

Matthew Robert Kolp
 Assistant Professor of Biology,
 One Health Research Program Manager
 Center for Animal and Human health in Appalachia
 Lincoln Memorial University (LMU) – College of Veterinary Medicine
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Education

Postdoc	Dept. of Microbiology; University of Tennessee (UT; 2020-2022)
Postdoc	Dept. of Ecology and Evolutionary Biology; University of Kansas (KU; 2019-20)
Ph.D.	Plant Biology and Ecology, Evolutionary Biology and Behavior (dual degree) Michigan State University (MSU; 2012-18)
B.S.	Horticulture, concentration in Horticultural Science; MSU (2009-12)

Teaching experience

2023-present	<u>Co-instructor at LMU</u> – “Population Medicine and One Health” (MVCC-506) “Research Design and Analysis” (LSCI-604) “Research Colloquium” (LSCI-603)
2022-present	<u>Instructor at LMU</u> – Graduate Research Project (LSCI-683)
2020-2021	<u>Participant</u> – Certificate Seminar Series “Facilitating Undergraduate Evidence-based Learning” at University of Tennessee through Center for the Integration of Research, Teaching and Learning (CIRTL) Network; One-day workshop “Bring an Inclusive Mindset to your Teaching” at University of Tennessee through CIRTL Network
2017-2019	<u>Instructor at MSU</u> – “Ecology” (ZOL355) at Kellogg Biological Station “Cells and Molecules” lab (BS171) “Plant Ecology” (PLB441)
2012-2018	<u>Grad teaching Asst. at MSU</u> – “Probability and Statistics for Ecologists” (STT 224) “Wetland Ecology & Management” Lecture and Lab (FW 417) “Plant Systematics” Lecture and Lab; (PLB 418) “Plants of Michigan” Lecture and Lab (PLB 218) “Plant Epidemiology” Lecture (PLB812) “Cell and Molecular Biology” Lab (BS 171) “Cell and Molecular Biology” Lecture Assistant (BS 161) “Organisms and Populations” Lab (BS 172) “Organisms and Populations” Lecture Assistant (BS 162)

Service

2023-present	<u>National Science Foundation (NSF) reviewer</u>
2022-present	<u>University Committee member</u> – LMU-CVM Admissions Committee; Research Committee.
2022-present	<u>Faculty advisor</u> – LMU-CVM Tri-State Doggie Olympic; One Health Club.
2018-present	<u>Reviewer</u> – “Nature Plants”, “Proc B”, “Microbial Ecology”, “Animal Microbiomes”, “Phytobiomes”, “Plant Pathology”, “Environmental Microbiology”, “Soil Biology and Biochemistry”, “Global Ecology and Biogeography”, “Journal of Plant Protection Research”.
2018	<u>Tour Guide</u> – MSU’s Kellogg Biological Station and W.K. Kellogg Bird Sanctuary Hickory Corners, Michigan.

- 2017-2018 *Graduate Officer* – MSU Plant Biology Graduate Student Organization.
- 2016-2017 *Judge* – Michigan Science Fair at Kettering University, April 1, 2017; Junior and Senior divisions at Science & Engineering Fair of Metro Detroit, March 5, 2016.
- 2014-present *Guest scientist* – “Toxic plants on the pasture” at DeBusk Veterinary Teaching Center, Ewing, VA, through LMU-CVM One Health club, October 16, 2024. “Ethnobotany, natural products, and microbiomes through a One Health collaboration” two-hour workshop given at Botanical Society of America annual conference, June 16, 2024. “UT - One Health Initiative” presentation at Albright Brewery & Co., April 19, 2023. “Skype a Scientist” at Wickliffe Progressive Upper Arlington School (4-5th grade) November 3, 2021. “Science Expo Day” at North Clinton Elementary School (K-6th grade) through UT, October 29, 2021. “Microbes on the move” children’s education program through Kansas NSF EPSCoR MAPS program and with KU Biodiversity Institute & Natural History Museum (Topeka & Shawnee Co. Public Library) May 9, 2020. **Planned but canceled due to COVID-19 pandemic.* Held digitally on November 11, 2020. Spring Science Festival at MSU Herbarium (Plant pressing and specimen preparation workshop), spring semesters 2014-2016.
- 2011-2012 *Undergraduate Officer* – MSU Horticulture Club including outreach activities: invasive species removal at local parks [e.g. Ele’s Place, East Lansing parks]; planting trees as part of Greening of Detroit; elected club representative for MSU College of Agriculture and Natural Resources Student Senate.

