Lori B. Huberman, PhD
Assistant Professor
Plant Pathology and Plant-Microbe Biology Section
School of Integrative Plant Science
Cornell University

EDUCATION

Harvard University, Cambridge, MA 2013
PhD in Biology
Thesis: Studies on mating in the budding yeast

Massachusetts Institute of Technology, Cambridge, MA 2007
BS in Biology, BS in Music
Phi Beta Kappa, Sigma Xi

RESEARCH and PROFESSIONAL EXPERIENCE

Cornell University, Plant Pathology and Plant-Microbe Biology Section 2021-
School of Integrative Plant Science Ithaca, NY
Assistant Professor

University of California Berkeley, Dept. of Plant and Microbial Biology 2019-2020
Assistant Project Scientist Berkeley, CA

University of California Berkeley, Dept. of Plant and Microbial Biology 2013-2019
Postdoctoral Fellow Berkeley, CA
Advisor: N. Louise Glass

Harvard University, Dept. of Molecular and Cellular Biology 2008-2013
Graduate Researcher Cambridge, MA
Advisor: Andrew Murray

Massachusetts Institute of Technology, Dept. of Biology 2005-2007
Undergraduate Research Opportunity (UROP) Cambridge, MA
Advisor: Chris Kaiser

PUBLICATIONS

Huberman, L.B., Wu, V.W., Lee, J., Daum, C., O'Malley, R.C., and Glass, N.L. (2021) Aspects of the *Neurospora crassa* sulfur starvation response are revealed by transcriptional profiling and DNA affinity purification sequencing. *mSphere*. **6**(5):e0056421. doi: 10.1128/mSphere.00564-21.

Huberman, L.B. (2021) Developing functional genomics platforms for fungi. *mSystems*. **6**(4):e0073021. doi: 10.1128/mSystems.00730-21.

Huberman, L.B., Wu, V.W., Kowbel, D.J., Lee, J., Daum, C., Grigoriev, I.V., O'Malley, R.C., and Glass, N.L. (2021) DNA affinity purification sequencing and transcriptional profiling reveal new aspects of nitrogen regulation in a filamentous fungus. *Proc Natl Acad Sci U S A*. **118**(13): e2009501118. doi: 10.1073/pnas.2009501118.

Wu, V.W., Thieme, N., **Huberman, L.B.**, Dietschmann, A., Kowbel, D.J., Lee, J., Calhoun, S., Singan, V., Lipzen, A., Xiong, Y., Monti, R., Blow, M.J., O'Malley, R.C., Grigoriev, I.V., Benz, J.P., and Glass, N.L. (2020) The regulatory and transcriptional landscape associated with carbon utilization in a filamentous fungus. *Proc Natl Acad Sci U S A* **117**(11): 6003-6014. doi: 10.1073/pnas.1915611117.

Huberman, L.B., Coradetti, S.T., and Glass, N.L. (2017) Network of nutrient-sensing pathways and a conserved kinase cascade integrate osmolarity and carbon sensing in *Neurospora crassa*. *Proc Natl Acad Sci U S A* **114**(41): E8665-E8674. doi: 10.1073/pnas.1707713114.

Huberman, L.B., Liu, J., Qin, L., and Glass, N.L. (2016) Regulation of the lignocellulolytic response in filamentous fungi. *Fungal Biology Reviews* **30**: 101-111. doi: 10.1016/j.fbr.2016.06.001.

Huberman, L.B. and Murray, A.W. (2014) A model for cell wall dissolution in mating yeast cells: polarized secretion and restricted diffusion of cell wall remodeling enzymes induces local dissolution. *PLoS ONE* **9**(10): e109780. doi: 10.1371/journal.pone.0109780.

Huberman, L.B. and Murray, A.W. (2013) Genetically engineered transvestites reveal novel mating genes in budding yeast. *Genetics* **195**: 1277-1290. doi: 10.1534/genetics.113.155846. **Faculty of 1000 Recommended Paper**

Underline indicates corresponding author or co-corresponding author.

FELLOWSHIPS AND AWARDS

Cornell Atkinson Center for Sustainability Faculty Fellow 2021-

National Institutes of Health Ruth L. Kirschstein National Research Service Award Individual Postdoctoral Fellowship 2015-2017

National Science Foundation Graduate Research Fellowship 2007-2010

Harvard University Ashford Fellowship 2007-2013
Awarded to only 6 first year graduate students in any area of study at Harvard University as an addition to stipend

MIT Susan Hockfield Prize in the Life Sciences 2006
Awarded to only 1 junior per year in any area of the life sciences for exceptional performance and promise for graduate study and research

GRANT FUNDING

VM Agritech 3/1/2021-2/28/2023
"Identifying fungicide mode of action using high throughput functional genomics"
- Role: PI

Joint Genome Institute New Investigator Community Science Project 5/1/2022-4/30/2024
"Investigating transcriptional and metabolic mechanisms used by filamentous fungi to distinguish between multiple nutrient sources during lignocellulose degradation"
- Role: PI

Cornell Atkinson Center for Sustainability Academic Venture Fund 7/1/2021-6/30/2023
"MycoBuilt: Mycelium-bound bio-composites in novel architectural applications for circular construction"
- Role: Co-PI
- PI: Felix Heisel (Cornell College of Architecture)
- Other co-PIs: Marta Wisniewska (Cornell College of Architecture), Kathie Hodge (Cornell Plant Pathology and Plant-Microbe Biology), Rebecca Nelson (Cornell Plant Pathology and Plant-Microbe Biology), Anil Netravali (Cornell College of Human Ecology), Prabhu Pingali (Cornell Johnson College of Business)

