

Pedro E. Urriola
Curriculum Vitae

335J Anim. Sci./Vet. Med.
1988 Fitch Ave
St. Paul, MN 55108
+1(612)624 1793; urrio001@umn.edu

Current Position

Research Associate, Department of Animal Sciences. University of Minnesota, St. Paul

- Develop and lead research projects that improve nutritional strategies in pork
- Coordinate and supervise research project for graduate students
- Participate in the design, implementation, and evaluation of research studies
- Collect data and develop data collection procedures; train and supervise personnel involved in data collection
- Design, organize, and implement project database; analyze data, collaborate on reports and publication of findings.
- Teaching of invited lectures related to research area

Education

PhD. Swine Nutrition, University of Illinois at Urbana-Champaign.

- Dissertation title: “Digestibility of dietary fiber in distillers co-products by growing pigs”
Advisor: Hans H. Stein
- Relevant courses: Regulation of Metabolism. Protein and Energy Nutrition. Nutritional Biochemistry. Microbial Biochemistry
- Completed May 2010

M.S. in Swine Nutrition, University of Minnesota, St. Paul

- Thesis title: “Amino Acid Digestibility in Distillers Dried Grains with Solubles *in vivo* and *in vitro*” Advisor: Gerald C. Shurson
- Completed October 2006.
- Relevant courses: Pork Production. Swine Nutrition. Statistical Methods. Design of Experiments

Veterinary Surgeon, Universidad Central de Venezuela, Maracay-Venezuela

Research and Business Experience

Research and Development Manager. Cargill Animal Nutrition. From February 2010 to April 2012

Supervisor: Brooke Humphrey (see references for contact information)

- Develop and coordinate all research and development of technologies related to Pork.
 - Find gaps in scientific knowledge on Pork Innovations and Solutions to Customers
 - Provide research needs and experimental design
 - Summarize research data and interpretation of results

- Distribute relevant research findings to members of technology team and application into the business
- Assist on generation and maintenance of information on nutrient requirements of animals, nutrient concentration in ingredients, proprietary animal growth models, and calibrations of Near Infrared Spectroscopy (NIR)
- Support technology deployment to business units
- Participate in training of technical and consulting team members
- Support marketing team and technology deployment managers with information on current and new technologies applied in the Pork Business.
- Collaborate with the Research and Development Managers from other species such as Aquaculture, Poultry, Dairy, and Companion Animals.

Research Assistant: University of Illinois at Urbana-Champaign. From January 2007 to January 2010

- Prepare scientific manuscripts
- Present research results for scientific meetings
- Write research proposals and reports
- Coordinate laboratory operation and supply. Keep track of samples submissions to other laboratories.
- Assist in surgical procedures (e. g., ileal and cecal cannula, jugular catheters) and provide animal care before and after surgical procedures.
- Supervise hourly students, laboratory safety procedures, and standard operating procedures
- Operate and provide maintenance to freeze drier, N-analyzer, bomb calorimeter, and soxtec extraction unit.
- Evaluate and apply analytical procedures for diets, ingredients, ileal digesta, feces, etc.

Research Intern, Pork: Cargill Animal Nutrition River, MN. From October 2006 to January 2007

- Coordinate ileal cannulation procedure in swine research farm
- Measure amino acid digestibility in distillers dried grain with solubles, canola meal, and soybean meals
- Summarize and write reports of experiments conducted at CAN
- Write and update Standard Operating Procedures
- Conduct literature review on selected topics of interest to CAN

Research Assistant: University of Minnesota, St. Paul. From fall 2004 to fall 2006

- Write research proposals and reports
- Work with multidisciplinary group (e.g. food scientists, statisticians, veterinarians) at University of Minnesota and South Dakota State University
- Coordinate laboratory operation and supply. Keep track of samples submissions to other laboratories.

Veterinary Technical Consultant: Empresa de Diagnóstico Veterinario, Venezuela. From August 2003 to August 2004

- Develop and deliver techniques in swine reproduction to more than 20 customers
- Develop, implement, and follow swine health program for customers
- Coordinate and implement business strategies to capture new customers

Veterinary Internship. Semen Cardona. January to March, 2003

Assistant to Manager Agropecuaria Los Cuatro, CA. Valencia Venezuela.

