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## TIMOTHY JON SAFRANSKI

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### **ACADEMIC APPOINTMENT:**

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	<u>Title</u>	<u>Date</u>
University of Missouri	Associate Professor	2002-present
University of Missouri	Assistant Professor	1996-2002

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### **UNIVERSITY OF MISSOURI RESPONSIBILITIES:**

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Provide instruction and program leadership in swine genetics and reproductive management for the state of Missouri through coordinated extension and research programming. Teach a Capstone, Writing Intensive swine production course.

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### **EDUCATION:**

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Post-doctoral Research Animal Scientist, USDA Roman L. Hruska Meat Animal Research Center, Clay Center, NE, 1994-1995.  
Ph.D., University of Missouri-Columbia, 1994  
Dissertation: Potential methods for improvement of transgenic livestock: a mouse model.  
M.S., University of Missouri-Columbia, 1990.  
Thesis: Expression of genetic potential for age at puberty in gilts.  
B.S., Oregon State University, 1987. Major: Animal Science

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### **AWARDS:**

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MU Campus Writing Program's inaugural Writing Intensive Teaching Excellence Award, 2012  
J.W. Burch Agricultural Extension Award for outstanding statewide leadership, 2009.  
Chancellor's Excellence Award for Best New Advisor (Mizzou Swine Club), 2009.  
National Pork Board Swine Innovation Award-Education, 2007.  
National Pork Producers Council Swine Industry Award for Innovation in Education, 2001  
Provost Award for Creative Extension Programming by New Faculty, 2000  
MU Block and Bridle Club, Honorary Member, 1999

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### **AFFILIATIONS:**

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American Society of Animal Science, member, 1987 - present.  
Missouri Pork (Producers) Association, member 1996 - present  
American Association of Swine Practitioners, affiliate member, 1999-2000.  
American Association of Swine Veterinarians, affiliate member, 2001-present.

American Livestock Conservancy/The Livestock Conservancy, member, 2010-present

**STATE AND NATIONAL SERVICE (since 2002):**

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American Society of Animal Science:

- Midwest Academic Quadrathlon Coordinator, 2012-present
- Editorial Board, member 2005-2008
- Extension Education Committee, 2005-2008, Chair 2008
- Field Editor, Swine Production FASS Science Summaries, 2001-2004
- Ad hoc reviewer, 1994-present
- Judge for Midwest Regional Ph.D. Competition Paper, 2001, 2002

National Pork Producers Council/National Pork Board

- Animal Science Committee, 2007-present.
- Sow Housing Education Working Group, 2010-present
- Extension Swine Educators Advisory Committee, member, 1998-present;  
Executive Committee 2007-2013  
Chair, 2012-2013.
- Skill Sets Task Force, 2004
- Sow Housing Alternatives: Factors, Economics and Resources workshop, 2003

US Pork Center of Excellence

- Reproduction Domain Advisory Group

Missouri Pork Association (Missouri Pork Producers Association)

- Advisory Board Member, 1997-present

Livestock Conservancy (American Livestock Breeds Conservancy). Board of Directors, 2010-present

Agricultural Leadership Of Tomorrow Foundation, Board of Directors, 2002-2005

American Kunekune Breeders Association, Board of Advisors, 2012-present

**RELEVANT EMPLOYMENT:**

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January 1996-present, Assistant/Associate Professor and Extension Swine Breeding Specialist, University of Missouri-Columbia. Serve as the state-wide resource person for 26 Regional Livestock Specialists as well as swine producers, veterinarians and other industry support personnel in the areas of genetics and reproductive management. Coordinate educational programs for Regional Specialists, producers and industry support personnel. Direct a research program in applied reproductive management. Specific focus areas include enhancing reproductive efficiency of the gilt, management of seasonality of reproduction, piglet survival to weaning and semen/sperm development/evaluation. Teach a senior level, capstone, writing intensive swine production course.

