kang S, Lin J, **Lin X**, Momany M, Lewis Z, and Meagher R. (2019) Dectin-1-targeted antifungal liposomes exhibit enhanced efficacy. *mSphere* 13;4(1). pii: e00025-19. PMID: PMC6374590

58. Zhao Y, Upadhyay S, and **Lin X\***. (2018) A PAS domain protein Pas3 interacts with the chromatin modifier Bre1 in regulating cryptococcal morphogenesis. *mBio* 9(6). pii: e02135-18. PMID: PMC6234864.
57. Tian X, He G, Hu P, Chen L, Tao C, Cui YL, Shen L, Ke W, Xu H, Zhao Y, Xu Q, Bai FY, Wu B, Yang E, **Lin X**, and Wang L. (2018) *Cryptococcus neoformans* sexual reproduction is controlled by a quorum sensing peptide. *Nature Microbiology* 3(6):698-707, DOI: 10.1038/s41564-018-0160-4, PMID: PMC12813696 (Recommended by *Faculty of 1000*)
56. Meng Y, Fan Y, Liao W\*, and **Lin X\***. (2018) Plant homeodomain (PHD) genes play important roles in cryptococcal yeast-hypha transition. *Applied and Environmental Microbiology* 84(9). pii: e01732-17 PMID: PMC5930315
55. 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 PMID: PMC5887135  
(Recommended by *Faculty of 1000*)
54. Xu X<sup>#</sup>, Lin J<sup>#</sup>, 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. PMID: PMC5595294
53. 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. PMID: PMC5435349  
(Recommended by *Faculty of 1000*)
52. Gyawali R, Upadhyay S, Way J, and **Lin X\***. (2016) A family of secretory proteins is associated with different morphotypes in *Cryptococcus neoformans*. *Applied and Environmental Microbiology* pii: AEM.02967-16. PMID: PMC5311391
51. Upadhyay S<sup>#</sup>, Xu X<sup>#</sup>, and **Lin X\***. (2016) Interactions between melanin enzymes and their atypical recruitment to the secretory pathway by palmitoylation. *mBio* 7(6) pii: e01925-16 PMID: PMC5120144
50. Upadhyay S<sup>#</sup>, Xu X<sup>#</sup>, 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. PMID: PMC4805463
49. Xu X, Zhao Y, Kirkman E, and **Lin X\***. (2016) Secreted Acb1 contributes to the yeast-to-hypha transition in *Cryptococcus neoformans*. *Applied and Environmental Microbiology* 82:1069 –1079. PMID: PMC4751841
48. Chacko N<sup>#</sup>, Zhao Y<sup>#</sup>, Yang E, Wang L, Cai J, and **Lin X\***. (2015) The lncRNA *RZE1* controls cryptococcal morphological transition. *PLoS Genetics* 11(11): e1005692. PMID: PMC4654512  
(Recommended by *Faculty of 1000*)
47. 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. PMID: PMC4611043
46. Wang L\* and **Lin X\***. (2015) The morphotype heterogeneity in *Cryptococcus neoformans*. *Current Opinion in Microbiology* 26:60–64, DOI: 10.1016/j.mib.2015.06.003 PMID: PMC12860970
45. Idnurm A\* and **Lin X\***. (2015) Rising to the challenge of multiple *Cryptococcus* species and the diseases they cause. *Fungal Genetics and Biology* pii: S1087-1845(15)00098-5. PMID: PMC4461476
44. Lin J, Idnurm A\*, and **Lin X\***. (2015) Morphology and its underlying genetic regulation impact the interaction between *Cryptococcus neoformans* and its hosts. *Medical Mycology* 199:887-96. PMID: PMC4577057
43. **Lin X\***, Chacko N, Wang L, and Pavuluri Y. (2015) Generation of stable mutants and targeted gene deletion strains in *Cryptococcus neoformans* through electroporation. *Medical Mycology* 53(3):225-34. PMID: PMC4574871

