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Professional Experience and Education

2018- Director, School of Biological Sciences, University of Nebraska-Lincoln
2018- Professor, School of Biological Sciences, University of Nebraska-Lincoln
2017 Adjunct Professor, School of Biological Sciences, University of Nebraska-Lincoln
2014-2017 Associate Dean, Graduate School, Kansas State University, Manhattan, KS
2011-2017 Professor, Division of Biology, Kansas State University, Manhattan, KS
2003-2017 Co-Director, KSU Ecological Genomics Institute
2003-2011 Associate Professor, Division of Biology, Kansas State University, Manhattan, KS,
1997-2003 Assistant Professor, Division of Biology, Kansas State University, Manhattan, KS,
1991-1996 Postdoctoral Fellow, Department of Genetics and Cell Biology, University of Minnesota,
St. Paul, MN, Advisor: Bob Herman
1991 Ph.D., Massachusetts Institute of Technology, Cambridge, MA,
Advisor: H. Robert Horvitz
1984 B.S. (with Honors), University of Iowa, Iowa City, IA

Honors and Awards

1984 James P. Robbie Prize for Undergraduate Research in Zoology
1994-2006 Board of Advisors, The Developmental Studies Hybridoma Bank, University of Iowa-
Johns Hopkins (Dr. David R. Soll, Director),
2000 Co-organizer, 2000 Midwest *C. elegans* Meeting
2001- Faculty of 1000
2001 California Breast Cancer Research Program Pathogenesis Panel Member
2001 U.S. Army Medical Research and Materiel Command Breast Cancer Research Program
Medical Genetics Panel member
2002-2004 U.S. Army Medical Research and Materiel Command Breast Cancer Research Program
Medical Genetics Panel, (declined)
2002 NIH Cell Development and Function NRSA Postdoctoral Fellowship Review Panel,
(declined)
2003 NIH Cell Development and Function NRSA Postdoctoral Fellowship Review Panel
2004 NSF Development Panel (declined).
2004 Co-organizer, 2004 Midwest *C. elegans* Meeting.
2004 NIH Cell Development and Function NRSA Postdoctoral Fellowship Review Panel,
(declined)
2004, 2005 NIH DEV-1 Study Section Ad Hoc Member
2004 Kansas Biomedical Research Infrastructure Network (KBRIN) Faculty Scholar Award
2005 NIH DEV-2 Study Section Ad Hoc Member
2008 NIH NCF Study Section Ad Hoc Member
2008 Fulbright Scholar
2012 NSF Division of Graduate Education, Panel Service
2012 NIH F05 Study Section
2015 National Academy of Inventors, Member
2013-2015 Co-chair Gordon Research Conference on Ecological and Evolutionary Genomics
2016 NSF Division of Graduate Education, Panel Service

Invitations

Selected Platform Speaker:

- 1995 10th International *C. elegans* Meeting
- 1997 11th International *C. elegans* Meeting
- 1998 Wnt Meeting, Harvard University
- 1999 Wnt Meeting, Stanford University
- 2003 Gordon Research Conference on Evolutionary and Ecological Functional Genomics
- 2010, 2012 Evolutionary Biology of *C. elegans* and Other Nematodes

Invited Platform Speaker

- 1998 Sunflower Developmental Genetics Symposium
- 1999 Motility Symposium, University of Iowa
- 2000 Area Developmental Biology Meeting, University of Kansas.
- 2002 42nd Annual Midwest Developmental Biology Meeting
- 2002 Wnt signaling in development and cancer, Royal Netherlands Academy of Arts and Sciences
- 2007 5th Annual Ecological Genomics Symposium, Kansas City, MO
- 2008 Lausanne Genomics Days, Lausanne, Switzerland
- 2008 12th Evolutionary Biology Meeting, Marseilles, France
- 2009 NemaSym Inaugural Meeting, Madison, WI
- 2010 2nd NemaSym Meeting, Tucson, AZ
- 2011 Gordon Research Conference on Evolutionary and Ecological Genomics
- 2012 4th NemaSym Meeting, Cold Spring Harbor, NY
- 2014 Ecological Society of America

