

# Julie J. Shaffer

## Objective

As a leader dedicated to transparent and collaborative decision-making, a strong academic education, and UNK success, I hope to use my skillset to become the permanent Senior Vice Chancellor for Academic Affairs.

## Leadership Experience

- Was Graduate Program Chair, Online Director, Chair and Co-chair of the Biology Department.
- Held numerous leadership roles in academia and professional societies, including President of the Nebraska Academy of Science and Missouri-Valley Branch of the American Society for Microbiology.
- Extensive experience managing budgets culminating in leading the construction of a plan to cut from UNK academics while impacting the least students.
- Accumulated 13 years of experience with promotion and tenure evaluation including post-tenure review.
- Earned more than \$1 million in grant support.
- Mentored over 100 students in research.
- Have completed 11 internal and external program reviews.
- Was a member of UNKEA until 2023 and understands the relationship to UNK.
- Have worked closely with leadership at the UN System level, working to align UNK with the President's 5 Pillar Plan.

## Education

August 1999	Ph.D. Biology, emphasis in microbial physiology, University of Nebraska-Lincoln. Dissertation title: Characterization of a novel DNA repair phenotype in <i>Pseudomonas aeruginosa</i> bacteriophage UNL-1.
May 1994	Bachelor of Science in Biology and English, Sioux Falls College, Sioux Falls, SD

## Professional Experience

2023-Present	Interim Senior Vice Chancellor of Academic Affairs
2022-2023	Co-chair of Biology-University of Nebraska at Kearney
2017-2022	Chair of Biology-University of Nebraska at Kearney
2010-Present	Professor of Biology-University of Nebraska at Kearney
2016-2017	Biology Online Director-University of Nebraska at Kearney
2010-2017	Graduate Program Chair in Biology-University of Nebraska at Kearney
2004-2010	Associate Professor of Biology-University of Nebraska at Kearney
1999-2004	Assistant Professor of Biology-University of Nebraska at Kearney
2001-Present	Graduate Faculty Member
2000-2002	Visiting Assistant Professor—University of Nebraska-Lincoln
1997-1998	Research Assistant—University of Nebraska-Lincoln
1994-1999	Teaching Assistant—University of Nebraska-Lincoln

## Awards and Honors

2023	Central Nebraska Science and Engineering Fair Special Awards Chair
2023-present	Counselor of the Nebraska Academy of Science
2022-2023	President of the Nebraska Academy of Science
2022-present	Treasurer of the American Society of Microbiology Missouri-Valley Branch

2022	NSRI Scholar-University of Nebraska
2021-2022	President-elect of the Nebraska Academy of Science
2019-2022	Secretary/Treasurer of the American Society of Microbiology Missouri-Valley Branch
2017-2018	President of the American Society of Microbiology Missouri-Valley Branch
2014	Leland Holdt/Security Mutual Life Insurance Company Distinguished Faculty Award
2014	University-wide Departmental Teaching Award: Biology Department
2013	UNK Departmental Teaching Award: Biology Department
2012	UNK Departmental Teaching Award: Biology Department
2012	MGAN Travel Award funded by Department of Energy (DOE) Joint Genome Institute (JGI)
2011-2013	President of the American Society of Microbiology Missouri-Valley branch
2010	Pratt-Heins Foundation Faculty Award for Teaching
2009-2011	President-elect of the American Society of Microbiology Missouri-Valley branch
2005	Faculty Mentoring of Graduate Student Research Award
2003	OSP Recognition for receiving over \$200,000 in external funds
2002	Mentor, NCUR/Lancy Project
2001 & 2002	Senior Appreciation Award

#### Peer-Reviewed Publications (**Undergraduate** students and **graduate** students)

1. **Messbarger, N.**, Carlson, D., Geluso, K., and **Shaffer, J.** (in preparation). Molecular detection of pathogenic bacteria in American Dog ticks (*Dermacentor variabilis*) in Brown County, Nebraska. *Transactions of the Nebraska Academy of Science*.
2. **Jelinek, B.**, Geluso, K., and Shaffer, J. (in preparation). A new DNA extraction method for tick nymphs. *Ticks and Tick-borne Diseases*.
3. Rault, L., **Mercer, S.**, and **Shaffer, J.J.** (in preparation). Rapid visual detection of tick pathogens: a tool for tick-borne disease surveillance. *PLoS Protocols*.
4. Moghe, S., **Baumgart, K.**, Carlson, K.A., and **Shaffer, J.J.** (2021). The importance of female mentoring in undergraduate STEM research experiences. *PLoS One*. <https://doi.org/10.1371/journal.pone.0260646>
5. **Schissel, M.**, **Best, R.**, **Liesemeyer, S.**, Tan, T-D., Carlson, D.J., **Shaffer, J.J.**, Avunthu, N., Guda, C., and Carlson, K.A. (2021) Effect of Nora virus infection on native gut bacterial communities of *Drosophila melanogaster*. *AIMS Microbiology* 7(2):216-237. <https://doi.org/10.3934/microbiol.2021014>.
6. Luedtke, B.E., **Shaffer, J.J.**, **Monrroy, E.**, Willicott, C.W., and Bourret, T. J. (2019) Molecular detection of spotted fever group Rickettsiae (Rickettsiales: Rickettsiaceae) in *Dermacentor variabilis* (Acari: Ixodidae) collected along the Platte River in south central Nebraska. *Journal of Medical Entomology*. <https://doi.org/10.1093/jme/tjz167>.
7. Fiore, N.A., Dunigan, D.D., **Shaffer, J.J.**, Roberts, R., Antony-Babu, S., Plantz, B.A., Nickerson, K.W., Benson, A.K., and Weber, K.A. (2019) Microbial community of saline, alkaline lakes in the Nebraska sandhills based on 16S rRNA gene amplicon sequence data. *Microbiology Resource Announcements* 8:e00063-19. <https://doi.org/10.1128/MRA.00063-19>
8. **Thiessen, J.D.**, Koupal, K.D., Schoenebeck, C.W., and **Shaffer, J.J.** (2018) Food habits of imperiled Plains Topminnow and diet overlap with invasive Western Mosquitofish in the Central Great Plains. *Transactions of the Nebraska Academy of Science* 38:1-9. doi: 10.13014/K2319T31
9. **Shaffer, J.J.**, Peterson, B.C., and Koupal, K.D. (2017) Assessment of seasonal changes in abiotic and zooplankton communities in highly and moderately alkaline sandhills

