

JOHN F. ODHIAMBO, PhD

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EDUCATION

West Virginia University Morgantown, WV
Doctor of Philosophy, Reproductive Physiology, December 2008

West Virginia University Morgantown, WV
Master of Science, Reproductive Physiology, December 2005

West Virginia University Morgantown, WV
Bachelor of Science (Summa cum Laude), Animal Science, May 2003

Animal Health and Industry Training Institute Kabete, Kenya
Certificate, Animal Health (Distinction), April 1997

EMPLOYMENT

Alabama A&M University May 2024 - Current
Associate Professor of Animal Science (Tenure)
Develop and lead an extramurally-funded large-animal research program in the Department of Food and Animal Sciences. Teach graduate and undergraduate courses. Advise and mentor graduate and undergraduate students majoring in Animal Biohealth Science, and supervise graduate thesis research.

Florida A & M University July 2023 - May, 2024
Associate Professor of Animal Science (Tenure) Tallahassee, FL
Develop and lead an extramurally-funded beef cow-calf research program in the Division of Agricultural Sciences, Florida A & M University. Teach graduate and undergraduate courses. Advise and mentor graduate and undergraduate students majoring in animal science, and supervise graduate thesis research.

Florida A & M University October 2017 - June 2023
Assistant Professor of Animal Science (Tenure-track) Tallahassee, FL

Conduct research and scholarly activities that promote student experiential learning and enrich students to contribute to the scientific body of knowledge. Teach undergraduate and graduate courses. Advise and mentor undergraduate and graduate students majoring in animal science, and supervise graduate thesis research. Participate in student recruitment and retention efforts of the Division of Agricultural Sciences, Florida A & M University. Participate in dissemination of information to Florida small-scale livestock producers through extension/outreach engagements and activities based on research-based findings. Prepare and submit grant applications for extramural support of my research program. Participate in professional development activities to enhance my research and teaching effectiveness.

University of Wyoming

Jan. 2012- Sept. 2017

Postdoctoral Research Associate

Laramie, WY

Primary responsibilities included assisting the PI with research project management at the Center for the Study of Fetal Programming, Department of Animal Science, University of Wyoming. Provided training and supervision to graduate and undergraduate students' research in the Center. Led multidisciplinary research teams from collaborators during project planning execution, data analysis and preparation of manuscripts. Participated in professional development activities and grantsmanship.

University of Alberta,

Sept. 2010-December 2011

Postdoctoral Fellow

Edmonton, AB Canada

Provided scientific and technical support in the management of research projects in dairy cow health and reproduction in the Department of Agricultural, Food and Nutritional Science, University of Alberta. Provided training and supervision to graduate and undergraduate students' research in the animal physiology laboratory. Participated in professional development activities, manuscript preparation and grantsmanship.

University of Missouri,

March 2009-August 2010

Postdoctoral Fellow

Columbia, MO

Obtained training and specialization in research methods in cell biology in the Division of Animal Sciences, University of Missouri. Characterized expression patterns of surface membrane biomarkers for sperm quality and fertility. Developed a flow cytometry-based protocol for sperm purification and semen quality evaluation by ubiquitin and lectin immunofluorescence. Developed a nanoparticle-based sperm enrichment protocol for porcine and bovine artificial insemination and *in vitro* fertilization. Provided training and supervision for graduate and undergraduate student research. Prepared grants and manuscripts for submission. Participated in professional development activities.

West Virginia University
Graduate Research Assistant

August 2003-Dec.2008
Morgantown, WV

Obtained graduate training and research mentorship in the Division of Animal and Nutritional Sciences, West Virginia University. My primary research focused on proteomic analysis of fertility associated biomarkers in bull seminal plasma, and management reproductive efficiency in postpartum beef cows. Provided supervision to junior graduate student research, work-study students and mentored summer interns. Prepared grant applications and manuscripts for publications. Participated in professional development.

INTERNSHIP

USDA Agriculture Research Service,
Entomology internship

March – August 2010
Columbia, MO.

