

# Courtney Coleman

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Email: [courtneycoleman@missouristate.edu](mailto: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** with Graduate Faculty membership  
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)
  - Course development for Special Topics in Biology: Molecular Techniques (BIO 597/697-005) for Spring 2026
  - Evaluating and updating course materials, as needed (lectures, homework assignments, 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
  - Serving as a graduate committee member
- 2023–present **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
- Developing and 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 and arabidopsis
- Research rotations: gene mapping in arabidopsis (Gassmann Lab) and fluorescence *in situ* hybridization of grapevine mitotic root tip cells (Birchler Lab)
- 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

**Visiting Assistant Professor** at Missouri State University, appointed to Graduate Faculty membership (Professional)

- Genetics (BIO 235; Lecture), Fall 2025 through Spring 2026, which will include teaching two sections of the laboratory component during the spring semester
- Applications of Molecular Markers (BIO 540/640/730), Fall 2025
- Honors Biology in Your World (BIO 101), Fall 2025
- Special Topics in Biology: Molecular Techniques (BIO 597), course development for teaching during the Spring 2026 semester

**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 and Advising**

**Graduate Committee Member** to a student in the Biology Department at Missouri State University. December 2025 to present

**Academic Advisor** to undergraduate students (currently numbering five individuals) in the Biology Department at Missouri State University. August 2025 to present

**Informal mentorship of Citizenship & Service-Learning (CASL) students.** Sharing perspectives on various professional and academic roles in biology with service-learning interns and other volunteers 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**

**Master Advisor Training.** Missouri State University. May 2025

**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 CIRTLL. 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 Fraćzak. 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

### **Grants, Awards, and Honors**

**NASA Moon to Mars: STEM Innovator Project.** Grant to develop an interactive hands-on learning experience at the Discovery Center of Springfield that includes an exhibit and lesson series. Role: Co-Principal Investigator (with Riana Clark, Education Director). December 2025–2028.

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**

Coleman C, Duncan C, Evilsizor D, Bartelt H, Londo J, Kovacs L (in preparation) Identification of a Carbaryl Sensitivity QTL in *V. rupestris* B38. Status: analysis completed, manuscript preparation in progress

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. 10<sup>th</sup> 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**