- lakes. *Great Plains Research* 27(2):109-116. DOI: 10.1353/gpr.2017.0019
10. Jacques, B.J., Bourret, T.J., and **Shaffer, J.J.** (2017) Role of fly cleaning behavior on carriage of *Escherichia coli* and *Pseudomonas aeruginosa*. *Journal of Medical Entomology*. <https://doi.org/10.1093/jme/tjx124>.
  11. Jacques, B.J., Akahane, S., Abe, M., Middleton, W., Hoback, W.W., and **Shaffer, J.J.** (2009) Temperature and food availability differentially affect the production of antimicrobial compounds produced by two species of burying beetles. *Journal of Chemical Ecology* 35(8):871-877. DOI: 10.1007/s10886-009-9680-y
  12. Hoback, W.W., Bishop, A.A., Kroemer, J., Scalzitti, J.M., and **Shaffer, J.J.** (2004). Differences among anti-microbial properties of carrion beetle (Coleoptera:Silphidae) secretions reflect phylogeny and ecology. *Journal of Chemical Ecology* 30(4):719-729. DOI: 10.1023/b:joec.0000028427.53141.41
  13. Kadavy, D.R., **Shaffer, J.J.**, Lott, S.E., Wolf, T.A., Martin, E.L., Nickerson, K.W., and Kokjohn, T.A. (2000). Enhanced bacteriophage reactivation in stationary phase and starved *Pseudomonas aeruginosa*. *Applied Environmental Microbiology* 66:5206-5212. DOI: 10.1128/aem.65.6.2606-2613.1999
  14. Martin, E.L., Reinhardt, R.L., Baum, L.L., Becker, M.R., **Shaffer, J.J.**, and Kokjohn, T.A. (2000). The effects of ultraviolet radiation on the moderate halophile *Halomonas elongata* and the extreme halophile *Halobacterium salinarum*. *Canadian Journal of Microbiology* 46:1-8. DOI: 10.1139/w99-122
  15. **Shaffer, J.J.**, Jacobsen, L.M., Schrader, J.O., Lee, K.W., Martin, E.L., and Kokjohn, T.A. (1999). Characterization of *Pseudomonas aeruginosa* bacteriophage UNL-1, a bacterial virus with a novel UV-A-inducible DNA damage reactivation phenotype. *Applied Environmental Microbiology* 65:2606-2613. DOI: 10.1128/AEM.65.6.2606-2613.1999

#### Teaching Publications (**Undergraduate** students and **graduate** students)

1. Skyepack textbook for UNK BIOL 211 Microbiology (2022). eds. Carlson, D.J. and **Shaffer, J.J.**
2. **Smith, M.J.**, **Shaffer, J.J.**, Koupal, K.D., and Hoback, W.W. (2012) Laboratory Measures of Filtration by Freshwater Mussels: An Activity to Introduce Biology Students to an Increasingly Threatened Group of Organisms. *Bioscene*.38(2):10-15.
3. **Shaffer, J.J.** and Carlson, D.J. (2009). *Microbiology for Majors*, Cafepress.com, Foster City, CA.
4. **Shaffer, J. J.**, **Warner, K.J.**, and Hoback W. W. (2007). Filthy flies? Experiments to test flies as vectors of bacterial disease. *American Biology Teacher* 69(2):e28-e31.
5. **Shaffer, J.J.**, Carlson, D.J., and Simonson, R.L. (2006). *Introductory Microbiology*, Cafepress.com, Foster City, CA.
6. **Shaffer, J.**, **Hurley, E.**, and Hoback, W. (2003). Microbes and mosquitoes: a laboratory exercise to investigate the non-target effects of Bt. *Bioscene* 29(3):27-32.

#### Student Publications (**Undergraduate** students and **graduate** students)

1. **Ramirez, R.** (2015) How effective are CleanWave UV-C portable toothbrush sanitizers in removing *Streptococcus mitis* from toothbrushes. *Undergraduate Research Journal* 19:222-231, UNK Publication & Printing Services, Kearney, NE.
2. **Scott, M.** (2009) Survival of *Staphylococcus aureus* on hospital scrubs fabric blends. *Undergraduate Research Journal* 13:186-199, UNK Publication & Printing Services, Kearney, NE.
3. **Griffith, M.** (2005-2006) Coliform colonization on the toothbrush at various storage distances from the toilet. *Undergraduate Research Journal* 10:175-187, UNK Publication & Printing Services, Kearney, NE.

4. **Goldfish, R.** (2000-2001). Assessment of antibiotics in soil and surface waters of the central Nebraska water basin. *Undergraduate Research Journal*, UNK, pp 239-251.

### Book Chapters

1. Schrader, H.S., Schrader, J.O., Walker, J.J., Bruggeman, N.B., Vanderloop, J.M., **Shaffer, J.J.**, and Kokjohn, T.A. (1997). Effects of host starvation on bacteriophage dynamics. In: R. Y. Morita. *Bacteria in Oligotrophic Environments Starvation-survival Lifestyle*, Chapman and Hall, New York, NY.

### Funded Grants

1. 07/01/2021-06/30/2022, "Unifying and strategizing tick and tick-borne disease research across Nebraska," University of Nebraska Collaboration Initiative Grant, PIs Eileen Hebets, Elizabeth VanWormer, Roberto Cortinas, Julie Shaffer, and Brandon Luedtke. \$7496.
2. 03/31/2021-06/30/2022, "Identification of pathogen spillover in Nebraska tick species," UNK Collaborative Grant, PIs: Julie Shaffer and Brandon Luedtke. \$8,000.
3. 4/20-3/25, "Nebraska Training Network and Functional Genomics", Project Title: "Renewal: Support of INBRE Scholars Program" (INBRE Program of the National Center for Research Resources/NIH), Principal Investigator (PI): Paul Sorgen, Ph.D., UGNET UNK Participant & Project PI: **J.J. Shaffer, Ph.D.**, \$100,347/year, 5-year total = \$501,735
4. 07/16-06/21, "Center for Root and Rhizobiome Innovation," NSF/EPSCoR. PI: Edgar Cahoon and James Alfano, Supporting: **Julie Shaffer** and Paul Twigg, \$925,000.
5. 01/17, "Digital PCR Instrumentation grant," NRI. PI: Brandon Luedtke, Kimberly Carlson, **Julie Shaffer**, Dawn Simon, and Rachel Whitaker, \$194,768.
6. 01/17, "Ion Chromatography Instrumentation grant," NRI. PI: Nate Bickford, **Julie Shaffer**, and Mary Harner, \$54,845.
7. 4/2015-3/2020, "Nebraska Training Network and Functional Genomics", Project Title: "Renewal: Support of INBRE Scholars Program" (INBRE Program of the National Center for Research Resources/NIH), Principal Investigator (PI): James Turpen, Ph.D., UGNET UNK Participant & Project PI: **J.J. Shaffer, Ph.D.**, \$87,681/year, 5-year total = \$438,405
8. 10/14-12/17, "Investigation of conservation management for plains topminnow in Nebraska," State Wildlife Grant, PI: Keith Koupal, CoPI's: **Julie Shaffer** and Casey Schoenebeck, \$31,800.
9. 8/14-8/15, "Monitoring the aquatic health of sandhills lakes in Brown County, NE," Daugherty Water for Food Institute Undergraduate Scholars Award, PI: **Julie Shaffer**, Co-PI's Brian Peterson, and Keith Koupal, \$14,570.
10. 9/2014-5/2015 "Nebraska Training Network and Functional Genomics", Project Title: "Bridge Funding" (INBRE Program of the National Center for Research Resources/NIH), Principal Investigator (PI): James Turpen, Ph.D., UGNET UNK Participant & Project PI: **J.J. Shaffer, Ph.D.**, \$234,472.
11. 7/1/09-06/30/11, "Administrative Supplement Notice for Students and Science Educators under the Recovery Act", Project Title: "Nebraska Training Network and Functional Genomics", (INBRE Program of the National Center for Research Resources/NIH), Principal Investigator (PI): James Turpen, Ph.D., UGNET UNK Participant & Project PI: **J.J. Shaffer**, \$71,258/year, 2-year total = \$142,516.
12. 4/1/09-3/31/14, "Nebraska Training Network and Functional Genomics," (INBRE Program of the National Center for Research Resources/NIH), Principal Investigator (PI): James Turpen, Ph.D., UGNET UNK Participant & Project PI: **J.J. Shaffer**, \$255,124/year, 5-year total = \$1,275,620
13. 03/01/09-02/01/2010, Project Title: Understanding Microbial Communities in Hyper

