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Department of Genetics, Development & Cell Biology
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Current Position

Iowa State University	Ames, IA
Senior Lecturer (Human Anatomy & Physiology)	2012-present

Education

Postdoctoral training. NSF Engineering Research Center for Biorenewable Chemicals (CBiRC) education programs design and assessment. Research Institute for Studies in Education. Iowa State University. 2010-2012.

Doctoral studies. Mitochondrial Genome Evolution in the Metazoa: Insights from Class Hexactinellida (Phylum Porifera) and Cnidaria. Interdepartmental Genetics Program, Ecology, Evolution and Organismal Biology Department. Iowa State University. 2010.

Master's studies. High-resolution mapping of the *tsn1* toxin sensitivity gene in wheat. North Dakota State University. 2003.

Undergraduate studies. Microbiology, Chemistry. Kansas State University. 2001.

Grants

Engineering-LAS Online Learning (ELO) Course Development Grant, 2018	\$9,000.00
LAS Computation Advisory Committee (LAS CAC) Instructional Grant, 2018	\$5,643.00
Opportunities for the Talented and Gifted (OPPTAG) Course, 2018	\$2,000.00
Engineering-LAS Online Learning (ELO) Course Development Grant, 2018	\$9,000.00
CALS Technology Advancement Committee (TAC) Grant, 2017	\$14,842.00
Engineering-LAS Online Learning (ELO) Course Development Grant, 2017	\$9,000.00
Opportunities for the Talented and Gifted (OPPTAG) Course, 2017	\$1,000.00
LAS Computation Advisory Committee (LAS CAC) Instructional Grant, 2017	\$40,341.00
LAS Computation Advisory Committee (LAS CAC) Instructional Grant, 2015	\$31,683.74
LAS Computation Advisory Committee (LAS CAC) Instructional Grant, 2013	\$30,479.85
Total (2013-2018)	\$152,989.59

Awards

CALS Excellence in Teaching by Lecturers and Adjunct Faculty Award	2019
CALS Faculty Excellence in Teaching Award (nominated)	2017
CALS Faculty Excellence in Teaching Award (nominated)	2014
Golden Key Honor Society Faculty Award	2014
National Society of Collegiate Scholars Faculty Award	2013
Dissertation Research Grant	2009
Dissertation Research Grant	2008
University Excellence in Teaching Award	2009
Knaphus Teaching Fellowship	2008
Miller Graduate Fellowship	2004

Teaching Experience

- Fifteen years' experience teaching STEM.
- Specialty in developing and leading high-enrollment university courses: over 8,621 undergraduate students directly instructed by me since 2012.
- Fully integrated two new anatomy and physiology online courses at ISU.
- Developed a novel inquiry-based curriculum for the Fundamentals of Human Physiology Laboratory, focusing on modern techniques in human physiological assessment and research.
- Developed and offered Biol 256L text at no cost to students by fully integrating course into the university's learning management system (LMS).

Professional Associations

• Human Anatomy & Physiology Society (HAPS)	2016-present
• American Evaluation Association	2012-present
• Society for Integrative & Comparative Biology	2009-present
• Society for Molecular Biology & Evolution	2007-present
• National Society of Collegiate Scholars (faculty member)	2013-present
• Golden Key National Honor Society (faculty member)	2014-present

Other Professional Experience

Ad hoc reviewer for McGraw Hill Publishing: Fox. *Human Physiology*, 16th Edition. 2019.

Ad hoc reviewer for McGraw Hill Publishing: McKinley, O'Loughlin, and Pennefather-O'Brien. *Human Anatomy*, 5th Edition. 2018.

Ad hoc reviewer for Pearson Publishing: Martini/Tallitsch, *Human Anatomy*, 10th Edition. 2017.

Ad hoc reviewer for McGraw Hill Publishing: Fox, Stuart. *Human Physiology*, 15th Edition. 2017.

Ad hoc reviewer for McGraw Hill Publishing: McGraw Hill Connect for McKinley, *Human Anatomy* 4E. 2016.

Research intern at Harbor Branch Oceanographic Institute, Florida Atlantic University, 2007.