42. Lin X\*, Alspaugh JA, Liu H, and Harris S. (2015) Fungal Morphogenesis, in *Human Fungal Pathogens*, edited by Casadevall A, Mitchell AP, Berman J, Kwon-Chung J, Perfect JR, and Heitman J. **Cold Spring Harb Perspect Med** 5(2):a019679 PMID: PMC4315913
41. Yang E, Chow W, Wang G, Woo CY, Lau KP, Yuen K, Lin X, and Cai C\*. (2014) Signature gene expression reveals novel clues to the molecular mechanisms of dimorphic transition in *Penicillium marneffeii*. **PLoS Genetics** 10(10):e1004662. PMID: PMC4199489
40. 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. PMID: PMC4047104  
(Featured Research Article by *PLoS Pathogens*)
39. 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. PMID: PMC3889567
38. Tian X and Lin X\*. (2013) Matricellular protein Cfl1 regulates cell differentiation. **Communicative & Integrative Biology** 6:e26444. PMID: PMC3926872
37. Huang J, Foyle D, Lin X, and Yang J. (2013) Total synthesis and biological evaluation of an antifungal tricyclic o-hydroxy-p-quinone methide diterpenoid. **The Journal of Organic Chemistry** 78(18):9166-73. PMID: PMC3843042
36. Chacko N and Lin X\*. (2013) Non-coding RNAs in the development and pathogenesis of eukaryotic microbes. **Applied Microbiology and Biotechnology**. 97(18):7989-97. PMID: PMC3791853
35. Wang L, Tian X, Gyawali R, and Lin X\*. (2013) Fungal adhesion protein guides community behaviors and autoinduction in a paracrine manner. **Proc. Natl. Acad. Sci USA (PNAS)** 110(28):11571-6. PMID: PMC3710841  
(Recommended by *Faculty of 1000*)
34. 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. PMID: PMC3697605
33. Zhu P, Zhai B, Lin X\*, and Idnurm A\*. (2013) Congenic strains for genetic analysis of virulence traits in *Cryptococcus gattii*. **Infection and Immunity** 81(7): 2616-2625. PMID: PMC3697594
32. Gyawali R and Lin X\*. (2013) Prezygotic and postzygotic control of uniparental mitochondrial inheritance in *Cryptococcus neoformans*. **mBio** 4(2). pii: e00112-13 PMID: PMC3638309
31. Zhai B and Lin X\*. (2013) Evaluation of anti-cryptococcal activity of the antibiotic polymyxin B *in vitro* and *in vivo*. **International Journal of Antimicrobial Agents** 41:250– 254.
30. Wang L and Lin X\*. *Cryptococcus neoformans* and Cryptococcosis. **Encyclopedia of Infectious Disease. Greenwood Press.**
29. Wang L and Lin X\*. (2012) Morphogenesis in fungal pathogenicity: shape, size, and surface. **PLoS Pathogens** 8(12): e1003027. PMID: PMC3516537
28. Wang L, Zhai B, and Lin X\*. (2012) The link between morphotype transition and virulence in *Cryptococcus neoformans*. **PLoS Pathogens** 8(6): e1002765. PMID: PMC3380952  
(Recommended by *Faculty of 1000*; Featured Research Article by *PLoS Pathogens*)
27. 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. PMID: PMC3393448  
(Recommended by *Faculty of 1000*)
26. Gyawali R and Lin X\*. (2011) Mechanisms of uniparental mitochondrial DNA inheritance in *Cryptococcus neoformans*. **Mycobiology** 39(4): 235-242. PMID: PMC3385124