- Alkaline-Saline Sandhills Lakes as an Indicator of Global Warming, NE Water Center/USGS, Prime grant 06HQGR0097, CFDA 15.805, Co-Principal Investigators: **J.J. Shaffer** and B.A. Plantz, \$60,266.
14. 10/08-06/09, "Alkali Lake Metasequencing Project," Office of Technology Advancement, University of Nebraska-Lincoln, Co-Principal Investigators: B.A. Plantz and **J.J. Shaffer**, \$15,000.
  15. 04/01/08-06/30/09, "Assessment and enhanced awareness of the plains pocketbook mussel, *Lampsilis cardium*," Nebraska State Wildlife Grant, Co-Principal Investigators: **J.J. Shaffer** and K. Koupal, \$13,668.
  16. 11/07-10/08, "Enzymes for enhancing ethanol production from lignocellulose," Nebraska Center for Energy Sciences Research, Principal Investigator: Van Etten, J.L., Co-Investigators: D. D. Dunigan, K.W. Nickerson, B.A. Plantz, T.O. Powers, V.L. Schlegel, **J.J. Shaffer**, and B.D. Siegfried, \$75,000.
  17. 07/01/07-06/30/08, "Lignocellulose Core Facility for Monitoring Carbohydrate Catalysis in the Generation of Ethanol," Nebraska Research Initiative, Principal Investigator: K.W. Nickerson, Co-Investigators: D.D. Dunigan, B.A. Plantz, T.O. Powers, V.L. Schlegel, **J.J. Shaffer**, B.D. Siegfried, and J.L. VanEtten, \$212,349.
  18. 07/01/07-06/30/08, "Novel lignocellulases for biofuel generation," UNL Strategic Research Cluster Grant, Principal Investigator: J.L. Van Etten, Co-Investigators: D.D. Dunigan, K.W. Nickerson, B.A. Plantz, T.O. Powers, V.L. Schlegel, **J.J. Shaffer**, and B.D. Siegfried, \$50,000.
  19. 07/01/04-06/30/09, "Nebraska Research Network in Functional Genomics," INBRE Program from the National Center for Research Resources, a component of NIH, Principal Investigator: James Turpen, UGNET UNK Investigators: K.A. Carlson, J.J. **Shaffer**, J.E. Steele, and P. Twigg. \$1.2 million.
  20. 05/06-05/07, "The use of FTIR as a quick way to identify microbial communities of alkaline lakes in western Nebraska," UNK RSC Collaborative Research Award, Co-Principal Investigators: **J.J. Shaffer** and B.A. Plantz, \$4923.
  21. 10/01-06/04, "Nebraska Biomedical Research Infrastructure Network," National Institute of Health, Principal Investigator: James Turpen, UGNET UNK Investigators: J.M. Scalzitti, **J.J. Shaffer**, and P. Twigg, \$679,205.
  22. 05/2001, "Enhanced Microscopy Program," NU Foundation, Co-Principal Investigators: **J. Shaffer** and J. Scalzitti, \$102,392.
  23. 05/01-05/02, "The Sensitivity of Trichoptera Larvae to Bt Toxin Found in the Pollen of Transgenic Corn," Creative Activity award, UNK Research Services Council, Principal Investigator: **J. Shaffer**, \$1561.
  24. 09/99-05/00, "The Effects of DNA Damage and Host Cell Starvation on Bacteriophage Reactivation," Faculty Mini Grant, UNK Research Services Council, Principal Investigator: **J. Shaffer**, \$1650.

#### Invited Presentations

1. **Shaffer, J.J.** (2015) Alkaline saline lakes. Department of Environmental Quality Annual Meeting, Kearney, NE.
2. Panelist: Bartle, J., Rice, M., and **Shaffer, J.** (2012) Institutionally adapting to the new graduate student. Graduate College Workshop, Omaha, NE.
3. Panelists: Fritson, K.K., Hayes, S., Luscher, R., Moore, T.J., Schulz, S., and **Shaffer, J.** (2012) General education: advantage for business students? Creative methods to promote integrative thinking. National Mountain Plains Management Conference, Kearney, NE.
4. **Shaffer, J.J.**, Honeyman, S., Burkink, T., and Lopez, S. (2008) Engaging UNK Students through Undergraduate Research, University of Nebraska-Kearney, Kearney, NE.

5. **Shaffer, J.J.** (2006) Profiling PUI's: an Indispensable Part of the Job Search. IRACDA Conference, University of Kansas, Kansas City, MO.
6. Hendricks, S., and **Shaffer, J.** (2005) Dealing with time and infrastructure challenges at PUI's. Research at Primarily Undergraduate Institutions: a conference to explore the importance, strategies, and challenges of scholarship at non-research institutions of higher education, University of Nebraska at Kearney, Kearney, NE.
7. Institutionalizing undergraduate research. (2004) 18th National Conference on Undergraduate Research, Indiana University-Purdue University Indianapolis, Indianapolis, IN.

