

Kathleen A. Barry

Contact Information:

University of Illinois at Urbana-Champaign
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Education

Doctor of Philosophy *University of Illinois at Urbana-Champaign, IL*
Department of Animal Sciences
Research Interests: Companion animal nutrition
Research topic: Indices of gut health and intestinal microbial ecology of the cat as affected by ingestion of select fiber sources varying in fermentative capacity
Expected graduation date: May 2010

Master of Science *University of Illinois at Urbana-Champaign, IL*
Department of Animal Sciences
Research Interests: Comparative animal nutrition
Thesis title: Human infant formula and formula components affect fecal attributes as measured using a weanling pig model
Graduation date: May 2007

Bachelor of Science *University of Illinois at Urbana-Champaign, IL*
Department of Animal Sciences
Graduation date: May 2005

Work Experience

Graduate Research Assistant August 2005-present
University of Illinois at Urbana-Champaign

Experience includes:

- Setting up and conducting a metagenomic study with cats
- Setting up and conducting *in vitro* analysis of gas production and fiber fermentation using cat fecal inoculum
- Setting up and conducting digestibility trials in cats, focusing on analyzing for fecal quality and odor component concentrations
- Setting up and conducting a nitrogen balance study with cats and performing subsequent analyses of diet, fecal, and urine samples collected

Conducting digestibility trials using ileal cannulated dogs, focusing on analyzing prebiotic supplements
Conducting digestibility trials in weanling pigs, focusing on analyzing for fecal quality and odor component concentrations
Laboratory experience conducting proximate analysis, high performance liquid chromatography (HPLC), gas-liquid chromatography, marker technology, and microbiota analyses including DGGE, qPCR, and metagenomic technologies

Teaching Assistant August 2007-present
University of Illinois at Urbana-Champaign
AnSc 523- Techniques in Animal Nutrition, Fall 2007 and 2008
AnSc 422- Companion Animal Nutrition, Spring 2008 and 2009
Completed Teaching College for the College of Agricultural, Consumer, and Environmental Sciences, Fall 2008

Undergraduate Research Assistant September 2002-August 2005
University of Illinois at Urbana-Champaign - Companion Animal Nutrition Laboratory

Experience includes:

Conducting research over summers 2003 and 2004 with ileal cannulated dogs and weanling pigs
Assay preparation, employee training, and care for laboratory animals

Professional Organizations

American Association of Veterinary Nutrition, 2008
American Society of Animal Science, 2005-present
American Society for Nutrition, 2005-present

Honors and Awards

IIC Pinnacle Award, 2008
Mitchell Fellowship Award in Graduate Nutrition Research, 2008-2009
Dean's List in the College of ACES, Spring 2005
Eli Lilly Academic Merit Scholar, 2003-2004

Publications

Abstracts Presented at Professional Meetings:

Barry, K.A., D.C. Hernot, J. Van Loo, G.C. Fahey, Jr. 2008. Fructan supplementation affects nitrogen partitioning in excreta and stool metabolite concentrations in healthy senior cats. *FASEB J.* 22: 444.3

Barry, K.A., D.C. Hernot, I.S. Middelbos, C. Francis, B. Dunsford, G.C. Fahey, Jr. 2008. Low-level fructan supplementation of healthy, adult dogs is effective in modifying stool protein catabolite concentrations but not gut microbiota populations. National ASAS meetings. (Accepted.)

Invited Papers:

Barry, K.A., B.M. Vester, and G.C. Fahey. Submitted. Prebiotics in Companion and Livestock Animal Nutrition. In: *Prebiotics and Probiotics Science and Technology*; D. Charalampopoulos and R. Rastall, eds. Springer, New York.

Fahey, G.C., **K.A. Barry**, and K.S. Swanson. 2008. Age-related changes in nutrient utilization by companion animals. *Ann. Rev. Nutr.* 28 28:425-45.

(doi:10.1146/annurev.nutr.28.061807.155325)

Invited Presentations:

Barry, K.A., and G.C. Fahey, Jr. Prebiotic use by companion animals and nonruminant livestock.

Washington State University, 2008

USDA Ag Utilization Station, Peoria, IL, 2008

Wageningen Universtiy, The Netherlands, 2009

Barry, K.A., and G.C. Fahey, Jr. 2009. Factors affecting production of odor-causing compounds in pet animals. American Society for Microbiology, Philadelphia, PA

Published Papers:

Barry, K.A., D.C. Hernot, I.S. Middelbos, C. Francis, B. Dunsford, K.S. Swanson, and G.C. Fahey, Jr. Submitted. Low-level fructan supplementation of dogs enhances nutrient digestion and modifies stool metabolite concentrations, but does not alter fecal microbiota populations. *J. Anim. Sci.*

Barry, K.A., N.D. Fastinger, J. Folador, M.L. Bozych, M.J. Kullen, and G.C. Fahey, Jr. 2008. The impact of commercial human infant formula on fecal attributes in a weanling pig model. *Food Chem. Toxicol.* 46: 1175-1183.

Dikeman, C., **K. Barry**, M. Murphy, and G.C. Fahey, Jr. 2007. Diet and measurement techniques affect small intestinal digesta viscosity among dogs. *Nutr. Res.* 27: 56-65.

Collaborative Projects:

Valdez-Morales, M., G. Fahey, L. Bauer, **K. Barry**, J. Pataky, E. Gonzalez de Mejia, and O. Paredes-Lopez. 2006. Effect of maize genotype, stage of development, and cooking process on the chemical composition and biological activity of huitlacoche (*Ustilago maydis*) galls. Abstract # 053-07. IFT Annual Meeting and Food Expo.