Professional Memberships

- Botanical Society of America (Since 2023)
 American Association of Veterinary Parasitologists (Since 2023)
 Southeastern Society of Veterinary Parasitologists (Since 2023)
 Entomological Society of America (since 2022)
 Ecological Society of America (since 2013)

Research Experience

- 2022-present **Assistant Professor and One Health Research Program Manager**
 Lincoln Memorial University
 Richard A. Gillespie College of Veterinary Medicine
Ethnobotany and plant chemistry; tick-borne pathogen surveillance; canine intestinal parasite surveillance.
- 2021-2022 **National Science Foundation Postdoctoral Research Fellow**
 University of Tennessee
 Department of Microbiology
 Sponsoring Scientist: Dr. Benjamin Parker
Ecological and genetic structuring of a pathogen’s microbiome and its effect on virulence
- 2019-2020 **Postdoctoral Researcher**
 University of Kansas
 Department of Ecology and Evolutionary Biology
 Advisor: Dr. Maggie Wagner
Plant breeding and the microbiome; Maize root microbiome function in response to drought
- 2012-2018 **PhD Research Assistant**

- Michigan State University
Department of Plant Biology
Advisor: Dr. Andrew Jarosz
Fungal Community Succession and Interactions in Chestnut Blight Cankers in Michigan and Wisconsin
- 2016-2017 **PhD Research Assistant**
Michigan State University
Department of Plant Pathology
Advisors: Dr. Dennis Fulbright, Dr. Carmen Medina-Mora, and Dr. Monique Sakalidis
First report of Gnomoniopsis smithogilvyi causing chestnut brown rot on chestnut fruit in Michigan
- 2012-2016 **Herbarium Research Assistant**
Michigan State University
Department of Plant Biology
Advisors: Dr. L. Alan Prather and Dr. Garrett Crow
Documenting forty years of floristic change in a campus woodlot at Michigan State University in East Lansing, MI USA
- 2011-2012 **Undergraduate Research Assistant**
Michigan State University
Department of Horticulture
Advisors: Dr. Brad Rowe and Dr. Art Cameron
Comparison of irrigation efficiency and plant health of overhead, drip, and sub-irrigation for extensive green roofs
- 2010-2011 **Undergraduate Research Assistant**
Michigan State University
Department of Plant Biology
Advisor: Dr. Jason Martina
Consequences of Phragmites australis invasion on carbon and nitrogen cycling

Fellowships, Awards, and Grants

- 2024 USDA NIFA Agriculture and Food Research Initiative Inter-Disciplinary Engagement in Animal Systems program, two-year seed grant, (***under review***).
- 2023 USDA NIFA Agriculture and Food Research Initiative Inter-Disciplinary Engagement in Animal Systems program, two-year seed grant, (**not awarded**).
Appalachian Regional Commission, Appalachian Regional Initiative for Stronger Economies program, two-year planning grant (**not awarded**).
National Center for Veterinary Parasitology, one-year research grant (**not awarded**).
- 2022 USDA NIFA Agriculture and Food Research Initiative Inter-Disciplinary Engagement in Animal Systems program, (**not awarded**).
- 2021 National Science Foundation Postdoctoral Research Fellowship in Biology (\$138,000).
- 2017 MSU Excellence-In-Teaching Citation (\$1,000).
College of Natural Science MSU Excellence-In-Teaching Citation (\$1,000).
- 2015 Fields award for outstanding teaching – MSU Plant Biology Department (\$250).
- 2014 The American Chestnut Foundation External Research Grant (\$850).
- 2011 MSU College of Natural Resources Undergraduate Research Award (\$2,000).
- 2010 MSU College of Natural Resources Undergraduate Research Award (\$1,500).