#### Submitted Presentations (**Undergraduate** students and **graduate** students)

1. **Shackelford, N.**, Carlson, D.J., and **Shaffer, J.J.** The prevalence of tick-borne disease-causing pathogens identified in South Central Nebraska. Annual meeting of the Missouri-Valley Branch of the American Society of Microbiology, Manhattan, KS. March 10-11, 2023.
2. **Jelinek, B.**, Geluso, K., and **Shaffer, J.J.** A new DNA extraction method for tick nymphs. Annual meeting of the Missouri-Valley Branch of the American Society of Microbiology, Manhattan, KS. March 10-11, 2023.
3. **Shackelford, N.**, Carlson, D.J., and **Shaffer, J.J.** The prevalence of tick-borne disease-causing pathogens identified in South Central Nebraska. UNK Student Research Day, Kearney, NE. April 13, 2023.
4. **Mitchell, A.**, Carlson, D.J., and **Shaffer, J.J.** A comparison of tick-borne infectious bacteria in central and western Nebraska, UNK Student Research Day, Kearney, NE. April 13, 2023.
5. **Messbarger, N.**, Carlson, D.J., and **Shaffer, J.J.** The increasing danger of tick-borne disease in Nebraska, UNK Student Research Day, Kearney, NE. April 13, 2023.
6. **Shackelford, N.**, Carlson, D.J., and **Shaffer, J.J.** The prevalence of tick-borne disease-causing pathogens identified in South Central Nebraska. Annual meeting of the Nebraska Academy of Science, Lincoln, NE. April 21, 2023.
7. **Jelinek, B.**, Geluso, K., and **Shaffer, J.J.** A new DNA extraction method for tick nymphs. Annual meeting of the Nebraska Academy of Science, Lincoln, NE. April 21, 2023.
8. **Mitchell, A.**, Carlson, D.J., and **Shaffer, J.J.** A comparison of tick-borne infectious bacteria in central and western Nebraska. Annual meeting of the Nebraska Academy of Science, Lincoln, NE. April 21, 2023.
9. **Mercer, S.**, Carlson, D.J., and **Shaffer, J.J.** Evidence of *Rickettsia* spp. spill over in Lonestar ticks and American dog ticks. Annual meeting of the Missouri-Valley Branch of the American Society of Microbiology, Stillwater, OK. March 18-19, 2022.
10. **Chandler, S.**, Carlson, D.J., and **Shaffer, J.J.** Identification of ticks and bacterial disease prevalence in Hall County, NE. Annual meeting of the Missouri-Valley Branch of the American Society of Microbiology, Stillwater, OK. March 18-19, 2022.
11. **Friesen, K.**, Carlson, D.J., and **Shaffer, J.J.** Comparison of tick and tick-borne disease prevalence in central and eastern Nebraska. Annual meeting of the Missouri-Valley Branch of the American Society of Microbiology, Stillwater, OK. March 18-19, 2022.
12. **Mercer, S.**, Carlson, D.J., and **Shaffer, J.J.** Evidence of *Rickettsia* spp. spill over in Lonestar ticks and American dog ticks. Nebraska Academy of Science. April 22, 2022.
13. **Chandler, S.**, Carlson, D.J., and **Shaffer, J.J.** Identification of ticks and bacterial disease prevalence in Hall County, NE. Nebraska Academy of Science. April 22, 2022.
14. **Friesen, K.**, Carlson, D.J., and **Shaffer, J.J.** Comparison of tick and tick-borne disease prevalence in central and eastern Nebraska. Nebraska Academy of Science. April 22, 2022.



15. **Mercer, S.**, Carlson, D.J., and **Shaffer, J.J.** Evidence of *Rickettsia* spp. spill over in Lonestar ticks and American dog ticks. UNK Student Research Day, March 31, 2022.
16. **Chandler, S.**, Carlson, D.J., and **Shaffer, J.J.** Identification of ticks and bacterial disease prevalence in Hall County, NE. UNK Student Research Day, March 31, 2022.
17. **Friesen, K.**, Carlson, D.J., and **Shaffer, J.J.** Comparison of tick and tick-borne disease prevalence in central and eastern Nebraska. UNK Student Research Day, March 31, 2022.
18. Pec, G.J, **M. Breight, S. Johnson**, P. Twigg, and **J. Shaffer**. Response of soil bacterial communities to redroot pigweed (*Amaranthus retroflexus*) invasion in corn (*Zea mays*). Botanical Society of America, Virtual.
19. Pec, G.J, **M. Breight**, P. Twigg, and **J. Shaffer**. Rhizosphere bacterial diversity and composition varies across *Zea mays* growth stages. Botanical Society of America, Virtual.
20. **Geweke, A.**, and **Shaffer, J.J.** (2020) Assessment of tick-borne pathogens in Central Nebraska (Tri-City Area) in 2019. UNK Student Research Day, Kearney, NE.
21. **Fitzgerald, C.**, Luedtke, B., Bourret, T., and **Shaffer, J.** (2020) The Prevalence of *Borrelia lonestari* in Central Nebraska, UNK Student Research Day, Kearney, NE.
22. **Willmore, C.**, Nigro, L., Durham Brooks, T., and **Shaffer, J.** (2019) Colorimetric evaluation of chemotactic response of soil bacteria to root exudates, 2019 UNL Plant Science Symposium, "Plant Metabolism and Engineering," Lincoln, NE
23. **Breight, M.**, Drew, B., and **Shaffer, J.** (2019) An examination of the rhizobacterial communities associated with corn (*Zea mays* L.) throughout the growing season in historically higher and lower yielding areas of a Nebraska field, JGI's 14<sup>th</sup> Annual Genomics of Energy and Environment Meeting, San Francisco, CA.
24. **Ingram, C.**, Luedtke, B., and **Shaffer, J.J.** (2019) Determining the prevalence of vectored diseases in Elkhorn Valley *Dermacentor variabilis* in Nebraska. Nebraska Academy of Science, Lincoln, NE.
25. **Ingram, C.**, Luedtke, B., and **Shaffer, J.J.** (2019) Determining the prevalence of vectored diseases in Elkhorn Valley *Dermacentor variabilis* in Nebraska. Annual Meeting of the Missouri-Valley and Missouri Branches of the American Society of Microbiology, Omaha, NE.
26. **Nemecek, M.**, **Shaffer, J.J.**, and Carlson, K.A. (2018) Characterization of gastrointestinal microbial communities in Nora Virus infected *Drosophila melanogaster* using 16S sequencing. NE-INBRE 16<sup>th</sup> Annual Conference, Nebraska City, NE.
27. **Shaffer, J.J.**, **Monrroy, E.**, **Harms, N.**, Luedtke, B. Willcott, C., and Bourret, T. (2018) Detection of *Rickettsia* spp. in American dog ticks in central Nebraska along the Platte River. NE-INBRE 16<sup>th</sup> Annual Conference, Nebraska City, NE.
28. **Fitzgerald, C.**, **Ingram, C.**, Bourret, T., Luedtke, B., and **Shaffer, J.** (2018) The prevalence of *Borrelia lonestari* in central Nebraska. Nebraska Academy of Science, Lincoln, NE.
29. **Shaffer, J.J.**, **Monrroy, E.**, **Warren, M.**, and Bourret, T.J. (2017) Distribution of *Rickettsia* spp. In *Dermacentor variabilis* in Central Nebraska. NE-INBRE 15<sup>th</sup> Annual Conference, Nebraska City, NE.
30. **Shaffer, J.J.**, Bourret, T.J., and Jacques, B.J. (2017) The effects of fly cleaning on bacterial disease transmission. 2017 Central Region IDeA Conference, Sioux Falls, SD.
31. **Harms, N.**, Luedtke, B. and **Shaffer, J.** (2017) Prevalence of pathogenic bacteria in *Dermacentor variabilis* and *Amblyomma americanum* collected from Fort Kearny, Nebraska. Nebraska Academy of Science, Lincoln, NE.
32. **Harms, N.**, Luedtke, B. and **Shaffer, J.** (2017) Prevalence of pathogenic bacteria in *Dermacentor variabilis* and *Amblyomma americanum* collected from Fort Kearny,

