
Logan Kilburn-Kappeler

Contact Information

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Kansas State University
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Education

Doctor of Philosophy

Kansas State University
Department of Grain Science and Industry
Advisor: Dr. Greg Aldrich
Course focus: pet food formulation, companion animal nutrition, clinical nutrition, immunology, pet food processing, advanced extrusion, statistics
Research topic: The utilization of yeast and co-products in companion animal diets
Expected graduation: May 2023

Master of Science

Iowa State University
Department of Animal Science
Advisor: Dr. Mariana Rossoni Serao
Course focus: animal nutrition, digestive physiology, gut microbiome, statistics, teaching
Thesis: The use of dietary fat and cricket powder as alternatives in diets fed to healthy adult dogs
Graduation date: December 2019

Bachelor of Science

Iowa State University
Major: Animal Science
Course focus: companion animal science and management, animal nutrition
Minor: Spanish
Study Abroad: ISU on the Mediterranean - Valencia, Spain
Fully immersed in the culture by living with a host family for 6 weeks
Independent travel throughout Europe
Completed three Spanish language courses
Graduation date: December 2016

Academic Experience

January 2020 – Current

Kansas State University – *Graduate Research Assistant*

- Management of laboratory equipment and procedures
- Mentor for new graduate students
- Immunological sample preparation and analysis (vaccine titers, cell populations, cytokines)
- Management of 6 undergraduate workers
- Completion of 5 diet digestibility trials in dogs and cats
- Completion of a water preference test in dogs
- Research protocol development
- Nutrient analysis for dry matter, ash, protein, fat, gross energy, and total dietary fiber
- Short chain fatty acid and microbiome analysis
- Blood draws
- Formulation and production of extruded kibble for dogs and cats

August 2017 – December 2019

Iowa State University – *Graduate Research Assistant*

- Completion of 2 diet digestibility trials in dogs
- Upper and lower gastrointestinal endoscopic procedures
- Management of pharmacokinetics study
- Management of 8 research dogs
- Blood draws
- Fecal collections and processing

Teaching Experience

January 2022 and June 2021

Kansas State University – *Pet Food Formulation for Commercial Production (GRSC 750)*

Teaching Assistant

- Concept 5 formulation software
- Leader of breakout sessions

August 2021 – December 2021

Kansas State University – *Freshman Orientation in Grain Science (GRSC 100) Teaching Assistant*

- Interactive lecture development
- Delivery of course material

August 2018 – December 2019

Iowa State University – *Animal Feeds and Feeding (ANS 320) Teaching Assistant*

- Two-hour lab every week
- Guest lecturer for Companion Animal Nutrition covering digestive physiology, nutrient requirements, feeding regimens, and food toxicities
- Prepare lab material for all sections (100 students)
- One on one teaching with students

August 2017 – December 2019

Iowa State University – *Undergraduate Mentoring*

- Laboratory training (nutrient analysis for dry matter, ash, protein, fat, and gross energy)
- Research team management
- Training of dog colony procedures (daily care, restraint for blood draws, socialization)
- Chaperone of Animal Science Block and Bridle club trips

August 2018 – December 2018

Iowa State University – *Animal Nutrition (ANS 319) Teaching Assistant*

- Guest lecturer for Companion Animal Nutrition
- 4 exam review sessions
- One on one teaching with students

August 2016 – December 2016

Iowa State University – *Animal Feeds and Feeding (ANS 320) Undergraduate Teaching Assistant*

- Course grading and online grade management
- Undergraduate student course tutoring
- Reviewed course material

Professional Experience

January 2017 – May 2017

Omaha Henry Doorly Zoo and Aquarium – *Animal Nutrition Intern*

- Nutrient analysis for protein, energy, and fat compositions in feed
- Research project on gut loading crickets
- Diet preparation for carnivore species
- Employee training

October 2014 – December 2016

Center for Food Security and Public Health – *Undergraduate Program Assistant*

- Web module development for the National Animal Health Emergency Management System
- Web module and print version editing of the National Veterinary Accreditation Program
- Hosted the National Veterinary Biologics Training Program

