

Education

- 2010 Ph.D., Integrated Program in Biomedical Science, University of Tennessee Health Science Center, Memphis, TN
Mentor: Michael A. Dyer, Ph.D. Howard Hughes Member at St. Jude Children's Research Hospital, Memphis, TN
- 1999 B.S. Biology and B.A. French, Marquette University, Milwaukee, WI

Professional Experience

- 2016-present **Assistant Professor** in the Department of Biology. University of Minnesota. Duluth, MN
- 2013-2016 **Assistant Professor** in the Department of Biology. The College of St. Scholastica. Duluth, MN
- 2015-2016 **Adjunct Instructor** in the Biology Department. Lake Superior College. Duluth, MN.
Supervisor: Hanna Erpestad
- 2012 August -December **Team Lecturer** ITV for Pharmacokinetics (6163). University of Minnesota- College of Pharmacy- Duluth, MN. Supervisor: Dr. Paul Ranelli.
- Facilitator** for Pharmacology (5101). University of Minnesota- College of Pharmacy- Duluth, MN. Supervisor: Dr. Paul Ranelli.
- Faculty Advisor** for Introductory Pharmacy Practice Experience (7001). University of Minnesota- College of Pharmacy- Duluth, MN. Supervisor: Dr. Paul Ranelli.
- 2010-2012 **Postdoctoral Fellow in Institutional Research and Career Developmental Award program (IRACDA) NIH/NIGMS**, University of Minnesota Medical School-Duluth Campus. Program director: George Trachte, Ph.D.
- 2012 Spring **Instructor** for Forensic Science for Non-Majors (BIOL 1011) through IRACDA program. Fond du Lac Tribal and Community College. Cloquet, Minnesota. Teaching supervisor: Jay Sandal.
- 2011-2012 **National Academies Education Fellow in the Life Sciences**, National Academies advisers to the nation on science, engineering and medicine.
Principle responsibilities: To address the concerns of the National Academies BIO2010 report by teaching methods, such as active learning, assessment and diversity of learning styles, to transforming undergraduate biology education for research scientists.
- 2004 – 2010 **Graduate Student**, University of Tennessee Health Science Center and St. Jude Children's Research Hospital
Department of Developmental Neurobiology, Mentor: Michael A. Dyer Ph.D.

Research: Pharmacokinetic and Pharmacodynamic studies of carboplatin and topotecan in pre-clinical models of retinoblastoma.

Department of Molecular Pharmacology, Mentor: Linda Harris Ph.D.

Research: Differential expression of *Mdm2* splice variants during cytotoxic stress.

- 2002 – 2004 **Research Technician**, Gen-Probe Prodesse Inc. Research and Development Department. Waukesha, WI.
Principal responsibilities: Developed new Multiplex Elisa Assays for viral detection in clinical specimens, processed clinical lab specimens, restructured SOP for CE Certifications and new employee training.
- 2001 – 2002 **Lab Technician**, Blood Center of Southeastern Wisconsin, Clinical Lab of Molecular Diagnostics. Milwaukee, WI.
Principal responsibilities: Chimera assays, analysis and communication. Wrote GMP and SOP for clinical assays. Validated lab automation. Trained new employees.
- 2000 – 2001 **Clinical Unit Coordinator**, Columbia Hospital, Orthopedic Surgical Department, Milwaukee, WI.
Principal responsibilities: oral communication to medical personal and data entry for procedures and billing and patient and family support.