- Nebraska. Annual Meeting of the Missouri Valley Branch and the Missouri Branch of the American Society of Microbiology, Springfield, MO.
33. Harms, N., Chaudhari, P., Shaffer, J., Luedtke, B. (2016) Prevalence of pathogenic bacteria in the American dog tick (*Dermacentor variabilis*) in Dawson County, Nebraska, Annual Meeting of the Missouri Valley Branch and the Missouri Branch of the American Society of Microbiology, Kansas City, KS.
  34. Harms, N., Chaudhari, P., Luedtke, B., Shaffer, J. (2016) Prevalence of pathogenic bacteria in the American dog tick (*Dermacentor variabilis*) in Dawson County, Nebraska, Nebraska Academy of Science, Lincoln, NE.
  35. Harms, N., Shaffer, J., Bourret, T., Luedtke, B. (2016) Prevalence of *Rickettsia* spp. In *Dermacentor variabilis* and *Amblyomma americanum* collected from Fort Kearney, Nebraska, NE-INBRE 14<sup>th</sup> Annual Conference, Nebraska City, NE.
  36. Shaffer, J., Sorgen, P., Carlson, K. (2016) Plan for improving minority research training in biomedical science with a T34 MARC U-STAR Program grant, NE-INBRE 14<sup>th</sup> Annual Conference, Nebraska City, NE.
  37. Chaudhari, P., Nelson, W., Bourret, T., and Shaffer, J. (2015) Prevalence of disease-causing bacteria in *Dermacentor variabilis* in Buffalo County, NE. Nebraska Academy of Science, Lincoln, NE
  38. Monroy, E., Chaudhari, P., Bourret, T., and Shaffer, J. (2015) *Rickettsia rickettsia* prevalence in *Dermacentor variabilis* in Dawson, County, Nebraska. Nebraska Academy of Science, Lincoln, NE.
  39. Warren, M., Bourret, T., and Shaffer, J. (2015) Comparison of infectious *Ehrlichia*, *Rickettsia*, and *Anaplasma* species of bacteria in American dog ticks from upland and lowland areas of Dawson County. Nebraska Academy of Science, Lincoln, NE.
  40. Chaudhari, P., Nelson, W., Bourret, T., and Shaffer, J. (2015) Prevalence of disease-causing bacteria in *Dermacentor variabilis* in Buffalo County, NE. Joint Meeting of the Missouri Valley and Missouri Branches of the American Society for Microbiology, Lincoln, NE.
  41. Monroy, E., Chaudhari, P., Bourret, T., and Shaffer, J. (2015) *Rickettsia rickettsia* prevalence in *Dermacentor variabilis* in Dawson, County, Nebraska. Joint Meeting of the Missouri Valley and Missouri Branches of the American Society for Microbiology, Lincoln, NE.
  42. Dillon, A., Shaffer, J., Peterson, B.C., Koupal, K.D., and Graham, K. (2015) Influence of common carp (*Cyprinus carpio*) on abiotic and biotic parameters within Nebraska's Sandhill lakes. Nebraska American Fisheries Society Meeting, Nebraska City, NE.
  43. Pawlak, R., Schoenebeck, C.W., Shaffer, J.J., and Koupal, K.D. (2014) Characterizing the abiotic and biotic components of Nebraska Interstate-80 lakes: implications for growth of stocked fish. Joint Meeting of the Nebraska and Iowa Chapters of the American Fisheries Society, Council Bluffs, Iowa.
  44. Pawlak, R., Schoenebeck, C.W., Shaffer, J.J., and Koupal, K.D. (2014) Characterizing the abiotic and biotic components of Nebraska Interstate-80 lakes: implications for growth of stocked fish. 74<sup>th</sup> Annual Midwest Fish and Wildlife Conference, Kansas City, Missouri.
  45. Pawlak R., Schoenebeck, C.W., Shaffer, J.J., and Koupal, K.D. (2014) Characterizing the abiotic and biotic components of Nebraska Interstate-80 lakes: implications for growth of stocked fish. Student Research Day, University of Nebraska at Kearney, Kearney, Nebraska.
  46. Chaudhari, P. and Shaffer, J.J. (2013) Microbial Diversity in High Alkaline-Saline Lakes Present in Sheridan County and Garden County. 2013 Rural Futures Conference, Lincoln, NE.
  47. Shaffer, J.J., White, B., and Simon, D.M. (2013) Comparison of microbial diversity in a