Session Chair

- 1998 Wnt Meeting, Harvard University
- 2001 13th International *C. elegans* Meeting
- 2005 Gordon Research Conference on Evolutionary and Ecological Functional Genomics, Oxford University
- 2001 Gordon Research Conference on Evolutionary and Ecological Genomics
- 2010 9th Annual Ecological Genomics Symposium, Kansas City, MO

Invited Seminars:

- 1997 University of Kansas, Department of Microbiology
- 1999 MRC, Laboratory of Molecular Biology
- 1999 University of Minnesota, Department of Genetics, Cell Biology and Development
- 2000 The Kansas Experience: A Workshop in Cancer Biology, Early Development & Cancer: What is the Connection?
- 2000 Union Biometrica Inc., Somerville, MA
- 2001 University of Kansas Medical Center, Department of Biochemistry and Molecular Biology
- 2002 University of Iowa, Department of Biological Sciences
- 2002 University of Tulsa, Department of Biology
- 2002 University of Missouri-Kansas City, Division of Molecular Biology and Biochemistry
- 2002 University of California, Santa Cruz, Department of Molecular, Cellular, and Developmental Biology
- 2002 Hubrecht Laboratory, Netherlands Institute for Developmental Biology
- 2002 Kansas State University, College of Veterinary Medicine, Department of Anatomy and Physiology
- 2003 University of Minnesota, Department of Genetics, Cell Biology and Development
- 2003 University of Kansas, Department of Molecular Biosciences

2003 University of Kansas, Department of Ecology and Evolutionary Biology
 2003 Kansas State University, Department of Plant Pathology
 2003 University of Missouri, Department of Biology
 2003 Baylor University, Department of Biology
 2003 Netherlands Institute of Ecology
 2003 Wageningen University, Graduate School of Production Ecology
 2003 Hubrecht Laboratory, Netherlands Institute for Developmental Biology
 2004 University of Nevada, Las Vegas, Department of Biological Sciences
 2004 University of North Texas, Department of Biological Sciences
 2005 Kansas State University, Department of Entomology
 2005 University of Wisconsin, Department of Zoology
 2005 Oxford University, Oxford England
 2007 Wichita State University, Department of Biological Sciences
 2007 Truman State University, Department of Biology
 2008 Duke University, Nicholas School, Division of Environmental Science and Policy
 2008 University of Chicago, Department of Organismal Biology and Anatomy
 2008 Northwestern University, Department of Biochemistry, Molecular Biology and Cell Biology
 2008 Wageningen University, Laboratory of Nematology, Wageningen, The Netherlands
 2008 Max Planck Institute for Developmental Biology, Tübingen, Germany
 2008 Radboud University, Institute for Water and Wetland Research , Nijmegen, The Netherlands
 2008 Hubrecht Laboratory, Netherlands Institute for Developmental Biology
 2009 Vrie University, Department of Environmental Biology, Amsterdam, The Netherlands
 2009 University of Missouri, Department of Ecology and Evolutionary Biology
 2009 Haskell Indian Nations University, Lawrence KS .
 2009 University of Puerto Rico-Mayaguez .
 2009 University of Puerto Rico-Aguadilla .
 2009 University of Puerto Rico-Rio Piedras .
 2010 Wageningen University, Laboratory of Nematology, Wageningen, The Netherlands
 2010 Environmental Genomics Course, Mount Desert Island Biological Laboratory, Bar Harbor, ME
 2010 Division of Biology, Kansas State University
 2011 Wageningen University, Laboratory of Nematology, Wageningen, The Netherlands
 2012 University of Kansas, Department of Molecular Biosciences
 2012 Idaho State University, Department of Biological Sciences
 2012 University of Idaho, Department of Biology
 2012 University of Cincinnati, Department of Biological Sciences
 2013 University of Iowa, Department of Biological Sciences
 2014 Environmental Genomics Course, Mount Desert Island Biological Laboratory, Bar Harbor, ME
 2014 KSU Department of Diagnostic Medicine/Pathobiology, Manhattan, KS
 2015 Leonardo Art Science Evening Rendezvous (LASER), Beach Museum of Art, Manhattan, KS
 2016 Environmental Genomics Course, Mount Desert Island Biological Laboratory, Bar Harbor, ME
 2017 University of Nebraska, School of Biological Sciences, Lincoln, NE
 2017 Environmental Genomics Course, Mount Desert Island Biological Laboratory, Bar Harbor, ME
 2018 Environmental Genomics Course, Mount Desert Island Biological Laboratory, Bar Harbor, ME

