

JERAMIA J. ORY, PH.D.

Curriculum Vitae - Abbreviated

Associate Professor of Biochemistry
Undergraduate Health Professions Advisor
Saint Louis College of Pharmacy
4588 Fairview Place
St. Louis, MO 63110

<http://DrLabRatOry.com>
E-mail: JeramiaOry@stlcop.edu
Office: (314) 446-8169
Cell: (610) 462-2166

EDUCATION & TRAINING

Ph.D. Biochemistry University of Minnesota, Minneapolis, MN
B.S. Biochemistry University of Nebraska, Lincoln, NE

SERVICE AND LEADERSHIP

2019-present Chair, Undergraduate Admissions and Progressions Committee, STLCOP
2019-present Chair, BEST Health Professions Curriculum Committee
2017-present Undergraduate Health Professions Advisor, STLCOP
2017-present Chair, Health Professions Advisory Committee, STLCOP
2018-present Certified Diversity Facilitator (CDFT), NCCJ St. Louis
2013-present Faculty mentor, Freeport High School SMART (**S**tudents **M**odeling **A** **R**esearch **T**opic) team
2017-present Editor, *The Chemical Bond*, St. Louis Chapter of the ACS
2017-present Webmaster, Missouri Academy of Science
2016-2019 Basic Sciences Representative, Undergraduate Admissions and Progressions Committee, STLCOP
2017-present Basic Sciences Representative, Holistic Admissions Subcommittee, STLCOP
2017-2019 Faculty Representative, Policy review committee, non-academic student code of conduct
2016-2018 Institutional Review Board member, STLCOP
2013-2014 Chair, Academic and Professional Affairs Committee, King's College
2012-2013 Chair-elect, Academic and Professional Affairs Committee, King's College
2011-2015 Co-advisor, Health Professions, King's College
2008-2015 Faculty Advisor, Pre-Health Club, King's College
2009-2011 Division A representative, Faculty Council, King's College

HONORS AND AWARDS

2019 Faculty Excellence Award, St. Louis College of Pharmacy

GRANTS

2016 Faculty Research Incentive Fund, "Phylogenetic and Genomic Characterization of *Rhodotorula* species"
2016 Faculty Research Incentive Fund, "Exploring a Potential Role for Disomy in Copper Tolerance in the Fungus *C. neoformans*"
2012 Northeastern Pennsylvania Technology Institute's Undergraduate Training Grant Program

2011 Professor Thomas V. Tobin Science Faculty Research Fund
 2009 Departmental Civic Engagement Grant, The Shoal Center for
 Community Engagement and Learning

TEACHING

Saint Louis College of Pharmacy

2019-present Course developer and Instructor, *Genetics*
 2019-present Instructor, *Chemistry Structure and Physical Properties*
 2017-present Course developer and instructor, *Introduction to Data Science*
 2016 Instructor, *Molecular Biology*
 2015-present Course developer and instructor, *Biochemistry* lecture and lab
 2015 Instructor, *Organic Chemistry with A Biological Emphasis* lecture and lab

Software Carpentry

2014-present Instructor: bash shell, python, R, version control, SQL. Workshops taught at: Cornell University, University of Toronto, University at Albany, SUNY.

Data Carpentry

2015-present Instructor: SQL, bash shell, R. Workshops taught at: Cornell University, Genentech

King's College

2013-2015 Course developer and instructor, *Introduction to Cellular and Molecular Biology* lecture & lab
 2013-2015 Course developer and Instructor, *Medical Genetics, Physician Assistant Didactic Phase*
 2011-2012 Course developer and instructor, *Freshman Biology Seminar*
 2010 Course developer, *Techniques in Molecular Medicine*
 2010 Co-Instructor and course developer, *Natural Science Perspectives: Humans and Nature*, a thematic non-majors course integrated with *Theology and Nature*

RESEARCH

2015-present **Associate Professor of Biochemistry, Saint Louis College of Pharmacy.** Research advisor, junior through P4 students. Biochemical and genetic characterization of copper sensing and transport in the pathogenic fungus *Cryptococcus neoformans*. Molecular genetic screening of local fungal populations for high copper tolerance.

2006-2015 **Assistant/Associate Professor of Biology, King's College.** Research advisor, sophomore through senior research students. Biochemical and genetic characterization of copper sensing and transport in the pathogenic fungus *Cryptococcus neoformans*. Molecular genetic screening of local fungal populations. Whole genome and transcriptome analysis of clinical and environmental strains of *C. neoformans*.

2004-2006 **Biochemical Information Specialist, Research Collaboratory for Structural Bioinformatics – Protein Data Bank.** Designed and implemented a high throughput computational strategy to standardize the chemical information content of the PDB ligand database using a

combination of commercially available libraries and open source tools.
Helen Berman, Director.