- potash and freshwater lake in the sandhills region of Nebraska. 113<sup>th</sup> General Meeting of the American Society of Microbiology, Denver, CO.
48. **Harbison, K.J.** and **Shaffer, J.J.** (2013) Bacterial isolates of Kokjohn pond in the western Nebraska Sandhills. National Conference on Undergraduate Research, LaCrosse, WI.
  49. **White, B.M.**, and **Shaffer, J.J.**, (2012) Characterization of red pigmented bacteria from potash lakes in the Nebraska Sandhills. Annual Meeting of the Missouri Valley Branch of the American Society of Microbiology, Manhattan, KS.
  50. **White, B.M.**, and **Shaffer, J.J.**, (2012) Characterization of red pigmented bacteria from potash lakes in the Nebraska Sandhills. Nebraska Academy of Sciences, Lincoln, NE.
  51. **Scott, M.**, **Shaffer, J.J.**, and **Strydom, M.** (2011) Siderophore isolation and characterization from hyper alkaline-saline lakes. Central Region IDeA Conference, Omaha, NE.
  52. **Fields, A.B.**, Tillinghast, H.S., and **Shaffer, J.J.** (2011) Currency as a potential vector of *Staphylococcus aureus*. Kansas Academy of Science, Baker University, Baldwin City, KS.
  53. **Strydom, M.** and **Shaffer, J.J.** (2011) Siderophore production by alkaline-saline lake bacteria. Nebraska Academy of Science, Lincoln, NE.
  54. **Strydom, M.**, **Scott, M.**, and **Shaffer, J.J.** (2011) Siderophore production by alkaline-saline lake bacteria. National Conference on Undergraduate Research, Ithaca, NY.
  55. **Shaffer, J.J.**, Springer, J., and Carlson, K.A. (2010) Creating a curriculum to prepare women for careers in science. CUR: Creating a Culture of Research on Campus meeting, Williamsburg VA.
  56. **Block, A.A.**, **Shield, C.**, and **Shaffer, J.J.** (2010) The effects of pH fluctuation on bacteriophage isolated from ephemeral, alkaline lakes. Nebraska Academy of Science, Lincoln, NE.
  57. **Edwards, S.**, Jacques, B.J., and **Shaffer, J.J.** (2010) The effects of fly cleaning behavior on bacterial transmission. Nebraska Academy of Science, Lincoln, NE.
  58. **Strydom, M.** and **Shaffer, J.J.** (2010) Identification of siderophore production by bacteria from hyper alkaline-saline lakes. Nebraska Academy of Science, Lincoln, NE.
  59. **Block, A.A.**, **Shield, C.**, and **Shaffer, J.J.** (2010) The effects of pH fluctuation on bacteriophage replication isolated from alkaline lakes. Annual Meeting of the Missouri Valley Branch of the American Society of Microbiology, Manhattan, KS.
  60. **Strydom, M.**, **Scott, M.**, and **Shaffer, J.J.** (2010) Characterization of siderophore production by bacteria from hyper alkaline-saline lakes. Annual Meeting of the Missouri Valley Branch of the American Society of Microbiology, Manhattan, KS.
  61. **Shaffer, J.J.**, Carlson, K.A., and Springer, J. (2010) Training women in science: not just a female issue. Fifth Annual Conference on Applied Learning in Higher Education, St. Joseph, MO.
  62. **Block, A.**, and **Shaffer, J.J.** (2009) Quantification and isolation of bacteriophage in hyper alkaline-saline lakes in western Nebraska. Nebraska Academy of Sciences, Lincoln, NE.
  63. **Hadden, J.D.** and **Shaffer, J.J.** (2009) Consequences of toilet lid use on toothbrush contamination by aerosolized coliform bacteria. Nebraska Academy of Sciences, Lincoln, NE.
  64. **Bonner, S.N.**, **Wang, A.**, **Shaffer, J.**, and Carlson, K.A. (2009) Characterization of microbes in frass from two populations of *Drosophila melanogaster*. Nebraska Academy of Sciences, Lincoln, NE.
  65. **Bonner, S.N.**, **Wang, A.**, **Shaffer, J.**, and Carlson, K.A. (2009) Comparison of bacterial species from frass and their potential influence on longevity in *Drosophila melanogaster*. Annual meeting of the Missouri Valley Branch of the American Society of Microbiology, Lawrence, KS.
  66. Carlson, K., **Shaffer, J.**, and Springer, J. (2009) Creating a mentoring program for

- undergraduate women in science. Research at Primarily Undergraduate Institutions, Kearney, NE.
67. Carlson, K.A., Springer, J., Ericson, B., Hertner, J. and **Shaffer J.** (2009) Establishment of a successful undergraduate research program: a look back at the past decade. Fourth Annual Conference on Applied Learning in Higher Education, St. Joseph, MO.
  68. **Schultz, D.L., Luedtke, B.E.,** Plantz, B.A., and **Shaffer, J.J.** (2008) Isolation of microorganisms from an alkaline lake ecosystem that secrete ferulic acid esterases active at high pH. Nebraska Academy of Sciences, Lincoln, NE.
  69. **Schultz, D.L., Luedtke, B.E.,** Plantz, B.A., and **Shaffer, J.J.** (2008) Alkaline lake ecosystem as a novel source of microorganisms that secrete ferulic acid esterases. Missouri and Missouri Valley Branches of the American Society of Microbiology Annual Meeting, Liberty, MO.
  70. **Luedtke, B.E.,** Plantz, B.A., and **Shaffer, J.J.** (2007) Microbial population characterization over a four-month period in an alkaline environment. Nebraska Academy of Sciences, Lincoln, NE.
  71. **Griffith, S.E.** and **Shaffer, J.J.** (2007) Looking for the true alkalophile in a hypersaline, alkaline environment. Nebraska Academy of Sciences, Lincoln, NE.
  72. **Luedtke, B.E.,** Plantz, B.A., and **Shaffer, J.J.** (2007) Microbial populations in an alkaline environment over a four-month period. American Society of Microbiology Missouri Valley Branch Meeting, Stillwater, OK.
  73. **Griffith, S.E.** and **Shaffer, J.J.** (2007) Looking for the true alkalophile in a hypersaline, alkaline environment. American Society of Microbiology Missouri Valley Branch Meeting, Stillwater, OK.
  74. Dunigan, D., Nickerson, K., Plantz, B., Powers, T., Schlegel, V., **Shaffer, J.,** Siegfried, B., and Van Etten, J. (2007) Mining enzymes from Nebraska's bioresources for ethanol production. Nebraska Research and Innovation Conference, Omaha, NE.
  75. **Shaffer, J.J.** and Carlson, K.A. (2007) Tying undergraduate research projects to an interest in teaching. Conference on Applied Learning in Higher Education, St. Joseph, MO.
  76. **Shaffer, J.J.** and Hornby, J. M. (2006) An inquiry-based laboratory to examine the phenomenon of fungal quorum sensing. American Society for Microbiology Conference for Undergraduate Educators, Orlando, FL.
  77. **Rupp, K.** and **Shaffer, J.** (2006) Formation of a library for the bacteriophage UNL-1 and characterization of genes of interest. Nebraska Academy of Sciences. Nebraska Wesleyan University, Lincoln, NE.
  78. **Griffith, S.E.,** Plantz, B.A., and **Shaffer, J.J.** (2006) Identification of bacteria from an alkaline lake using FTIR. Nebraska Academy of Sciences. Nebraska Wesleyan University, Lincoln, NE.
  79. **Nelson, M.** and **Shaffer, J.J.** (2006) Fractionation and characterization of the antimicrobial secretions in *Nicrophorus* sp. Nebraska Academy of Sciences. Nebraska Wesleyan University, Lincoln, NE.
  80. **Wieck, B.J.,** Hoback W.W., and **Shaffer, J.J.** (2006) Sex and temperature effects on the antimicrobial activity in the oral secretion of the carrion beetle, *Nicrophorus marginatus*. North Central Branch of the Entomological Society of America, Bloomington, IL.
  81. **Kling, M.W., Shaffer, J.J.,** and Hoback, W.W. (2005) A study of the ability of *Drosophila virilis* to remove *Escherichia coli*. Nebraska Academy of Sciences. Nebraska Wesleyan University, Lincoln, NE.
  82. **Shaffer, J.J. Kling, M.W.,** and Hoback, W.W. (2005) Fly cleaning behavior reduces the transmission of *Escherichia coli*. North Central Branch of the Entomological Society of America, West Lafayette, IN.
  83. **Middleton, W.K., Shaffer, J.J.,** and Hoback, W.W. (2005) Characterization of the oral