June, 1994-December, 1995, Postdoctoral Research Associate, Roman L. Hruska U.S. Meat Animal Research Center, Clay Center, Nebraska. Experimental and statistical evaluation of a whole-herd computer simulation model of pork production. The model's ability to simulate all aspects of pork production was being tested.

1988 - 1994, Graduate Research Assistant, Department of Animal Sciences, University of Missouri-Columbia. Designed and conducted experiments with swine, sheep and mice. Responsible for managing mouse colonies, supervising undergraduate workers and ordering laboratory supplies. Proficient in experimental design and analysis, blood collection (swine, mice, sheep, cattle), radioimmunoassay, DNA isolation, Southern analysis, swine embryo collection and embryo freezing.

### **SELECTED INVITED TALKS/WORKSHOPS**

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"Pigs have sex all over the world; or do they?" online to Epsilon Sigma Phi, 2014.

Diagnosis, Treatment and Prevention of Infertility Workshop speaker on Hippos, Rhinos and Peccaries. 2014. Memphis, TN at meeting of the Association of Zoos and Aquariums.

A North American perspective on tools to manage reproductive efficiency on the sow farm. 40-150 minute presentations at Wagga Wagga, Bendigo, and Roseworthy Australia, 2014.

Gilt Development. Corowa, Australia, 2014.

Managing to increase piglet survival. Corowa, Australia, 2014.

Sow reproductive efficiency in the USA. Presented in Roseworthy, Australia and recorded for Australian swine industry (available at <http://www.piglink.com.au/>), 2014

Introduction to reproduction and artificial insemination. Presented at Growing Farmers Workshop: Heritage Pigs. March 23-24 2014. Pocantico Hills, NY.

Considering reproductive management. Pocantico Hills, NY, 2014

Heritage populations and genetics. Pocantico Hills, NY, 2014.

Importance of AI for Heritage Breeds and Introduction to anatomy/physiology and semen collection. Presented at Boar Semen Collection Workshop, New Bolton, PA, 2013

Boar Stud management Overview, Princeton, MO, 2013

Solving the Heat Stress Problem. 2013. Part of SowBridge Breeding Herd Education Series, April, 2013.

Pasture Raised pork A-Z. 2013. 3hr workshop in Kissimmee, FL. 40 attendees.

Checking Heat, Managing the Heat Cycle, and Breeding the Pig, Plain City, OH

Timed AI in Swine, Columbia, MO, 2013

Gilt Development: Management Decisions and How They Impact Synchronization of Estrus and Fertility, Columbia, MO and St. Louis, MO, 2013

The Weaned Sow: Management Decisions That Impact Return to Estrus, Columbia and St. Louis, MO, 2013

Managing Gilt Development Units (GDUs). Part of SowBridge Breeding Herd Education Series. 2012

Swine Repro Management Workshop, Corvallis, OR, 2012

Sow Housing Choices, Columbia, MO, 2012

Swine Gestation Stall Symposium panelist, University of Missouri Animal Welfare Club, 2012

Heritage Breed Hog Semen Collection, Evaluation, Processing, and Preservation workshop , Raleigh, NC, 2012

Immunocastration, Sioux Falls, SD, 2011

Baby Pig Survival- Making every Pig Count, Sedalia, Nevada, Lamar, MO, 2011

Swine Artificial Insemination School. 2010. Moses Lake, WA.

Timing of AI. Part of SowBridge Breeding Herd Education Series. 2010

Get Your Gilts in Line: Management and Methods to Synchronize Estrus. 2009. Presented at the Carthage Veterinary Service, Ltd. Annual Swine Production Conference.

Fall Artificial Insemination Seminar. 2009. 5hrs. Mt. Angel, OR.

Induction of Farrowing, presented as part of SowBridge Breeding Herd Education Series. 2009.