Conducted field and greenhouse trials on resistance management of the Western Corn Rootworm. Developed statistical models for analysis of pest-host interactions. Prepared manuscripts for publications.

Kenya Agricultural Research Institute
Animal Science internship

May-September 1997
Muguga, Kenya.

Participated in regional research projects aimed at improving productivity of dairy operations in the Greater Nairobi Milk-shed. Major tasks accomplished included: Producer education in proper forage production and handling through participatory research appraisal and monitoring estrous cyclicity in lactating dairy cows through milk progesterone assays.

RESEARCH INTERESTS

Exploring physiologic and epigenetic mechanisms regulating reproductive efficiency in domestic animals. Developing models for animal health and production efficiency in domestic animals.

TEACHING EXPERIENCE

Alabama A&M University

May 2024 - current

Serve as principle instructor for the following courses: Animal Breeding and Genetics (**FAS 353**), Introduction to Animal Models in Biomedical Research (**FAS 424**), and Animal Models in Biomedical Research (**FAS 624**).

Florida A & M University

January 2018 – May 2024

Served as the principal instructor for the following undergraduate courses: Reproduction in Farm Animals (**ANS 3311**), Beef Cattle Production (**ANS 3244**), Special Problems in Animal Science (**ANS 4932**), and, Small Ruminant Management (**ANS 3273**). Previously, I have served as the principal instructor for Animal Science Seminar (**ANS 4931**), Feeds and Feeding (**ANS 3463**), Animal Nutrition (**ANS 4445**), and Genetics of Domestic Animals (**ANS 3384**).

University of Wyoming August 2012-Sept. 2017
I co-taught the following undergraduate courses: Comparative Anatomy and Physiology (**ANSC 3010**), and, Principles of Mammalian Reproduction (**ANSC 4120**).

University of Alberta September 2010-Dec. 2011
I guest lectured sections in the following undergraduate and graduate courses: Physiology of Domestic Animals (**ANSC 310**), and, Ruminant Physiology and Metabolic Disorders (**AFNS 520**).

West Virginia University August 2003-Dec. 2008
Served as graduate teaching assistant in the following undergraduate courses: Values and Ethics in Life Sciences (**A&VS 402**), and, Animal Reproduction Laboratory (**A&VS 293a**).

Laramie County Community College August-December 2016
Served as an adjunct instructor for Human Anatomy (**ZOO 2015**)

SERVICE

Alabama A& M University May 2024 - present
Serving my academic program (ABHS) in the following departmental committees: Undergraduate recruitment committee, Web/Communications Committee, ABHS new degree committee. I am also serving as a co-advisor for the ABHS club.

Florida A&M University
Faculty Senator August 2021-May 2024
I represent the faculty in the College of Agriculture and Food Science in the university faculty senate. I also serve in the Senate committee for Admissions Prior Conduct Review Board.

Academic Adviser August 2018-May 2024

I serve as an academic advisor for the Animal Science Program. I also double up as the faculty advisor to the Animal Science club since Fall 2020. Prior to that I served as a co-faculty advisor to the Animal Science club.

Team Leader August 2018-May 2024
I serve as a defacto team leader for the nascent animal science research group for the university's extension program based on my on-going research program and interests.

Society for the Study of Reproduction June 2012-present
I serve on my third-year term in the Diversity Committee of the Society. Previously, I have served as co-chair for focus sessions at the 2014 - 2016 Annual Meetings, and trainee volunteer during 2012-2016 Annual Meetings.

Land O' Lakes International Development August-October 2007
I served as a Breeding Consultant for the USAID-Land O' Lakes International Development, SAF Project Malawi providing producer training in developing commercial dairy cattle breeding programs.

Greene County 4-H, Pennsylvania May 2006
I volunteered my services to the county Goat 4-H group and presented a demonstration on goat reproduction and kidding management at the county fairgrounds.