Publications

- 1) Amy Prunuske, Courtney Hunter, **Katie Nemeth**. Application of the Introductory Molecular and Cellular Biology Assessment to Health Professional Students. *Medical Science Education*. 2014 May.
- 2) McEvoy J, Flores-Otero J, Zhang J, **Nemeth K**, Brennan R, Bradley C, Krafcik F, Rodriguez-Galindo C, Wilson M, Xiong S, Lozano G, Sage J, Fu L, Louhibi L, Trimarchi J, Pani A, Smeyne R, Johnson D, Dyer MA. Coexpression of normally incompatible developmental pathways in retinoblastoma genesis. *Cancer Cell*. **2011** Aug 16;20(2):260-75.
- 3) Zhang F, Tagen M, Throm S, Mallari J, Miller L, Guy KR, Dyer MA, Willians RT, Roussel MF, **Nemeth K**, Zhu F, Zhang J, Lu M, Stewart CF. Whole Body Physiologically-Based Pharmacokinetic Model for Nutlin-3a in Mice after Intravenous and Oral Administration. *Drug Metab Dispos*. **2010** Jan;39(1):15-21. [Epub 2010 Oct 14].
- 4) **Nemeth KM**, Federico S, Carcaboso AM, Shen Y, Schaiquevich P, Zhang J, Egorin M, Stewart C, Dyer MA. Improved Retinoblastoma Treatment Using Subconjunctival Carboplatin and Systemic Topotecan in Preclinical Models. *Cancer*. **2010** Jan 15;117(2):421-34. Epub2010 Sep 3.

5) Volk EL*, Schuster K*, **Nemeth KM**, Fan L, Harris LC. MDM2-A, a common Mdm2 splice variant, causes perinatal lethality, reduced longevity and enhanced senescence. *Dis Model Mech.* **2009** Jan-Feb;2(1-2):47-55. Epub 2008 Dec 22.

Abstracts

Katie Nemeth and Amy Prunuske. Development of cultural intelligence and communication skills using Ecotonos, a simulation role-playing activity. Society for the Advancement of Biology Education Research, 2017, Minneapolis, MN.

Katie Nemeth, Courtney Hunter and Amy Prunuske. The Identification of Misconceptions Among Professional Health Students. International Association of Medical Science Educators (IAMSE) 2014 meeting. June 7-10. Nashville TN.

Nemeth, K*, Hunter, C, and **Prunuske AJ**. The Identification of Misconceptions Among Health Professional Students. Society for the Advancement of Biology Education Research, 2013, Minneapolis, MN.

Katie Nemeth, Jay Sandal, George Trachte and Amy Prunuske. A Course Creation with Active Learning and Assessment: Teaching by recognizing learning diversities in a classroom. IRACDA 2012 meeting, June 17-19, Pennsylvania, PN.

Katie Nemeth, Ying Shen, Damon Reed, Anang Shelat, Alexander Arnold, David Smithson, Brenda, Schulman, Shunbin Xiong, Guillermina Lozano, R. Kiplin Guy and Michael A. Dyer. Identification and Characterization of Selective MDMX Inhibitors. AACR 100th Annual meeting, April 18-22, 2009, Denver, CO.

Katie Nemeth, Jiakun Zhang and Michael A. Dyer. Locally Delivered Targeted Chemotherapy for Retinoblastoma. Gordon Conference August 2008.

Erin L. Volk, Katja Schuster, **Katie M. Nemeth**, and Linda C. Harris
MDM2A, a Common Tumor Splice Variant of MDM2, Enhances Senescence and Reduces Longevity. International MDM2 Workshop IV October 2007.

Educational Modules and Talks

- June 2015 Bridges and Pathways Undergraduate program. **Invited facilitator** for Multicultural workshop. University of Minnesota-Duluth, MN.
- June 2014 CourseSource Writing Workshop. **Invited participant** for online peer-reviewed journal. University of Minnesota-College of Biological Sciences- Minneapolis, MN.
- July 2012-13 Nature of Life (www.cbs.umn.edu/node/269/). **Invited professor** from the University of Minnesota-College of Biological Sciences- Minneapolis, MN.
- September 2011 "Taking the Abstract out of Abstracts". **Guest Module** for NIGMS Bridges and Pathways to Advance Degrees in Life Sciences Program. UMD-Duluth, MN.