Farrowing scenarios: Practical problems exercise, Milford, UT, 2008

Making sow housing options work, Columbia, MO, 2008

Sow housing regulations, Columbia, MO, 2008

Swine Genetics, Albany, OR, 2008

Good Production Practices: Observations and Examples, Medellin, Cali, and Pareida, Colombia, 2008

Video Tour of Boar Studs, St. Louis, MO, 2008

Panelist for the Rare Breeds Swine Initiative meeting of the American Livestock Breeds Conservancy, Columbia, MO, 2008

Sow Productivity. Nevada, Marshall, Mexico, MO, 2008

Gilt development. 2008. Presented at the National University of Colombia, Medellin.

Practical approaches to increasing sow output. 2008. Presented at the University of Illinois Advanced Swine Production Technologies Conference, Champaign, IL.

Overview of reproductive biology of the male and female pig. 2008. Presented as part of the University of Illinois' Advanced Swine Production Technologies Conference, Champaign, IL.

Managing to Improve P1 Productivity. August, 2008. Presented at annual meeting of Utah Pork Producers, Milford, UT.

Genetic aspects of sow longevity. 2008. Presented at the NCERA-57 minisymposium, Sheridan, IN

30 pigs/sow/year: yeah, right. 2008. Presented at the Annual Meeting of the Utah Pork Producers. Lehi, UT.

Managing Replacement Gilts and Controlling Estrus. 2008. Presented at the Annual Meeting of the Utah Pork Producers. Lehi, UT.

Week long series of farm visits and seminars for Tecniagro in Colombia, 2007.

What makes my Class Successful? San Antonio, TX, 2007

Genetic selection of boars. 2007. Presented at the International Conference on Boar Semen Preservation. Ontario, Canada.

Managing rising feed, space and labor costs of your breeding herd. 2007. Presented at World Pork Expo. Des Moines, IA.

Sow Productivity, Harrisonville, Marshall and Mexico, MO, 2007

30 Pigs per Sow per Year: Key Steps to Get There, Butler, Marshall and Mexico, MO, 2007

Swine Breeding, Gestation & Farrowing Management, Columbia, MO, 2007

Estrus induction and maintenance of reproductive cycles in gilts with PG-600 and boar exposure. 2007. Presented at Intervet Swine emerging disease and reproductive symposia Myrtle Beach, SC and Branson, MO.

Swine AI Overview. 2006. Presented at 21<sup>st</sup> Technical Conference on Artificial Insemination and Reproduction of the National Association of Animal Breeders, Milwaukee, WI.

Alternativas para el reemplazo de pie de cria. Presented at Porciamericas, 2006, Medellin Colombia for over 250 producers.

Reproductive Management of Sows-Basics of Artificial Insemination, Owensville, KY, 2006

Induction and control of estrus, Waverly, IA and Sheldon, IA, 2006

Improving Reproductive Performance, Waverly, IA and Sheldon, IA, 2006

Reproductive management of swine, Holstein, IA, 2006

AI workshop, Mt. Angel, OR, 2006

Placental efficiency work at Mizzou, Truman State University, Kirksville, MO, 2006

Three day workshop on Integrating computerized records into swine farm consulting, Medellin, Colombia, 2006

The need for proper selection of production animals. 2005. Presented at national meeting of the American Society of Animal Science, Cincinnati, OH.

Three day follow-up workshop on semen collection, evaluation, processing and mating of the sow, Santo Domingo, The Dominican Republic, 2005

Management of replacement gilts. 2005. Presented at P.O.R.K. Academy, Des Moines, IA.

Controlling culling and sow losses. 2005. Presented at Illinois Advanced Swine Reproduction Conference in Spanish, Sycamore, IL.

Selection and development of replacement gilts. 2005. Sycamore, IL.

History of A.I. in the U.S. 2005. Presented at Boar semen collection/processing workshop for small scale farms, Columbia, MO.

Post-weaning estrus, heat detection, insemination. 2005. Presented at Boar semen collection/processing workshop for small scale farms, Columbia, MO.