BASF California Research Alliance 8/1/2019-7/31/2023
"Using comparative and functional genomics to map nutrient and developmental networks in *Myceliophthora thermophila*"
- Role: Co-PI
- PI: N. Louise Glass (University of California Berkeley)

Joint Genome Institute Community Science Project 1/1/2022-12/31/2023
"Mining the unknown part of fungal genomes by combining machine learning with multi-omics and functional characterization"
- Role: Co-PI
- PI: Ronald de Vries (Utrecht University)
- Other co-PIs: Makela Miia (University of Helsinki), Bernard Henrissat (Architecture et Fonction des Macromolecules Biologiques), Mao Peng (Utrecht University)

INVITED TALKS

Filamentous fungi at the buffet: The regulatory and transcriptional landscape of nutrient sensing. *Molecular Biology of Fungi VAAM Symposium Plenary Speaker*. (September 2022) Kaiserslautern, Germany.

Investigating fungicide mode of action using massively parallel screens. *Cellular and Molecular Fungal Biology Gordon Research Conference*. (June 2022) Holderness, NH.

Investigating fungicide mode of action using massively parallel screens. *Society for Molecular Biology and Evolution: Evolution of Fungal Pathogens Meeting Keynote Speaker*. (May 2022) Quebec City, Canada.

Filamentous fungi at the buffet: The regulatory and transcriptional landscape of nutrient sensing. *Siena College Seminar Speaker*. (February 2022) Loudonville, NY.

Filamentous fungi at the buffet: The regulatory and transcriptional landscape of nutrient sensing. *Neurospora Conference*. (October 2021) Navasota, TX and virtual.

Filamentous fungi at the buffet: The regulatory and transcriptional landscape of nutrient sensing. *Rutgers, The State University of New Jersey Seminar Speaker*. (October 2021) New Brunswick, NJ (virtual).

Filamentous fungi at the buffet: The regulatory and transcriptional landscape of nutrient sensing. *Botany 2021*. (July 2021) Virtual.
Developing a high-throughput functional genomics platform for filamentous fungi. *Neurospora Conference*. (October 2018) Pacific Grove, CA.
Developing a high-throughput functional genomics platform for filamentous fungi. *Cellular and Molecular Fungal Biology Gordon Research Conference*. (Poster – Award winner) (June 2018) Holderness, NH.
Transcriptional profiling of *Neurospora crassa* reveals secrets of plant cell wall degradation by filamentous fungi. *Joint Genome Institute User Meeting*. (March 2018) San Francisco, CA.
Identifying carbohydrate sensing pathways in *Neurospora crassa*: The mixed up signals of sweet and salty. *Fungal Genetics Conference*. (Invited talk and poster award winner) (March 2017) Pacific Grove, CA.
Identifying carbohydrate sensing pathways in *Neurospora crassa*: The mixed up signals of sweet and salty. *Cellular and Molecular Fungal Biology Gordon Research Conference*. (Poster – Award winner) (June 2016) Holderness, NH.
Identifying carbohydrate sensing pathways in *Neurospora crassa*: The mixed up signals of sweet and salty. *Neurospora Information Conference*. (March 2016) Pacific Grove, CA.

TEACHING and MENTORING EXPERIENCE

Cornell University Ithaca, NY
PLPPM 6490 Current Topics in Fungal Biology Fall 2023
- Instructor

PLPPM 6380 Fungal Genetics and Genomics Spring 2022
- Instructor

Current mentoring
- 2 postdoctoral associates, 1 undergraduate student

Past mentoring
- 1 rotation student, 1 graduate student, 1 undergraduate student

University of California Berkeley Berkeley, CA
Research Mentor 2015-2020
- Designed and oversaw research projects for 1 undergraduate, 1 graduate student, and 2 lab technicians

Senior Internship Mentor, Leadership Public School, Richmond Charter School 2016
- Mentored 2 high school seniors who are interested in a STEM career

Mentor, Be A Scientist, Berkeley Public Schools 2016
- Helped 4 middle school students with their middle school science projects

Harvard University Cambridge, MA
Research Mentor 2012
- Designed and oversaw 2-month research projects for 1 rotation student and 1 masters intern

Teaching Consultant for the Life Sciences, Bok Center for Teaching and Learning 2011-2013
- Prepared future Teaching Fellows for classroom presentation, teaching relevant material, and classroom discipline

Head Teaching Fellow and curriculum development, HHMI Outreach Program 2010-2013
- Developed curricula and taught high school outreach classes on plasmid DNA and antibiotic resistance

Teaching Fellow, Molecular Biology; Cellular Biology 2008; 2010
- Taught weekly lab and classroom section as a supplement to a large lecture

Massachusetts Institute of Technology Cambridge, MA
Instructor and curriculum development, MIT High School Studies Program 2006
- Developed curriculum and taught weekly basic genetics class to 60 middle and high school students

Undergraduate Tutor, Genetics, Cell Biology, Intro. Biology 2005-2007
- Tutored 10 individual students on a weekly basis

SERVICE

Fungal Genetics and Biology 2021-
Early Career Editorial Board
Frontiers in Fungal Biology 2020-
Review Editor