Publications

- Urriola, P. E., S. K. Cervantes-Pahm, and H. H. Stein. 2013. Fiber in Swine Nutrition. In: L. L. Chiba, editor, Sustainable Swine Nutrition. Wiley-Blackwell. Oxford, UK.
- Urriola, P. E., and H. H. Stein. 2010. Comparative digestibility of energy and nutrients in fibrous feed ingredients fed to Meishan and Yorkshire pigs. *J. Anim. Sci.* 90:802-812.
- Urriola, P. E., and H. H. Stein. 2010. Effects of distillers dried grains with solubles on amino acids, energy, and fiber digestibility and on hindgut fermentation of dietary fiber in corn soybean meal diet fed to growing pigs. *J. Anim. Sci.* 88:1454-1462.
- Urriola, P. E., C. Pedersen, H. H. Stein, and G. C. Shurson. 2009. Amino acid digestibility of distillers dried grains with solubles, produced from sorghum, a sorghum-corn blend, and corn fed to growing pigs. *J. Anim. Sci.* 87:2574-2580.
- Urriola, P. E., G. C. Shurson, and H. H. Stein. 2009. Digestibility of dietary fiber in distillers co-products fed to growing pigs. *J. Anim. Sci.* 88:2373-2381.

Abstracts

- Urriola, P. E., and H. H. Stein. 2010. Evaluation of *in vitro* procedures to measure digestibility of fiber in distillers dried grains with soluble. *J. Anim. Sci.* 88(E-Suppl-2) (Abstr. T-193).
- Urriola, P. E., and H. H. Stein. 2010. Comparative digestibility of energy and nutrients in fibrous feed ingredients fed to Meishan and Yorkshire pigs. *J. Anim. Sci.* 88:(E-Suppl 3) (Abstr. T-193).
- Urriola, P. E., and H. H. Stein. 2009. Effects of distillers dried grains with solubles on the digestibility of energy, DM, AA, and fiber, and on intestinal transit time in a corn-soybean meal diet fed to growing pigs. *J. Anim. Sci.* 87:(Suppl 1) (Abstr. 104).
- Reis De Souza, T. C., G. Mariscal-Landin, P. E. Urriola, and H. H. Stein. 2009. Effects of protein and sulfur AA concentration in diets fed to weanling pigs on growth performance and diarrhea incidence. *J. Anim. Sci.* 87:(Suppl. 1) (Abstr. T185).
- Urriola, P. E., G. C. Shurson, and H. H. Stein. 2009. Digestibility of dietary fiber in distillers co-products fed to growing pigs. *J. Anim. Sci.* 87:(Suppl. 2) (Abstr. 145).
- Urriola, P. E., M. H. Whitney, N. S. Muley, G. C. Shurson. 2006. Evaluation of regional differences in nutrient composition and physical characteristics among six U.S. soybean meal sources. *J. Anim. Sci.* 84:(Suppl. 2) (Abstr. 72).
- Utrera, V., C. Antillano, J. P. Cano, R. Carrillo, S. Del Castillo, D. Fuentes, C. Heredia, M. Pieters, L. Rojas, J. Villalobos, P. Urriola, E. Terán. 2004. The use of serum profiles to estimate the age of vaccination against *Mycoplasma hyopneumoniae*. Proceedings of the 18th Congress of the International Pig Veterinary Society. Hamburg, Germany.

Presentations

- Urriola, P. E., and H. H. Stein. 2011. Digestibility of dietary fiber in growing pigs. 72th Minnesota Nutrition Conference. Owatonna, MN.
Invited Speaker
- Urriola, P. E., and H. H. Stein. 2011. Digestibility of dietary fiber in growing pigs. *J. Anim. Sci.* 89(E-Suppl. 2):129 (Abstr.)
ASAS Midwestern Section. Animal Science Young Scholar

- Urriola, P. E., D. Hoehler, C. Pedersen, H. H. Stein, L. J. Johnson, and G. C. Shurson. 2007. Prediction of in vivo amino acid digestibility in dried distillers grains with solubles (DDGS) from crude protein, optical density and fluorescence. *J. Anim. Sci.* 85:(Suppl. 2)(Abstr. 93).
1st Place in Master Student Competition at ASAS Midwest Competition.
- Urriola, P. E., H. H. Stein, D. Hoehler, C. Pedersen, and G. C. Shurson. 2006. Prediction of amino acid digestibility in distillers dried grains with solubles by color, acid insoluble crude protein, soluble protein, and fluorescence. 67th Minnesota Nutrition Conference University of Minnesota. Research Update. St. Paul, MN.
- Urriola, P. E., M. Pieters, L. Ruzs, G. Quevedo, I. Ramos, and C. Rodriguez-Cariño. 2001. Description of osteogenic osteosarcoma in 1 year old dalmatian. Presented at: V Congreso Nacional de Ciencias Veterinarias. Maracay-Venezuela Sep. 2001.