- secretions of the burying beetle, *Nicrophorus marginatus*. North Central Branch of the Entomological Society of America, West Lafayette, IN.
84. Cook, M., Brust, M.L., Hoback, W.W., and Shaffer, J.J. (2005) Aquatic macroinvertebrates from oil-covered waste lagoons in western Nebraska. North Central Branch of the Entomological Society of America, West Lafayette, IN.
  85. Crabtree, K.L. and Shaffer, J.J. (2004) Identification of a UV repair gene in bacteriophage UNL-1. Nebraska Academy of Sciences. Nebraska Wesleyan University, Lincoln, NE.
  86. Haverkost, T., Young K., and Shaffer, J.J. (2004) Identification of gut bacteria of predaceous leeches in Nebraska. Joint ASM Branch Annual Meeting and Midwest Microbiology Educators Conference, Kansas City, MO.
  87. Shaffer, J.J., Schultz, A., Chartraw, T. and Haverkost, T. (2004) The effects of membrane derived oligosaccharides on bacteriophage attachment and replication. Joint ASM Branch Annual Meeting and Midwest Microbiology Educators Conference, Kansas City, MO.
  88. Crabtree, K.L. and Shaffer, J.J. (2004) Identification of a UV repair gene in bacteriophage UNL-1. Joint ASM Branch Annual Meeting and Midwest Microbiology Educators Conference, Kansas City, MO.
  89. Shaffer, J. and Hoback, W. (2003) The non-target effects of Bti toxin on aquatic insects. Annual meeting of ACUBE, Kirksville, MO.
  90. Haverkost, T. and Shaffer, J. (2003) Symbiosis of predaceous Nebraska leeches and their gut bacteria. Missouri Valley Branch meeting of American Society of Microbiology, Oklahoma City, OK.
  91. McKinney, M. and Shaffer, J. (2003) Investigation of the efficiency of ephemeral wetlands to remove pathogens from the environment. National Conference on Undergraduate Research, Salt Lake City, UT.
  92. Shaffer, J., and Hoback, W. (2002) A laboratory exercise to teach students about microbial pesticides and nontarget effects. North Central Branch of the Entomological Society of America, East Lansing, MI.
  93. Goldfish, R., Hoback, W., and Shaffer, J. (2002). Bacterial inhibition by carrion beetle secretions track phylogenetic relationships. North Central Branch of the Entomological Society of America, East Lansing, MI.
  94. Goldfish, R., Shaffer, J., and Aga D. (2001). Detection of antibiotics by ELISA in hog lagoons and runoff from cattle confinement operations. National ACS Meeting, San Diego, CA.
  95. Kroemer, J., Bishop, A., Shaffer, J., Scalzitti, J., and Hoback, W. (2001). Anal and oral secretions of the burying beetle *Nicrophorus marginatus* inhibit bacterial enzyme activity. North Central Branch of the Entomological Society of America, Fort Collins, CO.
  96. Goldfish, R., Shaffer, J., and Aga, D. (2001) Detection of antibiotics by ELISA in hog lagoons and runoff from cattle confinement operations. Nebraska Academy of Sciences, Lincoln, NE.
  97. Bishop, A.A., Hoback, W.W., Shaffer, J.J., and Scalzitti, J.M. (2000). Inhibition of bacterial  $\beta$ -galactosidase activity by burying beetle secretions. 2000 Entomological Society of America North Branch Annual Meeting, Minneapolis, MN.

**Student Honors and Awards (Undergraduate students in red and graduate students in blue)**

1. Shackelford, N. (2023-2025) INBRE Scholar
2. Messbarger, N. and Mitchell, A. (2022-2023) Undergraduate Research Fellow
3. Shackelford, N. (2022-2023) Undergraduate Research Fellow
4. Mercer, S. (2022) Homestead Meyer Award for 2<sup>nd</sup> place research presentation, UNK

- Biology Department Student Research Day, Kearney, NE.
5. Mercer, S. (2022) Undergraduate Research Fellow
  6. Chandler, S. (2022) 2<sup>nd</sup> place award for undergraduate oral presentation, UNK Student Research Day, Kearney, NE.
  7. Mercer, S. (2022) 3<sup>rd</sup> place award for undergraduate oral presentation, UNK Student Research Day, Kearney, NE.
  8. Mercer, S. (2022) 2<sup>nd</sup> place award for undergraduate presentation, MVB ASM, Stillwater, OK.
  9. Chandler, S. (2021) Homestead Meyer Award for Best Research Presentation, UNK Biology Department Student Research Presentations, Kearney, NE.
  10. Mercer, S. (2022) Undergraduate Research Fellow
  11. Chandler, S. and Friesen, K. (2021-2022) Undergraduate Research Fellow
  12. Fitzgerald, C. and Gewecke, A. (2019-2020) Undergraduate Research Fellow
  13. Fitzgerald, C. and Ingram, C. (2018) Undergraduate Research Fellow
  14. Fitzgerald, C. and Pryzmus, B. (2017) Undergraduate Research Fellow
  15. Harms, N. (May 2017) Biology 420 Research Presentation Homestead Meyers Award First Place.
  16. Harms, N. (March 2017) Best Undergraduate Poster Presentation at the Joint Meeting of the Missouri and Missouri-Valley Branches of the American Society for Microbiology.
  17. Monroy, E. (May 2016) Biology 420 Research Presentation Homestead Meyers Award First Place.
  18. Monroy, E. (2014 & 2015) Undergraduate Research Fellow
  19. Ostrowski, M. (Fall 2014) Rotifers: Are they capable of battling eutrophication? DOB grant.
  20. Kezer, C. (Summer 2014) *Escherichia coli* enumeration and antibiotic resistance from Bear Creek, OR, DOB grant.
  21. Harbison, K. (Fall 2013) Meyers Homestead Preserve Award for Best Undergraduate Research Presentation, UNK Biology Department.
  22. Chaudhari, P. (2013) Honorable Mention in the Undergraduate Poster Competition at the 2013 Rural Futures Conference
  23. Stewart, A. (Spring 2013) Determining bacterial population on esthetic restorative materials subjected to prophylaxis and the effect of an electric toothbrush on cariogenic bacterial populations DOB grant
  24. Smith, B. (2012) Effects of golf course fertilizer usage on water quality. DOB grant.
  25. Ripp, K. (2012-2013) Undergraduate Research Fellow
  26. Ramirez, R. (2012-2013) Undergraduate Research Fellow
  27. Harbison, K. (2012) Summer Student Research Fellow
  28. Collins, A. (2012) Effectiveness of *Lomatium dissectum* in treating *Staphylococcus aureus* infection in silkworms. DOB grant.
  29. Romero, D. (2011) *Streptococcus* and *Lactobacillus* detection in the assessment of dental decay. RSC grant.
  30. Clevenger, G. (2011) Bacterial count comparisons of Enterococci in surface water and potential impact on human and animal health. RSC grant.
  31. Fields, A.B. (2011) Currency as a potential vector for *Staphylococcus aureus*, Kansas Academy of Science Third Place Poster Award, Baker University, Baldwin City, KS.
  32. Fields, A.B. (2011) Currency as a potential vector for *Staphylococcus aureus*, Student Research Day Second Place Graduate Student Poster Award, University of Nebraska, Kearney, NE.
  33. Fields, A.B. (2010) One Year Examination of U.S. Currency as a Potential Vector for *Staphylococcus aureus* and Methicillin-Resistant *S. aureus*. RSC grant.
  34. Ito, H. (2010) Effectiveness of the Clean Wave UV-C Portable Toothbrush Sanitizer.