- November 2011 “Scientific Teaching Revolutionized”. **Guest Module** for IBS 8099 The Biological Practitioner at University of Minnesota Twin Cities Graduate School- MN.
- July 2011 “The Fish Crime at Hanks Grill- A Case Study using protein fingerprinting. **Guest module**. Ecology (BIOL 2050). Fond du Lac Tribal & Community College- Cloquet, MN.
- Summer 2006 Experimental Cell and Molecular Biology in the Community (MMCS 7010). **Teaching Assistant**. University of Tennessee Health Science Center and University of Memphis.
- Summer 1999 English as a second language for business professionals. **Instructor**. Business Talk France Language School, Paris FRANCE.
Principle responsibilities: To design lesson plans/materials for instruction. To teach English to small groups and individuals on-site or at place of employment.

Invited Educational Talks

- July 2017 Development of cultural intelligence and communication skills using Ecotonos, a simulation role-playing activity. **Invited speaker**. Society for the Advancement of Biology Education Research (SABER), Minneapolis, MN.
- April 2012 “Course creation with active learning assessment: Teaching by recognizing learning diversities in a classroom”. **Invited talk** at Fond du Lac Tribal and Community College teaching circle. Cloquet, MN.
- April 2012 Showcase of Superlative Strategies: “Communicating Science with Comic Strip Media” **Guest Speaker** for University of Minnesota. Duluth, MN.
- January 2012 “Using EnGaugements: engage your students while gauging their learning”. **Invited Speaker** for university wide presentation through the Instructional Development Services at University of Minnesota- Duluth.
- December 2011 Education Workshop: 2020 Vision: Using Scientific Teaching to Address the Challenges of the NRC's BIO2010. **Guest Facilitator at American Society Cell Biology (ASCB)** Denver, CO.

Educational Research Projects (IRB approved)

- August 2012 Co-investigator of educational study entitled, “Evaluation of Professional student Performance on Concept Inventories.
- November 2011 Co-investigator of educational study entitled, “Evaluation of learning impact and student preference of active verses traditional learning in the correction of common science misconceptions in the Community College”.
- Summer 2011 Co-investigator of social and behavior science entitled, “Impact of a novel ‘Forensic Science’ Class on disadvantaged student recruitment into scientific enrichment programs at the Community College level”

Awards

- January 2014 Active Learning Award- The College of St. Scholastica. Duluth, MN.
- May 2012 Travel Award-Society for the Advancement of Biology Education Research (SABER) for annual meeting. Minneapolis, MN. entee
- Spring 2012 Undergraduate Research Opportunity Program Award, *Promotion of Diversity in the Sciences Through the Incorporation of Active Learning*.
- Spring 2012 Undergraduate Research Opportunity Program Award, *Assessment of Learning Gains with Student Centered Instruction*.

Educational Enrichment

- 2013 CourseSource workshop for online journal for educational research.
- February 2012 National Academies of Science and HHMI Summer Institutes reunion meeting at the HHMI Headquarters. Chevy Chase, Maryland.
- July 2011-12 Society for the Advancement of Biological Education Research (SABER) meeting. University of Minnesota- Twin Cities, Minnesota
- June 2011 National Academies of Science and HHMI Summer Institutes of Undergraduate Education in Biology Workshop University of Wisconsin. Madison, Wisconsin.
- April 2011 Simplifying Course and Program Assessment: what to do with all that quantitative data? Dr. James Allert, University of Minnesota Duluth.
- April 2011 Simulating and Problem Solving Across Cultures by Ecotons. Drs. Shelley Smith and Leane Rutherford, University of Minnesota Duluth.
- Spring 2011 From lecture to learning: teaching more by talking less. Dr. Robyn Wright. University of Minnesota Duluth.
- Spring 2011 Early Career Workshop Series. Drs. Shelley Smith and Leane Rutherford. University of Minnesota Duluth.

Academic and Public Service

- 2016-2017 Invited ah hoc reviewer for Pearson Education Curriculum Group, Glenview, Illinois, United States. Review content K- Middle for the Next Gen Science Program and Elevate Science California Program.
- 2015-16 Invited ah hoc reviewer for two chapters in text Life: The Science of Biology, David Sadava, David Hillis, H. Craig Heller and Sally Hacker. Eleventh Edition. Publishers Sinauer Associates, Inc. and Macmillan Learning.
- 2014- current Biomedical Scientist Representative for Intel Regional Scientific and Engineering Fair for Northeastern Minnesota.
- 2011-2012 National Brain Awareness Program, Cloquet and Esko Public K12 Schools, MN.