June 2016 – July 2016

Animal Rescue League of Iowa – *Humane Education Intern*

- Humane education programs designed for various age levels (grades 1-8)
- Planned and executed educational workshops and events related to pet safety, pet ownership responsibilities, and community outreach

January 2015 – May 2015

Iowa State University – *Undergraduate Research Assistant*

Daily feeding for 60 head of dairy cattle to analyze feeding efficiency
Milk sampling to determine milk quality based on cattle genetics
Body heat imaging and weighing of cattle

Awards and Recognition

May 2022

Kansas State University Graduate Student Council Travel Award

Kansas State University Grain Science Graduate Student Organization Service Award

April 2022

Kansas State University Grain Science Outstanding Ph.D. Graduate Student Award

October 2021

Kansas State University Grain Science Graduate Student Research Symposium – second place in oral presentation competition

July 2021

International Ingredient Corporation Pinnacle Award

May 2021

Kansas State University Grain Science Graduate Student Organization Service Award

Publications

Kilburn, L. R., L. R. Koester, S. Schmitz-Esser, N. V. L. Serão, and M. C. Rossoni Serão. 2020. High-Fat Diets Led to OTU-Level Shifts in Fecal Samples of Healthy Adult Dogs. *Front. Microbiol.* 11:1–13. doi:10.3389/fmicb.2020.564160.

Frame, C. A., E. Johnson, **L. Kilburn**, E. Huff-Lonergan, B. J. Kerr, and M. R. Sero. 2020. Impact of dietary oxidized protein on oxidative status and performance in growing pigs. *J. Anim. Sci.* 98:1–7. doi:10.1093/jas/skaa097.

Kilburn, L. R., A. T. Carlson, E. Lewis, and M. C. R. Sero. 2020. Cricket (*Grylloides sigillatus*) meal fed to healthy adult dogs does not affect general health and minimally impacts apparent total tract digestibility. *J. Anim. Sci.* 98:1–8. doi:10.1093/jas/skaa083.

Kilburn, L. R., K. Allenspach, A. E. Jergens, A. Bourgois-Mochel, J. P. Mochel, and M. C. R. Sero. 2020. Apparent total tract digestibility, fecal characteristics, and blood parameters of healthy adult dogs fed high-fat diets. *J. Anim. Sci.* 98:1–8. doi:10.1093/jas/skaa043.

Abstracts

Kilburn, L., M.L. Jolly-Breithaupt, D. Balk, and C.G. Aldrich. 2022. Comparison of corn fermented protein (CFP) to traditional yeast and distillers grain fed to healthy adult cats. American Society of Animal Science Annual Meeting; Oklahoma City, OK. Accepted.

Kim, H.S., **L. Kilburn**, C.G. Aldrich, H. Dogan, Y. Li, and S. Alavi. 2022. Internal versus external fat in extrusion of dry expanded dog kibbles containing soy – Impact on process stability and product uniformity. Institute of Food Technologists Annual Meeting; Chicago, IL. Accepted.

Kilburn, L., M.L. Jolly-Breithaupt, D. Balk, and C.G. Aldrich. 2022. Evaluation of graded levels of corn fermented protein (CFP) on apparent nutrient digestibility and stool quality in healthy adult cats. Petfood Forum; Kansas City, MO. Oral Presentation.

Kilburn, L., K. Lema, M.L. Jolly-Breithaupt, D. Balk, and C.G. Aldrich. 2021. Comparison of grain distillers dried yeast (GDDY) to traditional distillers' grain and yeast sources fed to healthy adult dogs. Petfood Forum; Kansas City, MO. Oral Presentation.

Kilburn, L., M.L. Jolly-Breithaupt, D. Balk, and C.G. Aldrich. 2021. Palatability assessment of grain distillers dried yeast (GDDY) compared to traditional distillers' grain and yeast sources fed to healthy adult cats. Petfood Forum; Kansas City, MO. Poster Presentation.

