United States Department of Agriculture
National Institute of Food and Agriculture

Federal Excess Personal Property

By: Jesse Smith

University of Kentucky

What is Federal Excess Personal Property?

- Property is on loan from any federal government branch
- Property is not owned by the University of Kentucky

How are we eligible to participate?

- We are a land grant university
- We are a member of the National Institute of Food and Agriculture
- Items are used for research and extension only

Responsibilities

- Yearly inventory of FEPP items
- Care for and maintain property
- ONLY use for research and extension
- Contact coordinator BEFORE items are transferred to another user
- Proper disposal
  - Contact coordinator
  - Submit paperwork to send thru GSAXcess

5890 SERIES II
SONY

Research Highlights Obtained with Hewlett Packard GC/MS (13 refereed Journal Publications & 2 U.S. Patents Issued)

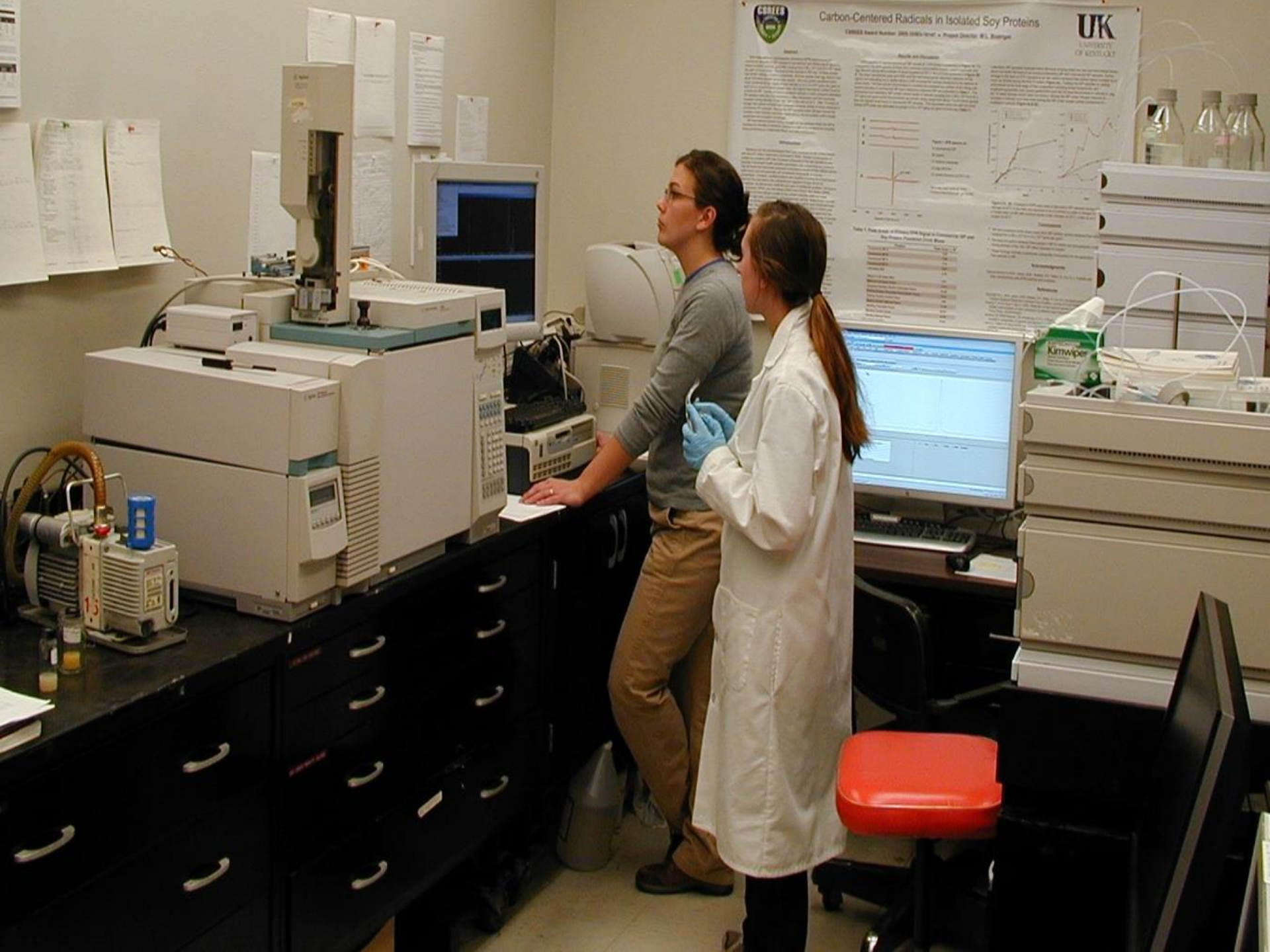
1999 – Discovered that Methanethiol and Dimethyl Trisulfide are Key Odorant from Hydrated Soy Proteins.

