Courtney Coleman

Email: courtneycoleman@missouristate.edu
Phone: +1 (417) 836-5512
Google Scholar: https://scholar.google.com/citations?user=Pj9N7zcAAAAJ&hl=en

Education

2009–2016 University of Missouri–Columbia
PhD in Plant, Insect, and Microbial Sciences
Dissertation: Positional Cloning and Functional Analysis of *REN1* in the grapevine 'Kishmish vatkana'

2007–2009 Missouri State University
MS in Plant Science
Thesis: Mapping *REN1* in *Vitis vinifera*

1997–2001 Drury University
BA with Honors
Majors: Biology and Chemistry
Minor: Global Studies

Professional Experience

Aug. 2025 –present **Visiting Assistant Professor**
Missouri State University, Biology Department

- Teaching Genetics (BIO 235), Honors Biology in Your World (BIO 101-999), and Applications of Molecular Markers (BIO 540/640/730)
- Evaluating and updating course materials, as needed (lectures, homework, and exams)
- Meeting with students to answer questions and complement course content with additional explanation, as needed
- Advising students who are pursuing a major in Biology

2023–present **Laboratory Manager and Life Sciences Team Lead**
Discovery Center of Springfield

- Site coordinator for Citizenship & Service Learning interns from Missouri State University who engage in service learning in the ChromoZone Life Sciences Gallery and supporting laboratory
- Maintaining life science exhibits and training laboratory interns and volunteers
- Facilitating museum exhibits and activities, and communicating science content in verbal and written form

2023–present **Academic Editor**
Cactus Communications (contract editor for the Center of Excellence in Plant and Animal Sciences), and freelancer through Fiverr

- Editing research manuscripts to ensure correct use of grammar and consistency in style; improving clarity and logical flow; optimizing word choice and manuscript structure
- Formatting for compliance with journal style guidelines

2019–2021 **Postdoctoral Research Associate**
Missouri State University, Biology Department
NSF-PGRP funded collaborative project

- Genotype-phenotype correlation analyses in grapevines to identify viticulturally relevant DNA variants
- Data curation in Excel and analysis with R and Python utilizing version control (git) and coding best practices
- Training and mentorship of undergraduate and graduate research assistants
- Plant propagation, vineyard establishment and maintenance, and greenhouse management

2018–2019 **Life Science Assistant and STEM Instructor**
Discovery Center of Springfield

- Maintenance of life science exhibits
- Assisting visitors with activities at interactive lab stations
- Teaching and developing educational content

2009–2016 **Graduate Research Assistant**
University of Missouri, Dr. Walter Gassmann Lab, and
Missouri State University, Dr. László Kovács Lab

- Molecular mapping, annotation, and functional analysis of candidate genes for disease resistance in grapevine
- Training and mentorship of undergraduate and graduate research assistants

2008–2010
Summers **Visiting Researcher**
University of Udine, Dr. Gabriele Di Gaspero Lab, and the
Applied Genomics Institute (Istituto di Genomica Applicata, IGA)

- Genotype-phenotype correlation analyses for disease resistance traits in grapevine, including molecular marker design, high-throughput DNA extraction and analysis (i.e., amplification, fragment analysis, sequencing and assembly, and gene annotation), data curation, and molecular mapping

- Assisted researchers in the field and laboratory with viticultural science, including grape breeding, berry analysis, and disease resistance assays

2007–2009 **Graduate Research Assistant**
Center for Grapevine Biotechnology, Missouri State University
- Development and implementation of genetic markers for disease resistance and pedigree studies in grapevine species

2001–2007 **Laboratory DNA Analyst**
Paternity Testing Corporation, Columbia, MO
- Manual and automated DNA extraction, quantification, and PCR amplification for human identity and relationship testing
- Agarose gel electrophoresis, Southern blotting, and chemiluminescent detection of DNA using RFLP techniques
- Research, development, and organization of laboratory methods for high-throughput sampling, genomic DNA extraction, and amplification using robotic instrumentation

Teaching Experience

Per Course Faculty at Missouri State University
- Genetics (BIO 235; Lecture), Spring 2025
- General Biology I (BIO 121; Lab), Spring 2015

STEM Instructor at The Discovery Center of Springfield, 2018 to 2019

Guest Lecturer at the University of Missouri–Columbia for the course Fungal Genetics and Biology, March 2012. Developed and presented a lecture describing my research work on the positional cloning of a disease resistance gene in grapevine