Breeding Management Workshop for Pork Producers, Mt. Angel, OR, 2005

Swine Production Update- Genetic and Breeding News, Kirksville, MO, 2005

Achieving 30 Pigs/Sow/Year, Columbia, Marshall, Kansas City and Middletown, MO, 2005

Hormones to Synchronize Estrus in Gilts, Columbia, MO, 2005

Induction and Control of Estrus, Dayton, OH; Clinton, NC; Lansing, MI; Marshall, MO; Cedar Rapids, IA, 2005

What is ovulation rate in commercial maternal lines and does the industry care?  
Presented at the Billy N. Day Symposium, March 16, 2004, as part of the Midwest ASAS meeting in Des Moines, IA.

Selection for placental efficiency in swine. 2004. Department of Animal Science Oregon State University, Corvallis, OR.

Oregon Reproductive Management Workshops, 2004. Three hour workshops offered in Canby and Medford, OR.

Three day workshop on semen collection, evaluation, processing and mating of the sow, Santo Domingo, The Dominican Republic, 2004

Reproduction Pays Off in Live-born pigs. Presented at Swine Reproduction for Spanish Speaking Employees, Springfield, IL, 2004

Estrous Detection, Springfield, IL, 2004

Using Reproductive Records, Springfield, IL, 2004

Germplasm Preservation; How Can Red Wattles Participate and Benefit? Columbia, MO at annual meeting of Red Wattle Pig Producers, 2004

Achieving 25 pigs/sow/year, Lake of the Ozarks, MO (regional), 2004

Swine AI- Practical Tips for Producers of Any Size, Kirksville, MO, 2004

Weaning Age and Management Strategies Critical to Achieving 30 pigs/sow/year. Columbia, MO, 2004

Doing in-house research and product/technique comparisons. 2004. Presented at Midwest Boar Stud Managers Conference II, St. Louis, MO.

AI Workshop Sedgwick County Zoo, Wichita, KS, 2003

The National Animal Germplasm Preservation Program and Hereford Hogs, presented at National Hereford Hog Record Association Annual Banquet and Meeting, Kirksville, MO, 2003

Basics of semen handling, heat detection, and insemination to achieve a 90% farrow rate. 2003. Presented at the Carthage Veterinary Service, Ltd. 13<sup>th</sup> Annual Swine Production Conference.

Estrous detection. Presented at Introduction to Swine Reproduction for Spanish Speaking Employees, Springfield, IL, 2003

Keeping and interpreting reproductive records, Springfield, IL, 2003

Farrowing induction and keeping baby piglets alive, Springfield, IL, 2003

Description of US pork production and the breeding herd. 2003. Presented at Producers Workshop, Chengdu, China.

Goals and targets for the breeding herd. 2003. Presented at Producers Workshop, Chengdu, China.

Managing replacement gilts for early puberty and efficient reproduction. 2003. Presented at Producers Workshop, Chengdu, China.

Establishing and maintaining pregnancies. 2003. Presented at Producers Workshop, Chengdu, China.

Comparison of U.S. and Chinese swine reproductive management: opportunities and challenges for the Chinese industry. 2003. Presented at a feed manufacturers workshop, Beijing, China.

Genetics, Breeding and Meat Quality. How do they Relate? 2003. Presented at the Oregon Pork Producers Council Educational Seminar, Albany, OR

Making Artificial Insemination Work for You Albany, OR, 2002

Selecting Boars and Gilts for Improved Performance Albany, OR, 2002

Sow Herd Management Conference organized and offered via satellite, 2002

MU Research Priorities, Industry Challenges and Research/Funding Coordination. 2002. Presented at the National Pork Board Fall Research Consortium, Des Moines, IA.

Reproductive Management of Sows. 2002. Presented at the Saratov State Agrarian University, Saratov, Russia.

Effects of Weaning Age and Lactation Management on Subsequent Reproduction. 2002. Presented at the Saratov State Agrarian University, Saratov, Russia.

Modern U.S. Swine Production. 2002. Presented at the Saratov State Agrarian University, Saratov, Russia.

*Tenure awarded in 2002*



Factors Influencing Detection of Estrus. 2001. Presented at the Illinois Swine Reproduction Seminar, Springfield, IL.