2009 – 2010	Graduate School President, University of Tennessee Health Science Center, Memphis, TN.
2009 – 2010	Student representative on Graduate Student Curriculum Committee, University of Tennessee Health Science Center, Memphis, TN.
2009 – 2010	Student representative on Graduate Studies Policy Council, a committee discussing current policy and updates of the Statewide University System, University of Tennessee Health Science Center, Memphis, TN.
2008 – 2010	Honor council representative for graduate school, University of Tennessee Health Science Center, Memphis, TN

Courses Taught

University of Minnesota- Duluth, MN.

General Biology I (Biology1011)- This course actively explores the fundamentals concepts of biology. These include chemical basis of life, cell structure and function, energy transformations, photosynthesis, cellular respiration, genetics, molecular biology, DNA technology, development, origin of life, and evolution. Students actively participate with the use of clickers and in-class case studies. It is paired up with an inquiry-based laboratory. **2016-2018 Fall and Spring.**

Communication in Biology (Biology 3987) – This course focuses on the development of professional oral communication skills through attendance and evaluation of biology public and seminars, developing a professional presentation, and the introduction of a speaker. **2017 Fall and 2018 Spring.**

Genetics Laboratory (Biology 2202)- This is a writing intensive course that explores the principals of genetics. **Fall 2016 and 2018**

Lake Superior College- Duluth, MN.

Anatomy and Physiology II (BIOL1141)- This class studies the body structure and function by incorporating principles of chemistry, biochemistry and molecular biology in lecture and lab. The systems covered include endocrine, cardiovascular, immune, respiratory, urinary system, digestive and reproductive. **2015-2016 Summer and Spring.**

On-line Anatomy and Physiology II (BIOL1141)- This class studies the body structure and function by incorporating principles of chemistry, biochemistry and molecular biology in lecture and lab. The systems covered include endocrine, cardiovascular, immune, respiratory, urinary system, digestive and reproductive. **Summer 2018.**

Fond du Lac Tribal Community College- Cloquet, MN.

Forensic Science for Non-Majors (BIOL1011)- This course offers an introduction to biology with a forensic theme. The focus is directed toward human biology, cellular biology and molecular biology with forensic application. **2012 Spring.**

The College of St. Scholastica- Duluth, MN.

General Biology I (BIO1101)- This course focuses on living systems with emphasis on molecular and cellular levels of organization. A particular focus is directed toward the synthesis of DNA, RNA and genetics of disease. Instructed 2013 and 2014 Fall.

Conversations of Naturalist (BIO3101)- This is a non-majors writing intensive course, which focuses on the observation and interpretation of living organisms and their environment. The class is interactive provides students the opportunity to read diverse authors, observe, reflect and write about the natural world while exploring general science topics. Instructed 2013 and 2014 Fall.

Biology of the Cell (BIO1036)- This course is an introduction to cell biology for non-majors. The topics discussed include the study of structure and function of proteins, carbohydrates, lipids and nucleic acids; study of structure and function of cells; a brief introduction to genetics. Instructed 2014 and 2015 Spring.

Cell Biology (BIO3600)- This course focus is on the eukaryotic cell and viruses. The topics include cell membrane, receptor proteins, organelles, cytoskeleton, cell communication, extracellular matrix and experimental methods. Instructed 2014 and 2015 Spring.

Molecular Biology (BIO4160)- The course explores current molecular biology research techniques, hypothesis testing and communication. Experimental design focuses on RNA and DNA topics. Instructed 2014 Spring and 2015 Spring.

Human Biology and Heredity (BIO1102)- This class studies the structure, function and heredity of the human body. It is designed for students with a minimal science background. The topics include cellular structure and function; organ systems of the body; problems of development and function; heredity and inheritance; and aspects of evolution. Will instruct 2015 Fall.