URC grant.

35. **Claybrooks, T.** (2010-2011) Undergraduate Research Fellow.
36. **Finstick, S.A.** (2010) Genetic analysis of thermophilic microorganisms collected from thermo hot springs, Beaver County, Utah. Student Research Day Second Place Graduate Student Poster Award. University of Nebraska at Kearney, Kearney, NE.
37. **Finstick, S.A.** (2009) Genetic analysis of thermophilic microorganisms collected from thermo hot springs, Beaver County, Utah. RSC grant.
38. **Bonner, S.N.** (2009) Characterization of microbes in frass from two populations of *Drosophila melanogaster*. Student Research Day Student 2<sup>nd</sup> place award. University of Nebraska at Kearney, Kearney, NE.
39. **Williams, L.C.** (2008) A comparison between the density of waterfowl and concentration of fecal bacteria in small watershed ponds in northwest Iowa. RSC grant.
40. **Schultz, D.L.** (2008) Alkaline lake ecosystem as a novel source of microorganisms that secrete ferulic acid esterases. First Place Undergraduate Student Presentation. Missouri and Missouri Valley Branches of the American Society of Microbiology Annual Meeting, Liberty, MO.
41. **Griffith, S.E.** (2007) Looking for the true alkalophile in a hypersaline, alkaline environment. Meyers Homestead Preserve Award for Best Undergraduate Research Presentation, UNK Biology Department.
42. **Nelson, M.** (2006). Size characterization of the antimicrobial compounds in secretions of *Nicrophorus marginatus*. First Place Research Presentation, UNK Biology Department.
43. **Miller, H.** (2006). Analysis of the particulate coliform bacteria from the dust of commercial cattle feedlots in central Nebraska. Runner up Research Presentation, UNK Biology Department.
44. **Johnson, T.C.,** and Shaffer, J.J. (2005). Identification of antibiotic resistance in solvent tolerant bacteria. Student Research Day Student Choice Award. University of Nebraska at Kearney, Kearney, NE.
45. **Zarate, M.** (2005). Determination of fecal coliform in household wells surrounding Johnson Lake. RSC grant.
46. **Middleton, W.** (2004). Characterizing the antimicrobial proteins present in the oral secretions of the carrion beetle. RSC grant.
47. **Middleton, W.** (2004). Characterization of the anti-microbial proteins present in the oral secretions of the burying beetle, *Nicrophorus marginatus*. First Place Poster in the Graduate Studies Division, Student Research Day.
48. **Haverkost, T.** (2004). Identification of gut bacteria of predaceous leeches in Nebraska. Outstanding Graduate Student Presentation-Second Place. ASM Joint Branches Meeting, Kansas City, KS.
49. **Mack, A.** (2003). The determination of commonly used DNA repair by F116 and G101 bacteriophages in *Pseudomonas aeruginosa*. Second Place Research Project, UNK Biology Department.
50. **Bruns, I.** (2003). Investigation of anti-microbial proteins in the oral secretion of *Nicrophorus marginatus*. Honorable Mention Research Project, UNK Biology Department.
51. **Haverkost, T.** (2002) Symbiotic bacteria of Nebraska leeches. RSC grant.
52. **Moss, S.** (2002). Identification of bacteria responsible for hemolytic activity in leeches. URC grant.
53. **Henrichs, M.** (2002). Antimicrobial resistance transferred from cattle to humans. URC grant.
54. **Townsend, J.** (2002). Detection of oxytetracycline by ELISA in agricultural fields. Outstanding Research Project, UNK Biology Department.
55. **Palmer, R.** (2001) Monitoring the indoor air quality of the UNK residence halls. RSC



grant.

56. Hurley, E. (2001) Isolation of previously unculturable bacteria with the addition of PQQ to the media. RSC grant.
57. Blanchard, E. (2001). Analysis of antibiotics in cattle manure using the Microtox detection method. RSC grant.
58. Ottemann, A. (2001). Determination of antibiotic activity from cattle manure by TLC. RSC grant.
59. Smith, S. (2001). Characterization of leech gut bacterial flora. RSC grant.
60. Johnston, M. (2000). Bacteriophage reactivation in starved cells. Honorable Mention Natural Sciences Undergraduate Poster, Student Research Day.
61. Bishop, A. (2000). Reduction of bacterial  $\beta$ -galactosidase enzyme production by burying beetle (Coleoptera: Silphidae) secretions. 1<sup>st</sup> Place Graduate Student Poster, Student Research Day.

### **Committee Service**

Nebraska EPSCoR Advisory Board (2023-present)  
NE INBRE Senior Advisory Committee (2015-2023)  
CAS Veterans Services Committee (2021-2022)  
At Large member of UNK Faculty Senate (2020-2021; S2023)  
UNK Academic Affairs—CNSS representative (2018-2020; 2021-2023)  
Honors Program Advisory Committee (2013-2020)  
Leland Holdt Selection Committee (2015-2016)  
Grievance Committee—CNSS representative (2013-2017)  
Biology Department Peer-Review Committee (2011-2017)  
Pratt-Heins Selection Committee (2011) Chair (2012)  
Executive Graduate Council UNK representative, University of Nebraska (2005-2014)  
Graduate Studies and research representative, UNK Steering Committee (2004-2014)  
Center for Teaching Excellence Advisory Board (2004-2008)  
Biology Department Curriculum Committee (2004-2010)  
Biology Department Lab Fees Coordinator (2004-2015)  
NSS representative, Graduate Council (2002-2016)  
NSS representative, Undergraduate Research Council (2001-2006)  
Member, CNSS Educational Policy (2002-2005)  
Member, Biology Department Graduate Committee (2001-2010); Chair (2010-2016)  
UNK representative, Bioterrorism Task Force (2002-2003)

### **Academic Program Review Teams**

Geography (2022)  
History (2022)  
Health Sciences Program (2018)  
Department of Biological Sciences, SUNY-Oswego (2018)  
Biology representative, MS in Science Teaching (2015)  
Graduate representative, History (2013)  
UNK representative, MS in Emergency Preparedness at UNMC (2012)  
CNSS representative, Health Sciences (2011)  
CNSS representative, Graduate Studies and Research (2010)  
CNSS Educational Policy representative, Physics and Physical Sciences Department (2004)  
CNSS Educational Policy representative, Health Programs Office (2004)

### **Memberships**

American Association for the Advancement of Science

American Society for Microbiology—Missouri Valley Branch  
National Science Teachers Association—Nebraska  
Nebraska Society of Science  
Association of College and University Biology Educators  
Entomological Society of America  
National Association of Biology Teachers  
Omaha Women Leaders Association

## **References**

Dr. Katherine Ankerson  
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