Farrowing Management. 2001. Presented at the Illinois Swine Reproduction Seminar, Springfield, IL.

Doing in-house research and comparison of products and techniques. Midwest Boar Stud Managers Conference, West Lafayette, IN, April 13-14, 2000. Proceedings published by Purdue University.

Como el comfort de la cerda afecta su desempeno (How sow comfort affects performance), Taller de Produccion Porcina Modulo I: Maternidad. Guadalajara, Mexico, October 19-20, 2000. Proceedings published by Elanco Animal Health.

Induccion del parto (Induction of parturition), Taller de Produccion Porcina Modulo I: Maternidad. Guadalajara, Mexico, October 19-20, 2000. Proceedings published by Elanco Animal Health.

Reproductive Technologies For The Next Millennium. July, 1999. Presented at AGROEXPO99, Seminario de actualizacion en porcicultura, Bogota, Colombia. Proceedings published by Asociacion Colombiana de Porcicultores.

Artificial insemination: opportunities and challenges. July, 1999. Presented at AGROEXPO99, Seminario de actualizacion en porcicultura, Bogota, Colombia. Proceedings published by Asociacion Colombiana de Porcicultores.

Artificial insemination for small farms. July, 1999. Presented at AGROEXPO99, Seminario de actualizacion en porcicultura, Bogota, Colombia. Proceedings published by Asociacion Colombiana de Porcicultores.

Round Table Discussion: Female Management. June, 1999. With Dr. Gordon Spronk, Pipestone Veterinary System, Dr. Tom Baas, Iowa State University and James Pflum, Premium Standard Farms. Presented at the World Pork Expo National Pork Producers Council Pork Pro Center.

All Pro Presentation: Semen Evaluation. June, 1999. Presented at the World Pork Expo, Des Moines, IA with Dr. Wayne Singleton, Purdue University.

AI Technology. November, 1997. Presented at the National Pork Producers Council's Level II Professional Swine Manager's Training, Princeton, MO.

Reproductive Technologies for Pork Producers: Something Old, Something New. August, 1997. Presented at the First Annual Peruvian Swine Congress, Lima, Peru and at the Universidad Nacional Agraria La Molina. Proceedings published by Asociacion Peruana de Porcicultores.

Reproduction Management. November, 1997. Presented at the National Pork Producers Council's Level II Professional Swine Manager's Training, Princeton, MO. Proceedings published by National Pork Producers Council.

Summary of U.S. Seedstock Populations. April, 1996. Presented to producer groups in Monterrey, Nuevo Leon, Tehuacan, Puebla and Merida, Yucatan, Mexico. Proceedings published by the Missouri Department of Agriculture for United States Livestock Genetics Export, Inc.

Modern Crossbreeding and Genetic Improvement Systems. November/December, 1996. Presented at the National Pingtung Polytechnic Institute and Chiayi, Taiwan. Proceedings published by the Missouri Department of Agriculture for United States Livestock Genetics Export, Inc.

Genetic Considerations of Pork Quality. November/December, 1996. Presented at the National Pingtung Polytechnic Institute and Chiayi, Taiwan. the Missouri Department of Agriculture for United States Livestock Genetics Export, Inc.

### **TEACHING EXPERIENCE:**

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Senior level Swine Production course. 1998-present. This is a comprehensive production course taught in the Writing Intensive curriculum as a Capstone Experience. Enrollment typically about 50 students.

Graduate Seminar in Animal Science, 1996, 1998, 2000, 2002, 2004, 2006. Developed and taught a seminar course in extension/production/management for graduate students. Students were responsible for writing news articles and guidesheets and required to give a seminar to producer audiences.

Supervisor, Academic Quadrathlon team to regional meeting, 1998, 1999, 2008-2014.

Graduate Seminar in Animal Science, 1997, 2003. Responsibility for the graduate seminar in genetics rotated among appropriate faculty.