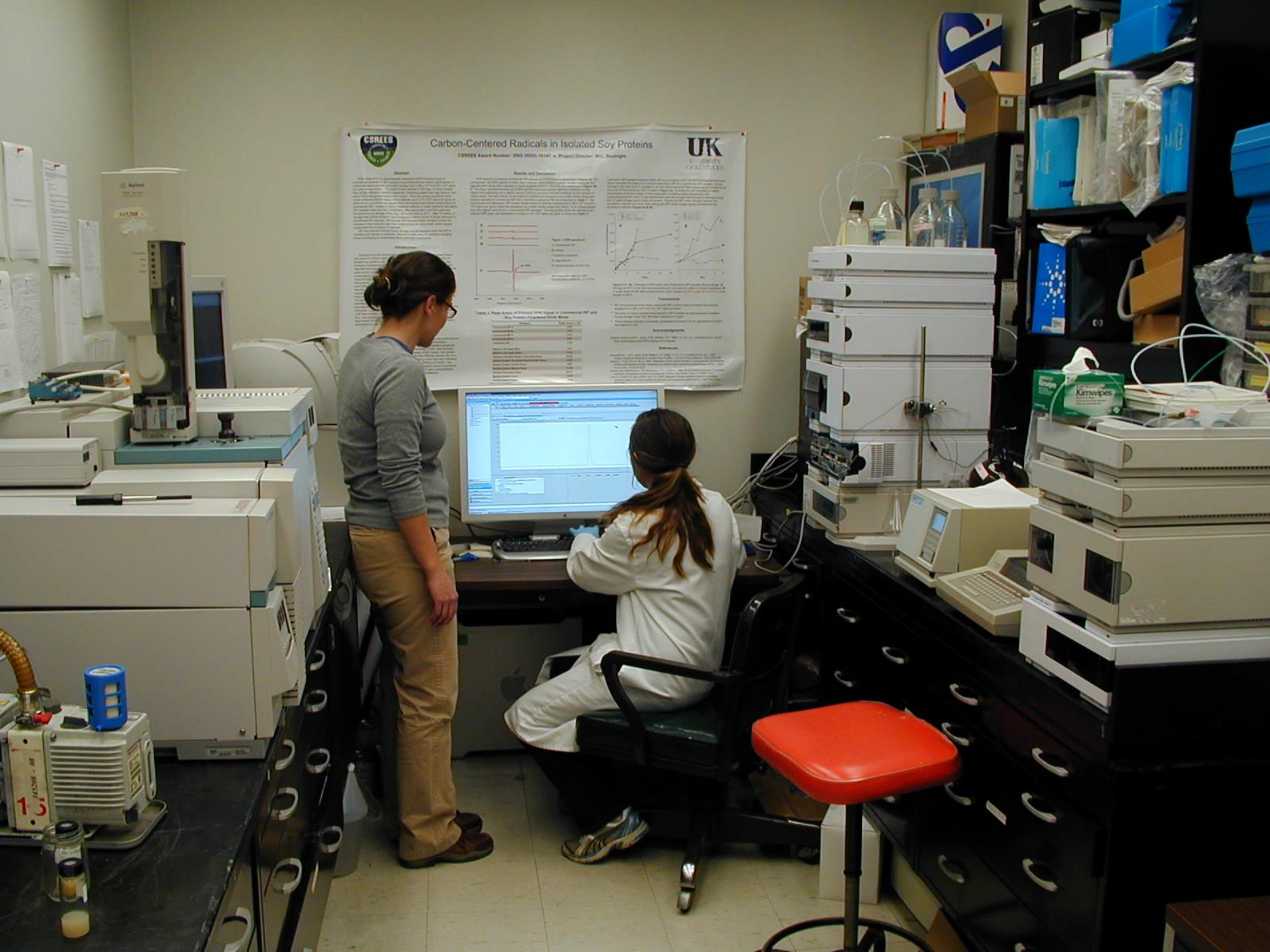
2004 – Determined post-processing mechanisms for formation of methanethiol and hexanal in soy protein.