ACTIVE PROFESSIONAL MEMBERSHIPS

2016-present	Genetics Society of America
2015-present	Missouri Academy of Science
2011-present	American Chemical Society
2006-present	American Society for Microbiology
2005-2015	Pennsylvania Academy of Science

INVITED PRESENTATIONS

2016	"Genomic Explorations of Virulence in the Fungal Pathogen <i>Cryptococcus neoformans</i> " Middle Tennessee State University
2013	"Engaging Students in Their Space to Increase Motivation: Expanding Small College Lessons to a Large University" University of Nebraska, Lincoln
2013	"Virulence of the Fungus <i>Cryptococcus neoformans</i> " Doane College
2010	"Virulence and Gene Expression in the Fungus <i>Cryptococcus neoformans</i> ," Cedar Crest College
2010	"Effects of Copper on Virulence and Gene Expression in the Fungus <i>Cryptococcus neoformans</i> ," Western Connecticut State University

PUBLICATIONS

Yockey J, Andres L, Carson M, **Ory JJ**, Reese AJ. Cell Envelope Integrity and Capsule Characterization of *Rhodotorula mucilaginosa* Strains from Clinical and Environmental Sources. mSphere 4, 2019

McClelland EE, Hobbs LM, Rivera J, Casadevall A, Potts WK, Smith JM, **Ory JJ**. The Role of Host Gender in the Pathogenesis of *Cryptococcus neoformans* Infections. PLoS ONE, 2013 8(5): e63632.

Henrick K, Feng Z, Bluhm WF, Dimitropoulos D, Doreleijers JF, Dutta S, Flippen-Anderson JL, Ionides J, Kamada C, Krissinel E, Lawson CL, Markley JL, Nakamura H, Newman R, Shimizu Y, Swaminathan J, Velankar S, **Ory J**, Ulrich EL, Vranken W, Westbrook J, Yamashita R, Yang H, Young J, Yousufuddin M, Berman HM. Remediation of the protein data bank archive. Nucleic Acids Res. 2008 Jan;36(Database issue):D426-33.

Burkhardt K, Schneider B, **Ory J**. A Biocurator Perspective: Annotation at the Research Collaboratory for Structural Bioinformatics Protein Data Bank. PLoS Comput Biol, 2006 2(10): e99

Ory JJ, Griffith CL, Doering TL. An efficiently regulated promoter system for *Cryptococcus neoformans* utilizing the *CTR4* promoter. Yeast, 2004 Aug;21(11):919-926.

Terradot L, Durnell N, Li M, Li D, **Ory J**, Labigne A, Legrain P, Colland F, Waksman G. Biochemical characterization of protein complexes from the *Helicobacter pylori* protein interaction map: strategies for complex formation and evidence for novel interactions within type IV secretion systems. Mol Cell Proteomics. 2004 Aug;3(8):809-819.

Bar-Peled M, Griffith CL, **Ory JJ**, Doering TL. Purification and kinetic characterization of UDP-glucose dehydrogenase from *Cryptococcus neoformans*. Biochem. J., 2004 Jul 1;381(Pt 1):131-6.

Ory, J. Scientists & Society: Two body problem. Nature. 2004 Jun 17;429(6993):788.

Bose I, Reese AJ, **Ory JJ**, Janbon G, Doering TL. A yeast under cover: The capsule of *Cryptococcus neoformans*. Eukaryotic Cell 2003 Aug;2(4):655-63.

Ory JJ, Banaszak LJ. Studies of the ligand binding reaction of adipocyte lipid binding protein using the fluorescent probe 1-anilinonaphthalene-8-sulfonate. *Biophys. J.* 1999 Aug;77(2):1107-16.

Thompson J, **Ory J**, Reese-Wagoner A, Banaszak L. The liver fatty acid binding protein -- comparison of cavity properties of intracellular lipid-binding proteins. *Mol. Cell, Biochem.* 1999 Feb;192(1-2):9-16.

Ory JJ, Mazhary A, Kuang H, Davies RR, Distefano MD, Banaszak LJ. Structural characterization of two synthetic catalysts based on adipocyte lipid-binding protein. *Protein Eng.* 1998 Apr;11(4):253-61.

Ory J, Kane CD, Simpson MA, Banaszak LJ, Bernlohr DA. Biochemical and crystallographic analyses of a portal mutant of the adipocyte lipid-binding protein. *J. Biol. Chem.* 1997 Apr 11;272(15):9793-801.

Blum P, **Ory J**, Bauernfeind J, Krska J. Physiological consequences of DnaK and DnaJ overproduction in *Escherichia coli*. *J. Bacteriol.* 1992 Nov;174(22):7436-44

CONFERENCE PAPERS

Nuthikattu N and **Ory JJ**, Department of Basic Sciences, St. Louis College of Pharmacy. A Survey of Disomy and Mitochondrial Heteroplasmy in 200 Strains of the Human Fungal Pathogen *Cryptococcus neoformans*. April 2019. Annual Meeting of the Missouri Academy of Science. Maryville, MO.