West Virginia Dairy and Beef Quality Assurance August 2003-May 2005
I volunteered my services and participated in the design and development of manuals and computer modules for producer training in prevention of drug and chemical residues in dairy and beef products.

Peer Review Service August 2015-present
I volunteer my professional services to peer review articles, editorials and conference proceedings for the following journals or groups: Journal of Developmental Origins of Health and Disease; Reproduction, Fertility and Development; Journal of Dairy Science; Frontiers; MDPI:(International Journal of Environmental Research and Public Health; Nutrients); Open Journal of Animal Sciences; Life Sciences.
I have also served a Special Issue guest editor for MDPI and project proposal reviewer for the following organizations: The French National Research Agency (ANR) project proposals; Alberta Strategic Research and Development Program (SRDP) project proposals; University of KwaZulu Natal (South Africa)

HONORS, AWARDS and ACTIVITIES

ACUE-ACE

April 2021

I was awarded with a certificate in Effective College Instruction by the Association of College and University Educators and the American Council on Education upon completion of a year-long online training program.

Society for the Study of Reproduction

July 2018

I was a recipient of the 2018 Burroughs Wellcome Junior Faculty Travel Award from the Society. Prior to this, I was a two-time recipient of the Society's Larry Ewing Memorial Trainee Travel Fund in 2015 and 2016.

World Conference on Animal Production

April 2013

I was awarded the Junior scientist travel scholarship to present my research at 11th World Conference on Animal Production in Beijing, China.

West Virginia University

Spring 2001-Fall 2008

During my undergraduate programs in West Virginia University, I was a recipient of several academic awards namely: Presidential award for excellence in scholarship-spring 2001 & 2002; Dean's award for outstanding scholarship and leadership-spring 2003; Sigma Gamma Delta award for outstanding academic scholarship or service -2003; International scholars merit award- 2002-2003; and, Harold C Olson scholarship award-2002-2003.

During my graduate program, I received two awards namely: Minority doctoral scholar-2007-2008; Robert E. Stitzel graduate student support award-2008.

Animal Health and Industry Training Institute

May 1997

I received two awards from Animal Health and Industry Training Institute, Nairobi, Kenya on my graduation day in 1997: Best overall student-class of 1997; Best overall student-Animal Health Program, 1997.

PROFESSIONAL ORGANIZATIONS

I have maintained an active membership in the following professional societies/associations: Society of the Study of Reproduction, American Society of Animal Science, and American Dairy Science Association.

GRANTS AWARDED

Florida A&M University

- **USDA-NIFA-Capacity Building Grant, USD \$294,378.** Evaluation of Effects of High Soluble Starch Diets on Post Weaning Beef Calf Health and Performance. 2023.
- **USDA-NIFA-Capacity Building Grant, USD 600,000.** Partnership to improve beef cow-calf development and management in north Florida: Focusing on limited-resource beef cow-calf producers. 2021.
- **FAMU Faculty Research Awards Program, USD 5,000.** Evaluation of the effects of calf backgrounding on the profitability of small-holder beef cow-calf operations. 2019.
- **FAMU World Class Scholars Program, USD 125,000.** Laboratory equipment grant. 2018.

University of Wyoming

- **Wyoming INBRE, USD 10,000.** Sequencing and bioinformatics analysis program. 2015.
- **Wyoming INBRE, USD 2,500.** Bioinformatics training travel grant. 2015
- **National Institutes of Health, USD 1.25 M.** Cortisol regulation of perinatal adipose tissue and sheep neonatal leptin peak (RO1). Co-PI with Drs. Stephen Ford and Peter Nathanielsz. 2012.

University of Alberta

- **Alberta Livestock and Meat Agency Ltd, CAD 350,000.** Using metabolomics technology to identify new biomarkers of early pregnancy diagnosis in dairy cows. Co-PI with Drs. Burim Ametaj and David Wishart 2011.
- **Alberta Livestock and Meat Agency Ltd, CAD 750,000.** Identification of biomarkers associated with the onset and progression of major metabolic and infectious diseases of transition dairy cows. Co-PI with Drs. Burim Ametaj and David Wishart 2011.