Kilburn, L., M.L. Jolly-Breithaupt, D. Balk, and C.G. Aldrich. 2021. Palatability assessment of graded levels of grain distillers dried yeast (GDDY) fed to healthy adult cats. American Society of Animal Science Annual Meeting; Louisville, KY. Poster Presentation. *J. Anim. Sci.* 99:S3, 336.

Kilburn, L., M.L. Jolly-Breithaupt, D. Balk, and C.G. Aldrich. 2021. Evaluation of graded levels of grain distillers dried yeast (GDDY) on apparent nutrient digestibility and stool quality in healthy adult dogs. American Society of Animal Science Annual Meeting; Louisville, KY. Oral Presentation. *J. Anim. Sci.* 99:S3, 59.

Borcherding, D. C., T. Atherly, A. Bourgois-Mochel, M. R. Serao, **L. Kilburn**, Y. M. Ambrosini, B. Agulla Perez, V. Gabriel, C.A. Iennarella-Servantez, A. Jergens, J. P. Mochel, and K. Allenspach. 2020. Polyphenols reverse the pathologic effects of palmitic acid and high fat diet in canine enteroids. Digestive Disease Week; Virtual. *Gastro.* 158:S-486.

Kilburn, L.R and M.C. Rossoni Serao. 2019. Digestibility, fecal characteristics, and blood parameters of adult dogs fed high fat diets. American Society of Animal Science Annual Meeting; Austin, TX. Oral Presentation. *J. Anim. Sci.* 97:S3, 61.

Borcherding, D. C., Y. M. Ambrosini, T. Atherly, A. Bourgois-Mochel, M. R. Serao, **L. Kilburn**, A. Jergens, J. P. Mochel, and K. Allenspach. 2019. High fat ketogenic diet

decreases serum lipid metabolites in healthy dogs. Digestive Disease Week; San Diego, CA. Gastro. 156:S-94.

Kilburn, L.R., A. Carlson, and M.C. Rossoni Serao. 2019. Evaluating digestibility and fecal characteristics of dogs fed diets containing cricket powder. Petfood Forum; Kansas City, MO. Poster Presentation.

Kilburn, L.R. and M.C. Rossoni Serao. 2019. Digestibility, fecal characteristics, and blood parameters of adult dogs fed high fat diets. Petfood Forum; Kansas City, MO. Oral Presentation.

Frame, C.A., **L.R. Kilburn**, E. M. Johnson, and M.C. Rossoni Serao. 2019. Can dietary oxidized protein induce oxidative stress in pigs? American Society of Animal Science Midwest Meeting; Omaha, NE. J. Anim. Sci. 97:S2, 181.

Kilburn, L.R. and M.C. Rossoni Serao. 2019. Digestibility, fecal characteristics, and blood parameters of adult dogs fed high fat diets. American Society of Animal Science Midwest Meeting; Omaha, NE. Oral Presentation. J. Anim. Sci. 97:S2, 94-95.

Invited Presentations

May 2022

The use of distillers dried grain variations in pet foods. 26th Distillers Grains Symposium. Omaha, NE.

Continuing Education

Global Animal Nutrition Summit – August 2020

ASAS-CSAS Annual Meeting – July 2020

Petfood Forum – April 2018

Petfood Forum – April 2017

Training Workshops

Pet Food Formulation for Commercial Production

January 2021 – Kansas State University

Concept 5 formulation software

Diet formulation for dogs and cats

CITI Program

January 2020 – Kansas State University

Working with the IACUC

Working with Dogs in Research Settings

Working with Cats in Research Settings

Responsible Conduct of Research

The Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching

Better Process Control School

November 2017 – Iowa State University

Certified as a supervisor of thermal processing systems, acidification and container closure evaluation programs for low-acid and acidified foods in closed containers

FSPCA Preventive Controls for Animal Food Training

August 2017 – Iowa State University

Preventative controls qualified individual

Professional Affiliations

April 2022 – Current

Institute of Food Technologists (IFT)

January 2020 – Current

Grain Science Graduate Student Organization (GSGSO)

Kansas State University

Social Chair

August 2017 – Current

American Society of Animal Science (ASAS)

August 2017 – December 2019

Association of Graduate Animal Scientists (AGAS)

Iowa State University