Courses Taught at KSU

Embryology/Developmental Biology: spring, 1997-2004
Principles of Biology: fall 1998, 2000, 2002, 2004, 2006, 2010, 2012, 2014
Advanced Genetic Analysis: fall 1998
Advanced Cell and Developmental Biology: fall 1999
Eukaryotic Genetics: fall 2000-2017 (except 2008, on sabbatical)
Modern Molecular Approaches, spring 2001-2004, 2007-2014
Modern Genetics, spring 2005, spring 2006, fall 2011
Ecological Genomics, fall 2003, 2007, 2009, 2011

Courses Taught at UNL

School of Biological Sciences Seminar: spring, 2018, fall and spring 2019
Professionalism: fall 2019

Relevant KSU Service

Division of Biology:

1997-2004, Seminar Committee
2011-2016
1998-2000, Graduate Affairs Committee
2012-2014
2003-2004 Genetics Curriculum Committee
2004-2008 Curriculum Committee

2007-2009, Tenure and Promotion Committee
2011-2012
2008-2009 Departmental Committee on Planning (DCOP)

Faculty Search Committees:

2003 Co-Chair, Ecological Genomics Faculty Search Committee.
2004-2005 MCDB Faculty Search Committee
2006 Cancer Biology Faculty Search Committee
2006 Co-Chair, Ecological Genomics Faculty Search Committee
2009-2010 Microbiology Search Committee
2010-2011 MCDB Faculty Search committee, 3 positions filled
2013-2014 Chair, Microbiology Faculty Search Committee
2014-2015 Developmental Biology Faculty Search Committee

University/College:

2003-2008 Genetics Graduate Program Steering Committee
2006-2008 Graduate Council
2006-2007 Marshal for the Graduate School Commencement
2009-2010 Judge for Annual K-State Research Forum, Biological Sciences Oral Section
2014- Associate Deans for Research Council
2014- Global Campus Advisory Council
2014- College International Advisory Council
2015- University Assessment Facilitators Committee
2015-2016 University Enrollment Management Task Force
2016-2017 Dean of the College of Arts and Sciences Search Committee

Relevant UNL Service

2018- SBS Executive Committee
2018- SBS Graduate Committee, *ex-officio*
2018 Chair, College of Arts & Sciences Associate Dean for Research Search Committee