West Virginia University

- **Select Sires Inc. USD 15,000.** Application of seminal plasma proteins in semen processing and artificial insemination. Co-PI with Dr. Robert Dailey.

PUBLICATIONS

Publications in Fetal Programming Research

Journal Articles

1. Pankey CL, **Odhiambo JF**, Smith AM, Ford SP. Effects of maternal obesity in an ovine model on metabolic outcomes in F2 adults and F3 neonates. *Domest Anim Endocrinol*. 2021 Jul;76:106628. doi: 10.1016/j.domaniend.2021.106628. Epub 2021 Mar 27. PMID: 33895699; PMCID: PMC8169583.
2. **Odhiambo JF**, Pankey CL, Ghnenis AB, Ford SP. A Review of Maternal Nutrition during Pregnancy and Impact on the Offspring through Development: Evidence from Animal Models of Over- and Undernutrition. *Int J Environ Res Public Health*. 2020 Sep 22;17(18):6926. doi: 10.3390/ijerph17186926. PMID: 32971930; PMCID: PMC7559343.
3. Serafim TL, Cunha-Oliveira T, Deus CM, Sardão VA, Cardoso IM, Yang S, **Odhiambo JF**, Ghnenis AB, Smith AM, Li J, Nathanielsz PW, Ford SP, Oliveira PJ. Maternal obesity in sheep impairs foetal hepatic mitochondrial respiratory chain capacity. *Eur J Clin Invest*. 2021 Feb;51(2):e13375. doi: 10.1111/eci.13375. Epub 2020 Sep 12. PMID: 32780417.
4. Ghnenis AB, **Odhiambo JF**, Smith AM, Pankey CL, Nathanielsz PW, Ford SP. A heretical view: rather than a solely placental protective function, placental 11 β hydroxysteroid dehydrogenase 2 also provides substrate for fetal peripheral cortisol synthesis in obese pregnant ewes [published online ahead of print, 2020 Mar 10]. *J Dev Orig Health Dis*. 2020;1-7. doi:10.1017/S2040174420000112
5. Smith AM, Pankey CL, **Odhiambo JF**, Ghnenis AB, Nathanielsz PW, Ford SP. Rapid Communication: Reduced maternal nutrition during early- to mid-gestation elevates newborn lamb plasma cortisol concentrations and eliminates the neonatal leptin surge. *J Anim Sci*. 2018 Jun 29;96(7):2640-2645. doi: 10.1093/jas/sky215. PubMed PMID: 29982763; PubMed Central PMCID: PMC6095368.
6. Ghnenis AB, **Odhiambo JF**, McCormick RJ, Nathanielsz PW, Ford SP. Maternal obesity in the ewe increases cardiac ventricular expression of glucocorticoid receptors, proinflammatory cytokines and fibrosis in adult male offspring. *PLoS One*. 2017 Dec 21;12(12):e0189977. doi:

- 10.1371/journal.pone.0189977. eCollection 2017. PubMed PMID: 29267325; PubMed Central PMCID: PMC5739430.
7. Tuersunjiang N, **Odhiambo JF**, Shasa DR, Smith AM, Nathanielsz PW, Ford SP. Maternal obesity programs reduced leptin signaling in the pituitary and altered GH/IGF1 axis function leading to increased adiposity in adult sheep offspring. PLoS One. 2017 Aug 3;12(8):e0181795. doi: 10.1371/journal.pone.0181795. eCollection 2017. PubMed PMID: 28771488; PubMed Central PMCID: PMC5542597.
 8. Pankey CL, Walton MW, **Odhiambo JF**, Smith AM, Ghnenis AB, Nathanielsz PW, Ford SP. Intergenerational impact of maternal overnutrition and obesity throughout pregnancy in sheep on metabolic syndrome in grandsons and granddaughters. Domest Anim Endocrinol. 2017 Jul;60:67-74. doi: 10.1016/j.domaniend.2017.04.002. Epub 2017 Apr 22. PubMed PMID: 28527530.
 9. Shasa, D. R., **J. F. Odhiambo**, N. M. Long, N. Tuersunjiang, P. W. Nathanielsz, and S. P. Ford. 2014. Multi-generational Impact of Maternal Overnutrition/Obesity in the Sheep on the Neonatal Leptin Surge in Granddaughters. Int J Obes (Lond). 2014 Oct 30. doi: 10.1038/ijo.2014.190.
 10. **Odhiambo, J. F.**, N. Tuersunjiang, N. M. Long, D. R. Shasa, P. W. Nathanielsz, and S. P. Ford. 2013. Diet reduction in obese ewes from early gestation prevents glucose-insulin dysregulation and returns fetal adiposity and organ development to control levels. Am J Physiol Endocrinol Metab. 305(7):E868-E878.