### **PUBLICATIONS :**

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#### **REFEREED JOURNALS:**

1. Johnson, J.S., R.L. Boddicker, M.V. Sanz-Fernandez, J.W. Ross, J.T. Selsby, M.C. Lucy, **T.J. Safranski**, R.P. Rhoads and L.H. Baumgard. 2013. Int'l J. of Hyperthermia, 29: 696-702.

2. Knox, R.V., S.L. Rodriguez Zas, N.L. Slotter, K.A. McNamara, T.J. Gall, D.G. Levis, **T.J. Safranski** and W.L. Singleton. 2013. J. Anim. Sci., 91: 433-445.

3. H.M. Smith, C.C. Selby, A.M. Williams, M.R. Ellersieck, W.R. Lamberson, **T.J. Safranski**. 2013. Effects of Day of Farrowing Induction and Spontaneous Versus Induced Farrowings on Sow and Suckling Piglet Performance. Journal of Swine Health and Production, 21: 195-202.

4. Williams, A.M., **T. J. Safranski**, D. E. Spiers, P. A. Eichen, E. A. Coate and M. C. Lucy. (2013). Effects of a controlled heat stress during late gestation, lactation, and after weaning on thermoregulation and metabolism of primiparous sows. *J. Anim. sci.*, 91: 2700-2714.
5. Mesa H, Cammack KM, **Safranski TJ**, Green JA, Lamberson WR. Selection for placental efficiency in swine: Conceptus development. *J Anim Sci.* 2012 90: 4217-22.
6. Curry, E., **Safranski, T.J.**, Pratt, S.L. (2011). Differential expression of porcine sperm microRNAs and their association with sperm morphology and motility. *Theriogenology*, 76 (8), pp. 1532-1539.
7. **Safranski, T.**, Ford, J.J., Rohrer, G.A., Guthrie, H.D. (2011). Plenary contribution to International Conference on Boar Semen Preservation 2011. Genetic selection for freezability and its controversy with selection for performance. *Reproduction in Domestic Animals*, 46 (SUPPL. 2), pp. 31-34.
8. Moore, K., K.W. Lovercamp, D. Feng, J. Antelman, M. Sutovsky, G. Manandhar, K. van Leyen, **T. Safranski** and P. Sutovsky. 2010. Altered epididymal sperm maturation and Cytoplasmic droplet migration in subfertile male Alox15 mice. *Cell Tissue Res.* 340: 569-81.
9. **Safranski, TJ.** 2008. Genetic selection of boars. In: Proceedings of the VIth International Conference on Boar Semen Preservation. *Theriogenology*, 70: 1310-1316.
10. P.A. Eichen, M.C. Lucy, T.J. Safranski, E.A. Coate, A.M. Williams and D.E. Spiers. 2008. Heat stress effects on sow reproductive performance using simulated forced air and evaporative cooling systems. *Livestock Environment VIII - Proceedings of the 8th International Symposium.*, 773-780.
11. Knox, R., D. Levis, **T. Safranski** and W. Singleton. 2008. An update on North American boar stud practices. In: Proceedings of the VIth International Conference on Boar Semen Preservation. *Theriogenology*, 70: 1202-1208.
12. Lovercamp, KW, **TJ Safranski**, KA Fischer, G Manandhar, M Sutovsky, WO Herring and P Sutovsky. 2007. High resolution light microscopic evaluation of boar semen quality sperm cytoplasmic droplet retention in relationship with boar fertility parameters. *Archives of Andrology*, 53: 219-228.
13. Lovercamp KW, **TJ Safranski**, KA Fischer, G Manandhar, M Sutovsky, W Herring, P Sutovsky. 2007. Arachidonate 15-lipoxygenase and ubiquitin as fertility markers in boars. *Theriogenology*, 67: 704-718.
14. Bracken CJ, Seaman-Bridges JS, **Safranski TJ**, Lucy MC. 2006. Ovarian follicular development, estrus, and ovulation in seasonally anestrous sows treated seven days post weaning with equine and human gonadotropins. *J. Swine Health Prod.* 14:207-209.