Publications

- White, CV, Herman MA 2018 Transcriptomic, functional and network analyses reveal novel genes involved in the interaction between *Caenorhabditis elegans* and *Stenotrophomonas maltophilia*. *Front. Cell. Infect. Microbiol.* 8:266.
- White, CV, Darby, BJ, Breeden, RJ, Herman MA 2016 A *Stenotrophomonas maltophilia* strain evades a major *Caenorhabditis elegans* defense pathway. *Infect. Immun.* 84: 524-536
- Leight ER, Murphy JT, Fantz DA, Pepin D, Schneider DL, Ratliff TM, Mohammad, DH, Herman MA, Kornfeld K. 2015. Conversion of the LIN-1 ETS protein of *Caenorhabditis elegans* from a SUMOylated transcriptional repressor to a phosphorylated transcriptional activator. *Genetics* 199: 761-75.
- Darby, BJ, Herman, MA. 2014. Effect of prey richness on a consumer's growth rate. *Oecologia* 175: 243-250
- Gomez-Montano L Jumpponen, A, Gonzales. MA, Cusicanqui, J, Valdivia, C, Motavalli, PP, Herman M, Garrett, KA. 2013. Do bacterial and fungal communities in soils of the Bolivian Altiplano change under shorter fallow periods? *Soil Biology & Biochemistry* 65 (2013) 50-59
- Darby, BJ, Todd, TC, Herman, MA 2013 High-throughput amplicon sequencing of rRNA genes requires a copy number correction to accurately reflect the effects of management practices on soil nematode community structure. *Mol. Ecol.*, 22:5456-5471
- Coolon, JD, Jones, KL, Todd, TC, Blair, JM, Herman, MA. 2013 Long-term nitrogen amendment alters soil bacterial diversity and assemblage in tallgrass prairie. *PLoS One*, Jun 28;8(6): e67884
- Wheeler DC, Darby BD, Herman, MA 2012. Several grassland soil nematodes species are insensitive to RNA-mediated interference. *Journal of Nematology*, 44:92-101.
- Darby, B.J., Jones, K.L., Wheeler, D., and Herman, M.A. (2011). Normalization and centering of array-based heterologous genome hybridization based on divergent control probes. *BMC Bioinformatics* 12, 183
- Hajuskova, M, Jindra, M, Herman, MA, Asahina, M. 2009. Nuclear receptor NHR-25 cooperates with Wnt/ β -catenin asymmetry pathway to control T cell differentiation in *C. elegans*. *J Cell Sci.*122:3051.
- Coolon, JD, Jones, KL, Carr, BC, Todd, TC, Herman, MA. 2009. *C. elegans* genomic response to soil bacteria predicts environment-specific genetic effects on life history traits. *PLoS Genetics*, 5(6): e1000503. doi:10.1371/journal.pgen.1000503.
- Herman, MA; Coolon, JD; Jones, KL; Todd, TC. 2009. Ecological Genomics of Nematode Community Interactions: Model and Non-model Approaches. In *Evolutionary Biology from Concept to Application II*, ed. by Pierre Pontarotti, Springer: Heidelberg, Germany, p. 303-321.
- Yu H, Seah A, Herman MA, Ferguson EL, Horvitz HR, Sternberg PW 2009. Wnt and EGF pathways act together to induce *C. elegans* male hook development. *Dev Biol*, 327: 419-432.
- Van Hoffelen, S. and Herman, M.A. 2009. Analysis of Wnt signaling during *C. elegans* postembryonic development. *Methods Mol Biol.*, 469, 87-102
- Ungerer, M.C., Johnson, L.C., Herman, M.A. 2008 Ecological genomics: understanding gene functions in the natural environment. *Heredity*, 100, 178-183
- Kammenga, J.E., Herman, M.A., Ouborg, N.J., Johnson, L.C. and Breitling R. 2007 Microarray challenges in ecology, *TREE*, 22, 273-279