2006 – Developed a commercially practical process for Soy Proteins with improved flavor (low methanethiol).

2006 – Filed U.S. Patent Application for Soy Proteins with Reduced Levels of Methanethiol and Improved Flavor

2008 – First to Report the Type and Quantity of Metasable Radicals in Powdered Soy Protein


Carbon-Centered Radicals in Isolated Soy Proteins
UK
Kimwipes


Carbon-Centered Radicals in Isolated Soy Proteins
UK
Kimwipes

USDA National Research Initiative (NRI) Competitive Grants Program Projects Completed by the University of Kentucky Food Chemistry Lab
Directly Linked to FEPP Instruments/Equipment

- Title: Factors Contributing to Association of 2-Pentyl Pyridine with Soy Proteins
  Sponsor: USDA NRI-CGP #KY9701687
  Years: September 1997 through September 2000 Amount: $135,000

- Title: Residual Soybean Sulfur Metabolism in Isolated Soy Protein: Sulfate to Cysteine
  Sponsor: USDA NRI-CGP # KY0-05018
  Years: September 2003 through August 2005 Amount: $118,000

- Title: Hexanal Synthesis in Isolated Soy Proteins
  Sponsor: USDA NRI-CGP #2005-35503-16147
  Years: September 2005 through August 2007 Amount: $198,088

- Title: Formation & Reactivity of Carbon-Centered Radicals in Isolated Soy Proteins
  Sponsor: USDA NRI-CGP #2009-35503-05190
  Years: December 2008 through December 2012 Amount: $424,884

Refereed Publications Directly Linked to FEPP Instruments/Equipment Obtained After 2008 (University of Kentucky Food Chemistry Lab)

Lei, Q., W.L. Boatright, 2008 Lipoxygenase Independent Hexanal Formation in Isolated Soy Proteins Induced by Reducing Agents, Journal of Food Science, 73(6):C464-468.

Boatright W.L., Q. Lei and M.S. Jahan, 2009. Effect of Storage Conditions on Carbon-Centered Radicals in Soy Protein Products, Journal of Agricultural and Food Chemistry, 57(17):7969-7973.

Lei Q., C.M. Liebold, W.L. Boatright and M.S. Jahan, 2010. Distribution of Stable Free Radicals among Amino Acids of Isolated Soy Proteins, Journal of Food Science, 75(7):C633-640.

Liebold CM, Q. Lei, W.L. Boatright and M.S. Jahan, 2011. Metastable Radicals & Intrinsic Chemiluminescence from Soy Proteins, Journal of Food Science, 76(7):C1101-1107.

Boatright W.L., Q. Lei and M.S. Jahan, 2012. Effect of Moisture, Lipids and Select Amino Acid Blocking Agents on the Formation and Stability of Metastable Radicals in Powdered Soy Proteins, Journal of Food Science, 77(6):C620-626.

Boatright WL and MS Jahan, 2013. Effect of Sequestering Intrinsic Iron on the Electron Paramagnetic Resonance Signals in Powdered Soy Proteins, Journal of Food Science, 78(5):C660-666.

Boatright WL, 2013. Hydrogen Peroxide Generation from Hydrated Protein Drink Mixes, Journal of Food Science, 78(11):C1651-1658.

Abdi D, MS Jahan, WL Boatright, BM Walters and Q Lei, 2014. Thermally-Stimulated Luminescence in Powdered Soy Proteins, Journal of Food Science, 79(1):C25-31.

Refereed Publications Directly Linked to FEPP Instruments/Equipment Obtained After 2012 (University of Kentucky Animal Science Labs)

Egert, A. M., D. H. Kim, F. N. Schrick, D. L. Harmon, and J. L. Klotz. 2014. Dietary exposure to ergot alkaloids decreases contractility of bovine mesenteric vasculature. J. Anim. Sci. (In Press 12-20-13).