Guest Lecturer at Missouri State University for the course Applications of Molecular Markers, October 2011. Developed and presented lectures covering the topics of genetic mapping and positional cloning

Guest Lecturer at the University of Missouri–Columbia for a student group, Freshman Research in Plant Sciences (FRIPS), December 2011. Developed and presented a lecture describing my research and explaining the basic laboratory techniques involved in my work

Mentoring

Site Coordinator, Citizenship & Service-Learning (CASL). Training and supervising service-learning students in the ChromoZone life science gallery at the Discovery Center. April 2023 to present

Peer Mentor. Participated in the coordination of educational workshops and seminars for students and trainees across multiple labs in the Biology Department at Missouri State University as a Postdoctoral Research Associate. April 2019 to September 2021

Professional Development

Research Mentor Training. Online course taken through CIRTL (Center for the Integration of Research, Teaching, and Learning). Course completed Summer 2018

Online Teaching and Learning. Online course taken through Ozarks Technical Community College. Course completed Summer 2017

An Introduction to Evidence-Based Undergraduate STEM Teaching. Massive Open Online Course taken through CIRTL. Course completed Spring 2017

Advancing Learning Through Evidence-Based STEM Teaching. Massive Open Online Course taken through CIRTL. Course completed Spring 2017

Scientific Outreach

Mizzou Adventures in Education, April 21, 2012. "Plant Loving Microbes: Friend or Foe." Developed and presented in conjunction with Students for the Advancement of Plant Pathology (SAPP)

"Hermann Jaeger, Ozarks Grape Hunter: Saving European Vineyards in the Late Nineteenth Century." A historical and scientific travelling exhibit developed by: Bethany Walker, Bela Bodo, László Kovács, **Courtney Coleman**, and Jacek Fraçzak. Opened April 8, 2011 at The Discovery Center, Springfield, MO; installed in the ChromoZone gallery at the Discovery Center in April 2023

Service

Volunteer Life Science Assistant at the Discovery Center of Springfield, aiding in the reestablishment and maintenance of life science exhibits in the ChromoZone life sciences gallery following the COVID-19 pandemic. April 2022–April 2023

Review Editor for Frontiers, Technical Advances in Plant Science. September 2014–present

Proofreading, copyediting, and substantive editing of academic manuscripts, book chapters, theses, and dissertations for peers and colleagues, with a focus on work for writers for whom English is a second language. January 2008–present. A detailed bibliography of edited works is available upon request

Awards and Honors

Second Place in the MU Life Sciences Week Poster Competition, "Genetics, Environment, and Evolution" category. May 2010

Life Sciences Fellowship from the University of Missouri. August 2009–2013

Awarded the Grapevine Research Coordination Network grant to support work involving international collaborative research. May 2009

Student Organizations and Leadership

2010–2013 **Secretary**, Life Sciences Center Postdoc and Graduate Student Association

2011–2012 **President**, Students for the Advancement of Plant Pathology at MU

2010–2011 **Vice President**, Students for the Advancement of Plant Pathology at MU

Publications

Bhattarai G, Fennell A, Londo JP, **Coleman C**, Kovacs LG (2021) A Novel Grape Downy Mildew Resistance Locus from *Vitis rupestris*. *American Journal of Enology and Viticulture* 72:12–20

Foria S, Magris G, Copetti D, **Coleman C**, Morgante M, Di Gaspero G (2018) InDel markers for monitoring the introgression of downy mildew resistance from wild relatives into grape varieties. *Molecular Breeding* 38(10):1–12

Li C, Erwin A, Pap D, **Coleman C**, Higgins A, Kiss E, Kozma P, Hoffmann S, Ramming DW, Kovács LG (2013) Selection for Run1-Ren1 dihybrid grapevines using microsatellite markers. *American Journal of Enology and Viticulture* 64:152–155

Di Gaspero G, Copetti D, **Coleman C**, Castellarin SD, Eibach R, Kozma P, Lacombe T, Gambetta G, Zvyagin A, Cindric P, Kovács L, Morgante M, Testolin R (2012) Selective sweep at the Rpv3 locus during grapevine breeding for downy mildew resistance. *Theoretical and Applied Genetics* 124:277–286