25. Qin Q, Luo J, **Lin X**, Pei J, Frerichs M, Ficht TA., and de Figueiredo P. (2011) Functional analysis of host factors that mediate the intracellular lifestyle of *Cryptococcus neoformans*. **PLoS Pathogens** 7(6): e1002078. PMID: PMC3116820  
(Recommended by *Faculty of 1000*)
24. Zhai B and **Lin X\***. (2011) Recent progress on antifungal drug development. **Current Pharmaceutical Biotechnology** 12(8):1255-62. DOI: 10.2174/138920111796117292
23. Wang L and **Lin X\***. (2011) Mechanisms of unisexual mating in *Cryptococcus neoformans*. **Fungal Genetics and Biology** 48:651–660 DOI: 10.1016/j.fgb.2011.02.001
22. Cogliati M\*, Viviani MA, and **Lin X\***. (2011) Hybridization and its importance in *Cryptococcus* species complex, in *Cryptococcus: from human pathogen to model yeast*. Edited by J. Heitman, T. Kozel, J. Kwon-Chung, J. Perfect, and A. Casadevall. **American Society of Microbiology**. Chapter 25, 359-370. <https://doi.org/10.1128/9781555816858.ch25>
21. Hsueh YP, **Lin X**, Kwon-Chung J and Heitman J. (2011) Sexual reproduction of *Cryptococcus*, in *Cryptococcus: from human pathogen to model yeast*. Edited by J. Heitman, T. Kozel, J. Kwon-Chung, J. Perfect, and A. Casadevall. **American Society of Microbiology**. Chapter 7: 81-96 <https://doi.org/10.1128/9781555816858.ch7>
20. **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. PMID: PMC2869318.
19. Zhai B, Zhou H, Yang L, Zhang J, Jung K, Giam C, Xiang X, and **Lin X\***. (2010) Polymyxin B, in combination with fluconazole, exerts a potent fungicidal effect. **Journal of Antimicrobial Chemotherapy** 65(5):931-8. PMID: PMC2851492.
18. **Lin X\***. (2009) *Cryptococcus neoformans*: morphogenesis, infection, and evolution. **Infection, Genetics and Evolution** 9:401-416. DOI: 10.1016/j.meegid.2009.01.013
17. Jackson J, Higgins L, and **Lin X\***. (2009) Conidiation color mutants of *Aspergillus fumigatus* are highly pathogenic to the heterologous insect host *Galleria mellonella*. **PLoS ONE** 4(1), e4224 (1-14). PMID: PMC2625396.
16. **Lin X**, Patel S, Litvintseva A, Floyd A, Mitchell TG, and Heitman J. (2009) Diploids in the *Cryptococcus neoformans* serotype A population homozygous for the  $\alpha$  mating type originate *via* unisexual mating. **PLoS Pathogens** 5(1), e1000283 (1-18). PMID: PMC2629120.  
(Recommended by *Faculty of 1000*)
15. Bui T, **Lin X**, Malik R, Heitman J, and Carter D. (2008) Isolates of *Cryptococcus neoformans* from infected animals reveal genetic exchange in unisexual,  $\alpha$  mating type populations. **Eukaryotic Cell** 7(10):1771– 80. PMID: PMC2568071
14. **Lin X**, Nielsen K, Patel S, and Heitman J. (2008) Impact of mating type, serotype, and ploidy on virulence of *Cryptococcus neoformans*. **Infection and Immunity** 76(7):2923-38. PMID: PMC2446738
13. Rutherford J, **Lin X**, Nielson K, and Heitman J. (2008) Amt2 permease is required to induce ammonium-responsive invasive growth and mating in *Cryptococcus neoformans*. **Eukaryotic Cell** 7(2):237-46. PMID: PMC2238157.
12. **Lin X**, Litvintseva A, Nielsen K, Patel S, Kapadia Z, Floyd A, Mitchell TG, and Heitman J. (2007)  $\alpha$ AD $\alpha$  hybrid strains: evidence of hybrid vigor and same sex mating of *Cryptococcus neoformans* in nature. **PLoS Genetics** 3(10):1975-90. PMID: PMC2042000.
11. Litvintseva AP, **Lin X**, Templeton I, Heitman J, and Mitchell TG. (2007) Many globally isolated AD hybrid strains of *Cryptococcus neoformans* originated in Africa. **PLoS Pathogens** 3(8), e114 (1-9). PMID: PMC1949410
10. **Lin X**, and Heitman J. (2007) Mechanisms of homothallism in fungi, in *Sex in fungi: molecular determination and evolutionary implications*, edited by J. Heitman, J. Kronstad, J. Taylor and L. A. Casselton. **American Society of Microbiology** Chapter 3:35-57
9. **Lin X**, Huang J, Mitchell T, and Heitman J. (2006) Virulence attributes and hyphal growth of *Cryptococcus*

*neoformans* are quantitative traits and the *MAT $\alpha$*  allele enhances filamentation. ***PLoS Genetics*** 2(11): e187 (1-14). PMID: PMC1636697.

8. **Lin X** and Heitman J. (2006) The biology of *Cryptococcus neoformans* species complex. ***Annual Review of Microbiology*** 60: 60-105. DOI: 10.1146/annurev.micro.60.080805.142102
7. **Lin X** and Heitman J. (2005) Chlamyospore formation during hyphal growth in *Cryptococcus neoformans*. ***Eukaryotic Cell*** 4(10):1746-54 PMID: PMC1265899
6. Idnurm A, Bahn Y, Nielsen K, **Lin X**, Fraser J, and Heitman J. (2005) Deciphering the model pathogenic fungus *Cryptococcus neoformans*. ***Nature Reviews Microbiology*** 3(10):753-64. DOI: 10.1038/nrmicro1245
5. **Lin X**, Hull CM, and Heitman J. (2005) Sexual reproduction between partners of the same mating-type in *Cryptococcus neoformans*. ***Nature*** 434: 1017-21. DOI: 10.1038/nature03448  
(Recommended by *Faculty of 1000*)
4. **Lin X** and Momany M. (2004) Identification and complementation of abnormal hyphal branch mutants *ahbA1* and *ahbB1* in *Aspergillus nidulans*. ***Fungal Genetics and Biology*** 41(11): 998-1006. DOI: 10.1016/j.fgb.2004.07.005
3. Guest G, **Lin X**, and Momany M. (2004) *Aspergillus nidulans* RhoA is involved in polar growth, branching, and cell wall synthesis. ***Fungal Genetics and Biology*** 41(1):13-22 DOI: 10.1016/j.fgb.2003.08.006
2. **Lin X** and Momany M. (2003) The *Aspergillus nidulans* *swoC1* mutant shows defects in growth and development. ***Genetics*** 165: 543-54. PMID: PMC1462793.
1. **Lin X**, Momany C, and Momany, M. (2003) SwoHp, nucleoside diphosphate kinase, is essential in *Aspergillus nidulans*. ***Eukaryotic Cell*** 2: 1169–1177. PMID: PMC326647.