Published Abstracts

1. **John F. Odhiambo**, Adel B. Ghnenis, Stephanie Guida, Callum Bell, Peter W. Nathanielsz, Stephen Ford. 2016. Maternal obesity (MO) in sheep induces differential expression and methylation of genes regulating lipid metabolism in day 135 fetal liver. *Society for the Study or Reproduction, 49th Annual Meeting (Abstract # 14)*.
2. Adel B. Ghnenis, **John F. Odhiambo**, Ashley M. Smith, Peter W. Nathanielsz, Stephen P. Ford. 2016. Maternal Obesity (MO) in Sheep Programs Liver Secretion of Cortisol and Upregulates Glucocorticoid Receptors and Pro-inflammatory Mediators in the Hearts of Adult Male Offspring. *Society for the Study or Reproduction, 49th Annual Meeting (Abstract # 13)*.

3. Chris L. Pankey, **John F. Odhiambo**, Ashley M. Smith, Adel B. Ghnenis, Peter W. Nathanielsz, Stephen P. Ford. 2016. Multigenerational impact of maternal overnutrition/obesity throughout pregnancy in sheep on metabolic syndrome in granddaughters. *Society for the Study or Reproduction, 49th Annual Meeting (Abstract # 16)*.
4. Ashley M. Smith, Adel B. Ghnenis, **John F. Odhiambo**, Peter W. Nathanielsz, Stephen P. Ford. 2016. Maternal obesity induces increased placental conversion of maternal cortisol to cortisone followed by increased conversion of this cortisone to cortisol by the fetal liver and perirenal fat. *Society for the Study or Reproduction, 49th Annual Meeting (Abstract # 15)*.
5. Teresa L Serafim, Teresa Cunha-Oliveira, Claudia M Deus, Paulo J Oliveira, Shanshan Yang, Ablat Tuerxun, **Fred Odhiambo**, Adel B Ghnenis, Ashley M Smith, Junfei Li, Peter W Nathanielsz, Stephen P Ford. 2016. Maternal Obesity (MO) in Sheep Decreases Fetal Hepatic Mitochondrial Respiratory Chain Activity. *Reproductive Sciences Vol. 23, Suppl. 1 (Abstract # O-132)*.
6. Chaoqun Zhu, **Fred Odhiambo**, Adel B Ghnenis, Stephen P Ford, Peter W Nathanielsz, Jun Ren, Wei Guo. 2016. Maternal Obesity (OB) Increases the Stiffer, Shorter Titin Isoform in the Maternal and Fetal Heart. *Reproductive Sciences Vol. 23, Suppl. 1 (Abstract # O-147)*.
7. Stephanie M Guida, Adel B Ghnenis, **John F Odhiambo**, Callum J Bell, Peter W Nathanielsz, Stephen P Ford. 2016. Maternal Obesity (MO) Increases Acetyl-CoA Carboxylase Alpha (ACC α) mRNA and Protein Expression and Alters ACACA Gene Methylation in Day 135 Sheep Fetal Liver. *Reproductive Sciences Vol. 23, Suppl. 1 (Abstract # S-026)*.
8. **John F. Odhiambo**, Peter W. Nathanielsz, Ford P. Stephen. 2015. Metabolomics reveals specific metabolic adaptations in mid and late gestation sheep fetuses in response to maternal overnutrition/obesity during pregnancy. *Society for the Study or Reproduction, 48th Annual Meeting (Abstract # 320)*.
9. Megan A. Walton, **John F. Odhiambo**, Peter W. Nathanielsz, and Stephen P. Ford. 2015. Maternal overnutrition/obesity (MO) in the ewe has multigenerational metabolic programming effects on adult granddaughters (F2). *J. Anim. Sci. Vol. 93, Suppl. s3/J. Dairy Sci. Vol. 98, Suppl. 2 (Abstract # M223)*.