- Wu, M. and Herman, M.A. 2007. Asymmetric localization of LIN-17/Fz and MIG-5/Dsh are required for the asymmetric B cell division in *C. elegans*. *Dev. Biol.*, 303, 650-662.
- Walston, T., Guo, C., Proenca, R., Wu, M. Herman, M., Hardin, J., Hedgecock, E. 2006. *mig-5/Dsh* controls cell fate determination and cell migration in *C. elegans*. *Dev. Biol*, 298: 485-497.
- Arata, Y., Kouike, H. Zhang, Y., Herman, M.A., Okano, H, and Sawa, H. 2006. The Wnt signal and Hox cooperate to express PSA-3/Meis, which determines specific daughter fates after asymmetric division in *C. elegans*, *Dev Cell*, 11, 105-115
- Jones, K.L., Todd, T.C., Wall-Beam, J.L, Coolon, J.D., Blair, J. M., and Herman, M.A. 2006. Molecular approach for assessing responses of microbial-feeding nematodes to burning and chronic nitrogen enrichment in a native grassland, *Mol. Ecol.*, 15, 2601-2609.
- Jones, K.L., Todd, T.C., and Herman, M.A. 2006 Development of taxon-specific markers for high-throughput screening of microbial-feeding nematodes, *Molecular Ecology Notes*, 6, 712-714.
- Wu, M. and Herman, M.A. 2006. A novel noncanonical Wnt pathway is involved in the regulation of the asymmetric B cell division in *C. elegans*. *Dev. Biol*, 293:316-329.
- Van Hoffelen, S. and Herman, M.A. 2006. Stem Cells: Specifying stem cell niches in the worm. *Curr. Biol.* 16, R175-177.
- Herman, M.A. Hermaphrodite cell fate specification. (January 09, 2006). in *WormBook*, ed. The *C. elegans* Research Community, Wormbook,doi/10.1895/wormbook.1.39.1, <http://www.wormbook.org>
- Hoepfner, D., Spector, M.S., Ratliff, T.R., Kinchen, J.M. Granat, S., Lin, S-C, Bhusri, S.S., Conradt, B., Herman, M.A., and Hengartner, M.O. 2004. *eor-1* and *eor-2* are required for cell-specific apoptotic death in *C. elegans*, *Dev. Biol*, 274, 125-138.
- Herman, M.A. and Wu, M. 2004. Noncanonical Wnt signaling pathways in *C. elegans* converge on POP-1/Tcf and control cell polarity. *Frontiers in Bioscience* 9, 1530-1539.
- Zhao, X. Sawa, H., and Herman, M. A. 2003. *tcl-2* encodes a novel protein that acts synergistically with the Wnt signaling pathway in *C. elegans*. *Dev. Biol.* 256, 276-289.
- Herman, M.A. 2003. Wnt signaling in *C. elegans*. In *Wnt signaling in Development*, M. Kühl, Editor. Landes Biosciences: Georgetown, TX, USA, pp.187-212
- Herman, M.A. 2002. Control of cell polarity by noncanonical Wnt signaling in *C. elegans*. *Semin. Cell Dev. Biol.* 13, 233-241.
- Zhao, X., Yang, Y., Fitch, D. H. A. and Herman, M. A. 2002. TLP-1 is an asymmetric cell fate determinant that responds to Wnt signals and controls male tail tip morphogenesis in *C. elegans*. *Development* 129: 1497-1502
- Herman, M.A. 2001. *C. elegans* POP-1/TCF functions in a canonical Wnt pathway that controls cell migration and in a noncanonical Wnt pathway to control cell polarity. *Development* 128, 581-590.
- Korswagen, H. C., Herman, M. A. and Clevers, H. C. 2000. Distinct beta-catenins mediate adhesion and signalling functions in *C. elegans*. *Nature* 406, 527-532.
Cited twice in Genetics and Development Paper Alert. *Current Opinion in Genetics & Development* 2000, 10, 581-589.
- Herman, M.A., Ch'ng, Q., Hettenbach, S.M., Ratliff, T.M., Kenyon, C., Herman, R.K. 1999. EGL-27 is similar to a metastasis-associated factor and controls cell polarity and cell migration in *C. elegans*. *Development* 126:1055-1064.
- Herman, M.A., Vassilieva, L.L., Horvitz, H.R., Shaw, J.E., and Herman, R.K. 1995. The *C. elegans* gene *lin-44*, which controls the polarity of certain asymmetric cell divisions, encodes a *Wnt* protein and acts cell nonautonomously. *Cell* 83:101-110.

- Herman, M.A. and H.R. Horvitz. 1994. The *Caenorhabditis elegans* gene *lin-44* controls the polarity of asymmetric cell divisions. *Development* 120:1035-1047.
- Soll, D.R., M.A. Herman, and M.A. Staebell. 1985. The involvement of cell wall expansion in the two modes of mycelium formation of *Candida albicans*. *J. General Microbiology* 131:2367-2375.
- Herman, M.A. and D.R. Soll. 1984. A comparison of volume growth during bud and mycelium formation in *Candida albicans*. *J. General Microbiology* 130:2219-2228.
- Buffo, J., M.A. Herman, and D.R. Soll. 1984. A characterization of pH-regulated dimorphism in *Candida albicans*. *Mycopathologia* 85:21-30.
- Soll, D.R. and M.A. Herman. 1983. Growth and inducibility of mycelium formation in *Candida albicans*: A single cell analysis employing a perfusion chamber. *J. General Microbiology* 129:2809-2824.