Pesqueira, A., D. L. Harmon, A. F. Branco, and J. L. Klotz. 2014. Bovine lateral saphenous veins exposed to ergopeptine alkaloids do not relax. J. Anim. Sci. 92:1213-1218.

Kim, D. H., K. M. Mizinga, J. C. Kube, K. G. Friesen, K. R. McLeod, and D. L. Harmon. 2014. Influence of monensin and lauric acid distillate or palm oil on in vitro fermentation kinetics and metabolites produced using forage and high concentrate substrates. Anim. Feed Sci. Technol. 189:19-29. DOI information: 10.1016/j.anifeedsci.2013.12.010

Kim, D.H., K. R. McLeod, J. L. Klotz, A. F. Koontz, A. P. Foote, and D. L. Harmon. 2013. Evaluation of a rapid determination of heat production and respiratory quotient in Holstein steers using the washed rumen technique. J. Anim. Sci. 91:4267-4276.

Foote, A. P., N. B. Kristensen, J. L. Klotz, D. H. Kim, A. F. Koontz, K. R. McLeod, L. P. Bush, F. N. Schrick, and D. L. Harmon. 2013. Ergot alkaloids from endophyte infected tall fescue decrease reticuloruminal epithelial blood flow and volatile fatty acid absorption from the washed reticulorumen. J. Anim. Sci. 91:5366-5378.

Cappellozza, B. I., D. W. Bohnert, C. S. Schaue, S. J. Falck, E. S. Vanzant, D. L. Harmon, and R. F. Cooke. 2013. Daily and alternate day supplementation of urea or soybean meal to ruminants consuming low quality cool season forage: ii. Effects on ruminal fermentation. Livestock Science 155:214-222.

Holder, Vaughn B., Samer W. El Kadi, Juan M. Tricarico, Eric S. Vanzant, Kyle R. McLeod and David L. Harmon. 2013. The effects of crude protein concentration and slow release urea on nitrogen metabolism in Holstein steers. Arch. Anim. Nutr. 67:93-103.

Koontz, A.F., D.H. Kim, A.P. Foote, L.P. Bush, J. L. Klotz, K.R. McLeod and D.L. Harmon. 2013. Alteration of fasting heat production during fescue toxicosis in Holstein steers. J. Anim. Sci. 91:3881-3888.

Conway, C., M. R. Godoy, K.R. McLeod, and D. L. Harmon. 2013. The effects of graded arginine levels on nitrogen metabolism in the lean adult dog. J. Anim. Sci. Adv. 3:1-12.

Martin, S. K., C.E. Conway, E. S. Vanzant, D. L. Harmon and K. R. McLeod. 2012. Influence of dietary histidine on circulating concentration and urinary excretion of histamine in domestic felines. Intern. J. Appl. Res. Vet. Med. 10:289-299.

Martin, S. K., C. E. Conway, E. S. Vanzant, D. L. Harmon and K. R. McLeod. 2012. Dietary effects of magnesium on histamine metabolism and urine acidity in domestic felines. Amer. J. Anim. Vet. Sci. 7:186-193.

Taylor Edwards, C. C., D. G. Burrin, N. B. Kristensen, J. J. Holst, K. R. McLeod, and D. L. Harmon. 2012. Glucagon like peptide 2 (GLP 2) increases net amino acid utilization by the portal drained viscera of ruminating calves. Animal 6:1985-1997 doi:10.1017/S175173111200095X.

Foote, A. P., D. L. Harmon, K. R. Brown, J. R. Strickland, K. R. McLeod, L. P. Bush, and J. L. Klotz. 2012. Constriction of bovine vasculature caused by endophyte infected tall fescue seed extract is similar to pure ergovaline. J. Anim. Sci. 90:1603-1609.

Koontz, A.F., L.P. Bush, J. L. Klotz, K.R. McLeod, F.N. Schrick, and D.L. Harmon. 2012. Evaluation of a ruminally dosed tall fescue seed extract as a model for fescue toxicosis in steers. J. Anim. Sci. 90:914-921.

Bohaty, R.E., M. R. C. de Godoy, K.R. McLeod, and D. L. Harmon. 2012. The effects of added sulfur amino acids, threonine, and an ideal amino acid ratio on nitrogen metabolism in mature, overweight dogs. Arch. Anim. Nutr. 66:39-49.

HONDA
GX

LANDOLL

UK
PLANT PATHOLOGY

Questions