15. Mesa H, **Safranski TJ**, Cammack KM, Weaber RL, Lamberson WR. 2006. Genetic and phenotypic relationships of farrowing and weaning survival to birth and placental weights in pigs. *J Anim Sci.*, 84:32-40.
16. Mesa, H., **T.J. Safranski**, K.A. Fischer, K.M. Cammack and W.R. Lamberson. 2005. Selection for placental efficiency in swine: Genetic parameters and trends. *J. Anim. Sci.*, 83: 983-991.
17. Fischer, K.A., K. Van Leyen, K.W. Lovercamp, G. Manandhar, M. Sutovsky, D. Feng, **T. Safranski** and P. Sutovsky. 2005. 15-Lipoxygenase is a component of the mammalian sperm cytoplasmic droplet. *Reproduction*, 130: 213-222.
18. Bracken, C.J., **T.J. Safranski**, T.C. Cantley, M.C. Lucy and W.R. Lamberson. 2003. Effect of time of ovulation and sperm concentration on fertilization rate in gilts. *Theriogenology*, 60: 669-676.
19. Seaman-Bridges, J.S., J.A. Carroll, **T.J. Safranski** and E.P. Berg. 2003. Short-and Long-Term Influence of Perinatal Dexamethasone Treatment on Swine Growth. *Dom. Anim. Endocr.*, 24: 193-208.
20. Mesa, H, **T.J. Safranski**, R.K. Johnson, and W.R. Lamberson. 2003. Correlated Response in Placental Efficiency in Swine Selected for an Index of Components of Litter Size. *J. Anim. Sci.*, 81: 74-79.
21. Bracken, C.J., W.R. Lamberson, **T.J. Safranski** and M.C. Lucy. 2003. Factors affecting follicular populations on day 3 post-weaning and interval to ovulation in a commercial sow herd. *Theriogenology*, 60: 11-20.
22. Lay, D. C., Jr., Matteri, R. L, Carroll, J. A., Fangman, T. J. and **Safranski, T. J.** 2002. Prewaning Survival in Swine. *J. Anim. Sci.*, 80(E. Suppl. 1):E74-E86.
23. Lamberson, W.R. and **T.J. Safranski**. 2000. A model for economic comparison of swine insemination programs. *Theriogenology*, 54: 799-807.
24. Kaps, M., A.S.A.M.T. Moura, **T.J. Safranski**, and W.R. Lamberson. 1999. Components of growth in mice hemizygous for a MT/bGH transgene. *Journal of Animal Science* 77: 1148-1154.
25. **Safranski, T.J.**, D.L. Harris, J.A. Nienaber, G.L. Hahn and R.L. Korthals. 1997. Heat stress and limit feeding pigs: Effects on growth and composition. In: *Livestock Environment V, Volume II*, 772-780. American Society of Agricultural Engineers, St. Joseph, MI.
26. Holder, R.B., W.R. Lamberson, R.O. Bates and **T.J. Safranski**. 1995. Lifetime productivity in gilts previously selected for decreased age at puberty. *Animal Science* 61:115-121.

27. Lamberson, W.R., **T.J. Safranski**, R.O. Bates, D.H. Keisler and R.L. Matteri. 1995. Relationships of serum IGF-I concentrations to growth, composition and reproduction traits of swine. *Journal of Animal Science* 73:3241-3245.
- 28 **Safranski, T.J.**, W.R. Lamberson and D.H. Keisler. 1993. Correlations among three measures of puberty in mice and relationships with estradiol concentration and ovulation. *Biology of Reproduction*, 48: 669-673.
- 29 **Safranski, T.J.**, W.R. Lamberson and D.H. Keisler. 1992. Use of melengestrol acetate (MGA) and gonadotropins to induce fertile estrus in seasonally anestrous ewes. *Journal of Animal Science* 70: 2935-2941.
30. **Safranski, T.J.**, W.R. Lamberson and R.O. Bates. 1991. Effect of boar exposure on expression of genetic potential for age of puberty in gilts. *Animal Production* 52:521-526.