10. Adel Bashir Ghnenis, **John F. Odhiambo**, Richard J. McCormick, and Stephen P. Ford. 2015. Maternal obesity (MO) during ovine pregnancy leads to increased collagen content and cross-linking in the myocardium of adult F1 but not F2 offspring. *J. Anim. Sci.* Vol. 93, Suppl. s3/*J. Dairy Sci.* Vol. 98, Suppl. 2 (Abstract # 422).
11. S P Ford, **J F Odhiambo**, M A Walton, M W Nathanielsz. 2015. Elevating Blood Cortisol (CORT) Concentrations at Birth in Lambs Eliminates the Early Postnatal Leptin Surge. *Reproductive Sciences* Vol. 22, Suppl. 1 (Abstract T-167).
12. **John F. Odhiambo**, Peter W. Nathanielsz, Ford P. Stephen. 2014. Late gestation adiposity and increased expression of brown adipose tissue (BAT) linked genes in fetuses of obese sheep are returned to control levels by diet reduction. *Society for the Study or Reproduction, 47th Annual Meeting* (Abstract # 351).
13. Stephen P. Ford, Zhongliang Jiang, **John F. Odhiambo**, Peter W. Nathanielsz. 2014. Correction of maternal obesity (MO) in pregnant sheep by diet reduction increases adipocyte expression of leptin, and up regulates the growth hormone (GH) / insulin-like growth factor (IGF)-1 axis. *Society for the Study or Reproduction, 47th Annual Meeting* (Abstract # 144).
14. Megan A. Walton, **John F. Odhiambo** ; Peter W. Nathanielsz ; Stephen P. Ford. 2014. Maternal overnutrition/obesity (MO) has multigenerational metabolic programming effects on adult grandsons (F2). *Society for the Study or Reproduction, 47th Annual Meeting* (Abstract # 537).
15. Stephen P Ford, Desiree R Shasa, Nathan M Long, Tursanjan Nurmamat, **John F Odhiambo**, Peter W Nathanielsz. 2014. Multigenerational Metabolic Programming of Daughters (F1) and Granddaughters (F2) in an Ovine Model of Maternal Overnutrition/Obesity (OB). *Reproductive Sciences* Vol. 21, Suppl.3 (Abstract # O-014).
16. **Odhiambo, J. F.**, T. Nurmamat, P. W. Nathanielsz, and S. P. Ford. 2013. Dietary reduction from early gestation in obese/overnourished ewes reduced adiposity and serum lipids and increased liver glycogen in late gestation fetuses. *J. Anim. Sci.* Vol. 91, E-Suppl. 2/*J. Dairy Sci.* Vol. 96, E-Suppl. 1 (Abstract # 685).
17. Ford, S. P., T. Nurmamat, **J. F. Odhiambo**, P. W. Nathanielsz. 2013. Effects of an Early Maternal Dietary Intervention during Maternal

Overnutrition/Obesity (MO) on Maternal and Fetal Hypothalamic-Pituitary-Adrenal Axis (HPAA) Activity. *Reproductive Sciences* Vol. 20, Suppl. 3 (Abstract # S-017).