Peer-reviewed Publications

- Kolp, M.** and Parker, B. (*in prep.*). Ecological and genetic structuring of a pathogen's microbiome and its effect on virulence.
- Swift, J.*, **Kolp, M.***, Carmichael, A., Ford, N., Hansen, P., Sikes, B., Kleiner, M., and Wagner, M. (2024). Drought stress homogenizes maize growth responses to diverse natural soil microbiomes. *Plant and Soil*. <https://doi.org/10.1007/s11104-024-06853-x>. *First two authors contributed equally.
- Kolp, M.**, de Anda Acosta, I., Y., Brewer, W., Nichols, H., Goldstein, E., Tallapragada, K., and Parker, B. (2024). Pathogen-microbiome interactions and the virulence of an entomopathogenic fungus. *Applied Environmental Microbiology*, 90:e02293-23. <https://doi.org/10.1128/aem.02293-23>.
- Mino, L.*, and **Kolp, M.***, Fox, S., Reazin, C., Zeglin, L., and Jumpponen, A. (2021). Fire severity is a stronger determinant of soil chemistry and microbiomes than woody encroachment in a tallgrass prairie system. *FEMS Microbiology Ecology*, 97(12). <https://doi.org/10.1093/femsec/fiab154>. *First two authors contributed to research equally.
- Kolp, M.**, Crow, G., Chansler, M., and Prather, L.A. (2020). Documenting forty years of floristic change in a campus woodlot at Michigan State University in East Lansing, MI USA. *Rhodora*, Volume 122(991). <https://doi.org/10.3119/20-13>.
- Kolp, M.** Double, M.L., Fulbright, D.W., MacDonald, W.L., and Jarosz, A.M. (2020). Spatial and temporal dynamics of the fungal community of chestnut blight cankers on American chestnut (*Castanea dentata*) in Michigan and Wisconsin. *Fungal Ecology*, 45, article no. 100925. <https://doi.org/10.1016/j.funeco.2020.100925>.
- Ježić, M., **Kolp, M.**, Prospero, S., Karin-Kujundžić, V., Idžojić, M., Sotirovski, K., Risteski, M., Rigling, D., Double, M.L., and Ćurković-Perica, M. (2019). Diversity of *Cryphonectria parasitica* in callused chestnut blight cankers on European and American chestnut. *Forest Pathology*, 49(6):e12566. <https://doi.org/10.1111/efp.12566>.
- Sakalidis, M.L., Medina-Mora, C., **Kolp, M.**, and Fulbright, D.W. (2019). First report of *Gnomoniopsis smithogilvyi* causing chestnut brown rot on chestnut fruit in Michigan. *Plant Disease Notes*, 103(8):2134. <https://doi.org/10.1094/PDIS-03-19-0562-PDN>.
- Kolp, M.**, Fulbright, D.W., and Jarosz, A.M. (2018). Inhibition of *Cryphonectria parasitica* growth in dual culture by potentially antagonistic fungi commonly isolated from chestnut blight cankers. *Fungal Biology*, 122(10):935-942. <https://doi.org/10.1016/j.funbio.2018.05.007>.
- Double, M.L., **Kolp, M.**, Jarosz, A.M., Davelos Baines, A., Fulbright, D.W., and MacDonald, W.L. 2014. Fungi associated with hypovirulent cankers of differing ages on American chestnut. *Acta Horticulturae*, 1043:57-65.
- Rowe, D.B., **Kolp, M.**, Greer, S.E., and Getter, K.L. 2014. Comparison of irrigation efficiency and plant health of overhead, drip, and sub-irrigation for extensive green roofs. *Ecological Engineering*, 64: 306-313.

Conference Presentations

Oral presentations (2015-present)

- Kolp, M., Wisnieski, L., Gruszynski, K., and Vroegindewey, G. Preliminary estimates and feedback of the Veterinary Workforce of Appalachia Dashboard. AAVLD/USAHA National Conference, Epidemiology session, Nashville, TN. October 10-16, 2024.
- Kolp, M., Lagos, A., Hamilton, B., Rossi, K., Hill, K., Holt, A., Hamilton, B., Purple, K., Faulkner, C. Prevalence of canine intestinal parasites at public dog parks in Central Appalachia.