Abraham B, Thomas S, Teagarden J, Bross T, and **Ory JJ**. Induced Evolution of Copper Tolerance in *Cryptococcus neoformans*. April 2018. St. Louis Area Undergraduate Research Symposium. St. Louis, MO.

Ory JJ Induced Evolution of Copper Tolerance in *Cryptococcus neoformans*. April 2018. Annual Meeting of the Missouri Academy of Science. Rolla, MO.

Ory JJ Virtual Whiteboard and Slide Presentation Utilizing Annotate.net. September 2017 Focus on Teaching and Technology, Saint Louis, MO

Grosonja M, DeVore P, and **Ory, JJ** Survey of Copper Tolerant Fungi from Missouri Soil. April 2017. Annual Meeting of the Missouri Academy of Science. St. Charles, MO.

Teagarden J, Bross T, and **Ory JJ** Induced Evolution of Low Copper Tolerance in *Cryptococcus neoformans*. April 2017. Annual Meeting of the Missouri Academy of Science. St. Charles, MO.

Ellis SE, Coslett M, Teagarden J, Bross T and **Ory JJ**. Genomic analysis of phenotype reversion in a *cut1*- strain of *Cryptococcus neoformans var neoformans*. March 2017. 29th Fungal Genetics Conference. Pacific Grove, CA.

Kosak Z, McClelland EE and **Ory JJ**. Exploring Microarray Data from *Cryptococcus neoformans* to Identify Novel Cryptococcal Meningitis Virulence Indicators. April 2014. 90th Annual Meeting of the Pennsylvania Academy of Science. Selinsgrove, PA.

Manes C and **Ory JJ**. Exploring the role of CUF1 in phagocytosis of *C. neoformans var neoformans*. April 2013. 89th Annual Meeting of the Pennsylvania Academy of Science. Bradford, PA.

McClelland EE, Hobbs LM, Bisson GP, Smith JM and **Ory JJ**. The Role of Host Gender in the Pathogenesis of *Cryptococcus neoformans* Infections. May 2012. 112th General Meeting of the American Society For Microbiology. San Francisco, CA.

Ory JJ, Phillips K, Kliman RM and McClelland EE. Genetic Determinants of Virulence in the Fungal Pathogen *Cryptococcus neoformans*. April 2012. 88th Annual Meeting of the Pennsylvania Academy of Science. Allentown, PA.

Ellis SE, Attanasio NA, Sapienza SA, Kish AJ and **Ory JJ**. Analysis of Copper Homeostasis

Pathways in *Cryptococcus neoformans* via Microarray and Bioinformatic Characterization of a *cup1*- Strain. May 2011. Eighth International Conference on Cryptococcus and Cryptococcosis. Charleston, SC.

De Palma R and **Ory JJ**. The Effect of Modified Copper-Sensing Elements in the Regulated *CTR4* Promoter System of *Cryptococcus neoformans*. April 2011. 87th Annual Meeting of the Pennsylvania Academy of Science. Altoona, PA.

Trengue S, Manes C and **Ory JJ**. The Role of the Copper Sensing Transcription Factor Cuf1p on Macrophage Phagocytosis and Killing by *Cryptococcus neoformans*. April 2011. 87th Annual Meeting of the Pennsylvania Academy of Science. Altoona, PA.

Kish A and **Ory JJ**. Microarray Analysis of Clinical Isolates of *C. neoformans* from Patients in Botswana. April 2011. 87th Annual Meeting of the Pennsylvania Academy of Science. Altoona, PA.

Grundowski J, Miller J, and **Ory JJ**. The Role of CNLAC1 and CNLAC2 in Azure B Reactive Activity in *Cryptococcus neoformans*. April 2011. 87th Annual Meeting of the Pennsylvania Academy of Science. Altoona, PA.

Ellis SE, Doering TL and **Ory JJ**. Microarray analysis of a $\Delta cup1$ strain of *Cryptococcus neoformans* suggests Cuf1p is involved in both repressor and enhancer activities. May 2010. 110th General Meeting of the American Society For Microbiology. San Diego, CA.

Miller JB and **Ory JJ**. Characterization and Isolation of Azure B Reactive Compounds from the Fungal Pathogen *Cryptococcus neoformans*. May 2010. 110th General Meeting of the American Society For Microbiology. San Diego, CA.

Attanasio N and **Ory J**. Effects of Copper on the Expression of the *CTR4* and *CUF1* Genes in Different Strains of *C. neoformans*. April 2010. 86th Annual Meeting of the Pennsylvania Academy of Science. Camp Hill, PA

Capozzeli R and **Ory J**. Cloning and Expression of the Copper Sensitive Transcription Factor Cuf1p from *Cryptococcus neoformans*. April 2010. 86th Annual Meeting of the Pennsylvania Academy of Science. Camp Hill, PA

Ellis SE, Doering TL, **Ory JJ**. Effect of copper concentration on growth morphology and genome wide expression in the fungal pathogen *Cryptococcus neoformans var. neoformans*. May 2009. 109th General Meeting of the American Society For Microbiology. Philadelphia, PA.