Experiments conducted

University of Minnesota:

- Evaluation of regional differences in nutrient composition and physical characteristics among six U.S. soybean meal sources. Fall 2004
- Determination of Amino Acid Digestibility of Sorghum and a Corn-Sorghum Blend of Distiller's Dried Grains with Solubles (DDGS) and the Relationship with DDGS Color Scores for Swine. Summer 2005
- Effect of Increased DDGS Usage in Grow-Finish Pig Diets on Growth Performance, Carcass Quality, and Fat and Muscle Quality. Spring 2006

University of Illinois:

- Effects of distillers dried grains with solubles on digestibility of AA, fiber, and energy, fermentation of fiber, and intestinal transit time of a corn soybean meal diet fed to growing pigs. University of Illinois. Fall 2007
- Digestibility of dietary fiber from distillers' co-products fed to growing pigs. University of Illinois. Spring 2008
- Effect of pig genotype on apparent ileal digestibility of soluble and insoluble dietary fiber in growing pigs. University of Illinois. Fall 2008.
- Effects of different levels and types of xylanases on digestibility of nutrients of growing pigs fed corn distillers dried grains with solubles. University of Illinois. Spring 2007
- Effects of different enzymes on digestibility of nutrients of growing pigs fed distillers dried grains with solubles. University of Illinois. Spring 2007.

Grants Written and Awarded

- Effect of Increased DDGS Usage in Grow-Finish Pig Diets on Growth Performance, Carcass Quality, and Fat and Muscle Quality. Granted by the Minnesota Corn Growers Association (05-09EU). Co-author with. G. C. Shurson, H. H. Stein, C. Pedersen, and A. Pahlm
- Determination of Amino Acid Digestibility of Sorghum and a Corn-Sorghum Blend of Distiller's Dried Grains with Solubles (DDGS) and the Relationship with DDGS Color Scores for Swine. Granted by the US. Department of Agriculture. Co-author with. G. C. Shurson, H. H. Stein, C. Pedersen, and A. Pahlm

- Digestibility of dietary fiber from distillers' co-products fed to growing pigs. P. I. Hans H. Stein

Volunteer Activities

Reviewer for Journals: Journal of Animal Sciences, Revista Colombiana de Ciencias Pecuarias, and Biological Trace Element Research

May 2005 Ag Awareness for elementary students. University of Minnesota, St Paul, MN

April 2005 Midwest Regional Academic Quadrathlon. University of Minnesota St Paul

May 2006 Ag Awareness for elementary students. University of Minnesota, St Paul, MN

Skills

Languages: Spanish, English, basic German

Technical skills: Surgical insertion of T-cannula in pigs (duodenum, ileum, and cecum), catheterization of jugular vein in pigs

Awards

Cargill Animal Nutrition Technology Circle Awards: Development of NIR calibration for fatty meals and antinutritional factors in rapeseed meal

American Society of Animal Sciences. 2011. Young Scholar.

American Society of Animal Sciences. 2007. 1st Place Master Student Oral Presentation Competition

MEMBERSHIPS AND PROFESSIONAL SOCIETIES

Gamma Sigma Delta. Illinois Chapter, since 2008

American Society of Animal Sciences, since 2005

International Pig Veterinarian Society, since 2003

FAMILY

Wife:

Maria G. Pieters, DVM, PhD

Current position: Post-doctoral Research Associate, Department of Infectious Diseases, College of Veterinary Medicine, University of Minnesota.

Research interest: Swine Infectious Diseases.

Daughter:

Abigail P. Urriola

References

Hans H. Stein
Department of Animal Sciences University of Illinois
204 Animal Sciences Laboratory
1207 West Gregory Drive
Urbana, IL 61801
Telephone: +1(217)333 0013
Email: hstein@uiuc.edu
<http://labs.ansci.uiuc.edu/stein/Stein.cfm>
Relationship: Academic Advisor of PhD program

Gerald C. Shurson
Department of Animal Science University of Minnesota
335D An Sci/Vet Med
1988 Fitch Avenue
St. Paul, MN 55108-6012
Telephone: +1(612)624 2764
Email: shurs001@umn.edu
Relationship: Academic Advisor of MS program **and current supervisor**

Brooke D. Humphrey
Cargill Animal Nutrition
Strategic Marketing and Technology, R&D Director Monogastric
10383 165th Ave NW
Elk River, MN 55330
Phone: +1(763)241 3363
Fax: +1(763)241 3399
Relationship: Latest supervisor