- Conference of Research Workers of Animal Diseases International Meeting, Chicago, IL. January 10-14, 2024.
- Kolp, M., Wisnieski, L., Gruszynski, K., and Vroegindewey, G. A data-driven, online dashboard of animal population and veterinary workforce estimates in Appalachian states. AAVLD/USAHA National Conference, Committee on Animal Health Surveillance and Information Systems, Washington, D.C. October 15-18, 2023.
- Holt, A., Hamilton, B., Purple, K., Faulkner, C., Kolp, M. 2023. Pilot study investigating the prevalence of parasites in abandoned piles of feces collected at dog parks in East Tennessee. Southeastern Society of Parasitologists annual meeting, Harrogate, TN April 20-22, 2023.
- Hamilton, B. and Kolp, M. 2023. Fecal contamination with gastrointestinal parasites of dog parks in rural and urban environments. Harrogate, TN April 20-22, 2023.
- Kolp, M. and Parker, B. 2022. Pandora's box: Testing genetic and ecological factors that structure pathogen virulence toward an insect host with protective bacterial symbionts. Entomological Society of America annual conference, Vancouver, BC CA November 13-16, 2022.
- Swift, J., Kolp, M., Carmichael, A., Ford, N., Hansen, P., Sikes, B., Wagner, M. 2022. Legacy effects of precipitation and land use impact maize growth and microbiome assembly under drought stress. Conference of the Botanical Society of America Anchorage, AK July 22-26, 2022.
- Kolp, M. and Wagner, M. 2020. Drought conditions induce variable plant growth rates in maize grown in soils amended with microbes from different land-use and precipitation legacies in Kansas. University of Kansas Ecology Seminar, Lawrence KS 10 April 2020. *Planned but canceled due to COVID-19 pandemic.
- Kolp, M. and Wagner, M. 2020. Phenotypic variability in maize grown under drought conditions and in soils amended with microbes from different land-use and precipitation legacies. NSF EPSCoR Microbiomes of Aquatic, Plant, and Soil Systems across Kansas (MAPS) annual symposium, Lawrence, KS 2 March 2020.
- Kolp, M., Long, T., and Ebert-May, D. 2017. Transforming exams in a plant systematics using 3D-LAP. Future Academic Scholars in Teaching Fellowship program 11th annual symposium, East Lansing, MI 2 May 2017.
- Kolp, M. and Prather, L.A. 2016. An Analysis of the Changing Flora of Baker Woodlot. 7th meeting of the Michigan Consortium of Botanists, Allendale, MI 22 October 2016.
- Kolp, M. and Ebert-May, D. 2016. Transforming a Plant Systematics Laboratory to emphasize the principles of scientific inquiry that better align with student learning goals. Future Academic Scholars in Teaching Fellowship program 10th annual symposium, East Lansing, MI 3 May 2016.
- Kolp, M. and Ebert-May, D. 2015. Transforming a Plant Systematics Laboratory to emphasize the principles of scientific inquiry. Center for the Integration of Research, Teaching & Learning (CIRTL) All-Network Teaching as Research Presentation (Video Conference), 16 November 2015.
- Kolp, M., Double, M., Fulbright, D.W., MacDonald, W. Jarosz, A.M. 2015. Characterizing the fungal communities found in chestnut blight cankers. USDA:NE-1333 Chestnut Conference, Marion, VA 11-12 September 2015.
- Kolp, M., Jarosz, A.M. 2015. Microbial interactions influence plant-pathogen interactions in American chestnut blight. Proc. of the 100th Ecological Soc. of America annual meeting, Baltimore, MD 9-15 August 2015.

Poster Presentations (2015-present)

- Telemeco, S., Lane, C., Auvil, A. Marcello, M., Rossi, K., Lagos, A., Hill, K., Holt, A., and Hamilton, B., Purple, K., Faulkner, C., Kolp, M. "Prevalence of canine intestinal parasites at

- public dog parks in Central Appalachia”. Lincoln Memorial University Research Day, Harrogate, TN April 17, 2024.
- Kothari, S. and Kolp, M. 2023. Searching the Literature for Risk Factors of Parasite Transmission in Dog Parks with a focus on Appalachia. Lincoln Memorial University Research Day, Harrogate, TN April 14, 2023.
- Kolp, M. Double, M.L., Fulbright, D.W., MacDonald, W.L., Jarosz, A.M. 2017. Tracking disease and the fungal community structure in chestnut blight cankers on American chestnut in Michigan and Wisconsin. Ecological Society of America, Portland, Oregon 5-11 August 2017.
- Curkovic-Perica, M., Jezic, M., Karin, V., Idzajt, M., Sotirovski, K., Risteski, M., Rigling, D., Prospero, S., Kolp, M., Double, M. 2017. Biological control of chestnut blight: (In)stable infection of the chestnut blight fungus by *Cryphonectria hypovirus 1*. 7th Congress of European Microbiologists, Valencia, Spain 9-13 July 2017.
- Kolp, M. Double, M.L., Fulbright, D.W., MacDonald, W.L., Jarosz, A.M. 2016. Spatiotemporal dimensions of the fungal community in chestnut blight cankers on American chestnut (*Castanea dentata*) caused by *Cryphonectria parasitica*. Mycological Society of America annual meeting, Berkeley, CA 7-11 August 2016.
- Curkovic-Perica, M., Jezic, M., Karin, V., Idzajt, M., Sotirovski, K., Risteski, M., Rigling, D., Prospero, S., Kolp, M., Double, M. 2015. Biological control of chestnut blight: persistence of biocontrol agent *Cryphonectria hypovirus 1* in healed chestnut cankers. 18th International Plant Protection Congress, Berlin, Germany 24-27 August 2015.
- Kolp, M. Double, M.L., Fulbright, D.W., MacDonald, W.L., Jarosz, A.M. 2015. Diversity and distribution of secondary fungi inhabiting chestnut blight cankers. Proc. of the 100th Ecological Soc. of America annual meeting, Baltimore, MD 9-15 August 2015.