Publications

Haen Whitmer K.M. (2018). Model Systems for Exploring the Evolutionary Origins of the Nervous System. In: Kloc M., Kubiak J. (eds) *Marine Organisms as Model Systems in Biology and Medicine. Results and Problems in Cell Differentiation*, vol 65. Springer Nature Series, Cham.

Haen, K.M. (2017). *Course-Based Research Approach to Human Physiology*. Laboratory manual for Biology 256L, freely available via ISU Canvas.

Haen, K.M. Current insights into synaptic dysfunction in autism spectrum disorder. Review. In preparation.

Haen, K.M. An inquiry-based approach to teaching in the modern human physiology laboratory. In preparation.

Haen, K.M., Arun Sethuraman, Jonathan Wendel and Adah Leshem. Elementary school science for a more sustainable future. Submitted.

Haen K.M., Walker Pett, and Dennis V. Lavrov. (2014). Eight new mtDNA sequences of glass sponges reveal an extensive usage of +1 frameshifting in mitochondrial translation. *Gene* 535.2. 2014: 336-344.

Haen, K.M. and M.R. Kemis. (2012). The Evolution of Responsive Education Program Evaluation at the National Science Foundation Engineering Research Center for Biorenewable Chemicals. Paper for 26th Annual American Evaluation Association (AEA) Conference.

Haen, K.M., Raman, D.R., Polush, E. & Kemis, M.R. (2012). Training the Next Generation of Creative, Innovative and Adaptive Scientists and Engineers: The NSF Engineering Research Center for Biorenewable Chemicals (CBiRC) Research Experience for Undergraduates. Education for Chemical Engineers. DOI: 10.1016/j.ece.2012.09.001, published online 11-Oct-2012.

Geisinger, B.N., Raman, D.R., **Haen, K.M.**, Kemis, M.R., & Pate, M.L. (2012). Virtual education center for biorenewable resources: Building capacity and humanizing distance education. NACTA Journal, in press.

Hondred, P., Keller, M., **Haen, K.M.** & Leshem, A. (2012). Iowa State University SYMBI GK12 program: a case study of the resident engineer's effects on 8th graders attitudes toward science and engineering. Conference paper at American Society for Engineering Education (ASEE) K-12 Workshop on Engineering Education.

Hargrave, C., Kemis, M., **Haen, K.M.** & Leshem, A. (2012). Influence of the young engineers and scientists program for underrepresented minority high school students on their knowledge and career aspirations in STEM fields. Accepted to the Fourth International Conference on Science in Society.

Martin Dohrmann, **Karri M. Haen**, Dennis V. Lavrov, and Gert Wörheide. (2012). Molecular phylogeny of glass sponges (Porifera, Hexactinellida): increased taxon sampling and inclusion of a mitochondrial protein-coding gene. *Hydrobiologia*. 687 (1).

Rivera, A.S., Hammel, J.U., **Haen, K.M.** *et al.* (2011). RNA interference in marine and freshwater sponges: acting knockdown in *Tethya wilhelma* and *Ephydatia muelleri* by ingested dsRNA expressing bacteria. *BMC Biotechnology*, 11, 67–82.

Haen, K.M., Pett, W. & Lavrov, D.V. (2010). Parallel loss of nuclear-encoded mitochondrial aminoacyl-tRNA synthetases and mtDNA-encoded tRNAs in Cnidaria. *Mol Biol Evol*. 27(10):2216-2219.

Haen, K.M., Lang, F.B., Pomponi, S.A. & Lavrov, D.V. (2007). Glass Sponges and Bilaterian Animals Share Derived Mitochondrial Genomic Features: A Common Ancestry or Parallel Evolution? *Mol Biol Evol* 24: 1518-1527.

Haen, K.M., Lu, H., Friesen, T.L. & Faris, J.D. (2004). Genomic Targeting and High-Resolution Mapping of the *Tsn1* Gene in Wheat. *Crop Sci*. 44:951-962.

Faris, J.D., **Haen, K.M.** & Gill, B.S. (2000). Saturation Mapping of a Gene-Rich Recombination Hot Spot Region in Wheat. *Genetics* 154: 823-835.