### **ABSTRACTS:**

1. Allen B.L., M.R. Ellersieck and **T.J. Safranski**. 2014. Use of PG-600 and OvuGel in summer-weaned first-parity sows. *J. Anim. Sci.* 92 Suppl. 2: 91.
2. Lynch, B.L., J.N. Rhoades, M.C. Lucy and **T.J. Safranski**. 2014 Heat stress in utero affects piglets later in life. 2014. *J. Anim. Sci.* 92 Suppl. 2: 4.
3. Johnson, J.S., M.V. Sanz-Fernandez, J.F. Patience, J.W. Ross, N.K. Gabler, M.C. Lucy, **T.J. Safranski**, R.P. Rhoads and L.H. Baumgard. 2014. Effects of in utero heat stress and core body temperature on tissue accretion during the growing phase (30 to 60 kg) in pigs. *J. Anim. Sci.* 92 Suppl. 2: 42.
4. Johnson J.S., M.V. Sanz-Fernandez, J.F. Patience, J.W. Ross, N.K. Gabler, M.C. Lucy, **T.J. Safranski**, R.P. Rhoads and L.H. Baumgard. 2014. In utero heat stress alters body composition during the early finishing phase (60 to 80 kg) in pigs. *J. Anim. Sci.* 92 Suppl. 2: 54.
5. Callahan, Z.D., T.A. Wilmoth, M.C. Shane, **T.J. Safranski** and B.R. Wiegand. 2014. Interactive effects of gestational heat stress, Paylean, and lysine improve carcass and pork quality. *J. Anim. Sci.* 92 Suppl. 2: 50.
6. Wilmoth, T.A., Z.D. Callahan, M.C. Shane, **T.J. Safranski** and B.R. Wiegand. 2014. In utero heat stress negatively affects the growth performance of barrows. *J. Anim. Sci.* 92 Suppl. 2:51.
7. Shane M.C., T.A. Wilmoth, Z.D. Callahan, **T.J. Safranski** and B.R. Wiegand. 2014. In utero heat stress alters body temperature and loin eye area in barrows. *J. Anim. Sci.* 92 Suppl. 2: 103.

8. Johnson J.S., M.V. Sanz-Fernandez, S.K. Stoakes, M. Abuajamieh, J.W. Ross, M.C. Lucy, **T.J. Safranski**, R.P. Rhoads, and L.H. Baumgard. 2013. Gestational heat stress alters postnatal thermoregulation., *J. Anim. Sci.* 91, E-Suppl. 2: 168.
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**BOOK CHAPTERS:**

1. **Safranski, T.J.** and N.M. Cox. Clinical reproductive physiology and endocrinology of sows; Mating management in Current therapy in large animal theriogenology, second edition, R.S. Youngquist, ed. 2007.

**COMPETITIVE GRANTS since 2002:**

Year	Amount	Title	Source	Role
2013	110,188	Impact of <i>in utero</i> heat stress on subsequent growth, composition and reproduction	National Pork Board	PI
2012	239,814	Translational Genomics for Improving Sow Reproductive Longevity*	USDA-NIFA through U. of Nebraska	Co-PI
2010	286,682	The physiological impact of heat stress on pig metabolism and performance	USDA-NIFA through Iowa State University	Co-PI
2007	450,000	An integrated approach for solving seasonal anestrus in swine**	USDA-NIFA	Co-PI
2005	69,000	An Innovative Doctoral Training Program to Prepare the Next Generation of Cross-Disciplinary Scholars in Animal Reproductive Biology. Objective is to train Ph.D. students in Animal Reproductive Biology	USDA CSREES	Co-PI
2003	15,000	Litter size produced by gilts divergently selected on reproductive components: terminal evaluation	National Pork Board	PI

\*an integrated research and Extension proposal

\*\*an integrated research and Extension proposal