Coleman C, Copetti D, Cipriani G, Hoffmann S, Kozma P, Kovács L, Morgante M, Testolin R, Di Gaspero G (2009) The powdery mildew resistance gene *REN1* co-segregates with an NBS-LRR gene cluster in two Central Asian grapevines. *BMC Genetics* 10:89–109

Presentations

Hunter Bartelt, Kaylene Reyes, Courtney Coleman, Vanessa Morales, Alex Weldon, Kole Stutzman, Christian Willers, Tharin Luehrs, Sujan Thapa, Laszlo Kovacs, Margaret Frank, Zoe Migicovsky, Daniel Chitwood. 2020. Does elemental composition of North American grapevines reflect environmental adaptation? Plant Biology Worldwide Summit, virtual conference. **Poster Presentation**.

Courtney Coleman, Dániel Pap, Fei Gao, Chen Li, Dario Copetti, Sarolta Hoffmann, Pál Kozma, David Ramming, Michele Morgante, Raffaele Testolin, Gabriele Di Gaspero, László Kovács, Walter Gassmann. 2013. Physical mapping of the *REN1* locus in 'Kishmish vatkana' and functional analysis of candidate genes for resistance to grapevine powdery mildew. MU Life Sciences Week, Columbia, MO. **Poster Presentation**

Courtney Coleman. 2013. Physical mapping of the *REN1* locus in 'Kishmish vatkana' and functional analysis of candidate genes for resistance to grapevine powdery mildew. Plant Talks, University of Missouri, Columbia, MO. **Oral presentation**

Courtney Coleman, Dániel Pap, Fei Gao, Chen Li, Alexandra Erwin, Alyssa Higgins, Dario Copetti, Guido Cipriani, Sarolta Hoffmann, David Ramming, Pál Kozma, László Kovács, Walter Gassmann, Michele Morgante, Raffaele Testolin, Gabriele Di Gaspero. 2012. Analysis of the genetic locus containing the *REN1* gene for resistance to grapevine powdery mildew. MU Life Sciences Week, Columbia, MO. **Poster Presentation**

Courtney Coleman. 2012. Mapping and cloning of a disease resistance gene in grapevine. Missouri State University, Biology Department Seminar. **Oral presentation**

Courtney Coleman, Dario Copetti, Sarolta Hoffmann, Pál Kozma, Walter Gassmann, László Kovács, Michele Morgante, Raffaele Testolin, Gabriele Di Gaspero. 2011. Powdery mildew resistance in cultivated grapevines: identification and analysis of the *REN1* region in 'Kishmish vatkana'. MU Life Sciences Week, Columbia, MO. **Poster Presentation**

Courtney Coleman, Dario Copetti, Guido Cipriani, Sarolta Hoffmann, Pál Kozma, László Kovács, Michele Morgante, Raffaele Testolin, Gabriele Di Gaspero. 2010. Genetic mapping of *REN1*: a powdery mildew resistance gene present in two Central Asian grapevines. 10th International Conference on Grapevine Breeding and Genetics, Geneva, NY. **Oral presentation**

Courtney Coleman, Dario Copetti, Guido Cipriani, Sarolta Hoffmann, Pál Kozma, László Kovács, Michele Morgante, Raffaele Testolin, Gabriele Di Gaspero. 2010. Genetic mapping of *REN1*: a powdery mildew resistance gene present in two Central Asian grapevines. MU Life Sciences Week, Columbia, MO. **Poster Presentation**

Courtney Coleman. 2010. Mapping *REN1*: a powdery mildew resistance locus in *Vitis vinifera* grapevines. Plant Talks, University of Missouri, Columbia, MO. **Oral presentation**

Courtney Coleman, Gabriele Di Gaspero, Sarolta Hoffmann, László Kovács, Pál Kozma, Michele Morgante, Raffaele Testolin. 2009. Powdery mildew resistance in *Vitis vinifera* from Central Asia. Plant and Animal Genome XVII Conference, San Diego, CA. **Poster Presentation**

Courtney Coleman, László Kovács. 2008. Mapping a disease resistance gene in *Vitis vinifera*. Missouri State University, Biology Department Seminar. **Oral presentation**

Courtney Coleman. 2007. Validation of *forensic*GEM. Mid-America 2007 Forensic DNA Conference, Columbia, MO. **Oral presentation**