18. Nurmamat, T., **J. F. Odhiambo**, P. W. Nathanielsz, and S. P. Ford. 2013. Dietary Intervention in Early Pregnancy Reduces the Negative Impacts of Obesity/Overnutrition on Fetal Growth and Organ Development, and Improves Glucose-Insulin Dynamics in Late Gestation. *Reproductive Sciences* Vol. 20, Suppl. 3 (Abstract # S-028).

Publications in Dairy and Beef Cattle Reproduction

Journal Articles

1. Deng Q, **Odhiambo JF**, Farooq U, Lam T, Dunn SM, Ametaj BN. Intravaginal probiotics modulated metabolic status and improved milk production and composition of transition dairy cows. *J Anim Sci*. 2016 Feb;94(2):760-70. doi: 10.2527/jas.2015-9650. PubMed PMID: 27065146.
2. Deng Q, **Odhiambo JF**, Farooq U, Lam T, Dunn SM, Gänzle MG, Ametaj BN. Intravaginally administered lactic acid bacteria expedited uterine involution and modulated hormonal profiles of transition dairy cows. *J Dairy Sci*. 2015 Sep;98(9):6018-28. doi: 10.3168/jds.2014-8559. Epub 2015 Jul 15. PubMed PMID: 26188583.
3. Deng Q., **J. F. Odhiambo**, U. Farooq, T. Lam, S. M. Dunn, and B. N. Ametaj. 2015. Intravaginal Lactic Acid Bacteria Modulated Local and Systemic Immune Responses and Lowered the Incidence of Uterine Infections in Periparturient Dairy Cows. *Plos One*: 2015 Apr 28;10(4):e0124167. doi: 10.1371/journal.pone.0124167.
4. **Odhiambo, J. F.**, J. M. DeJarnette, T. W. Geary, C. E. Kennedy, S. S. Suarez, M. Sutovsky, and P. Sutovsky. 2014. Increased Conception Rates in Beef Cattle Inseminated with Nanopurified Bull Semen. *Biol Reprod*. 2014 Oct;91(4):97. doi: 10.1095/biolreprod.114.121897. Epub 2014 Sep 17.
5. Ametaj B. N, Iqbal S, Selami F, **Odhiambo JF**, Wang Y, Gänzle MG, Dunn SM, Zebeli Q. 2014. Intravaginal administration of lactic acid bacteria modulated the incidence of purulent vaginal discharges, plasma haptoglobin concentrations, and milk production in dairy cows. *Res Vet Sci*. 96(2):365-70. doi:10.1016/j.rvsc.2014.02.007. Epub 2014 Feb 18.
6. Yi, Y-J., S. W. Zimmerman, G. Manandhar, **J. F. Odhiambo**, V. Jonáková, P. Maňásková-Postlerová, M. Sutovsky, C. S. Park, and P. Sutovsky. 2012.

- Ubiquitin activating enzyme UBA1 is required for sperm capacitation, acrosomal exocytosis and sperm-egg coat penetration during porcine fertilization. *Int J Androl.* 35(2):196-210.
7. **Odhiambo, J. F.**, Sutovsky M., DeJarnette J. M., Marshall C., Sutovsky P. 2011. Adaptation of ubiquitin-pna based sperm quality assay for semen evaluation by a conventional flow cytometer and a dedicated platform for flow cytometric semen analysis. *Theriogenology* 76(6):1168-76.
 8. **Odhiambo, J. F.** and R. A. Dailey. 2011. Characterization of proteins in seminal plasma of dairy bulls and their relationship to fertility. *Open Journal of Animal Sciences* 1 (2): 33-40.
 9. Zimmerman, S. W., G. Manandhar, Y-J. Yi, S. K. Gupta, M. Sutovsky, **J. F. Odhiambo**, M. D. Powell, D. J. Miller, and P. Sutovsky. 2011. Sperm proteasomes degrade sperm receptor on the egg coat during mammalian fertilization. *PLoS One* 6(2):e17256.
 10. **Odhiambo JF**, Rhinehart JD, Helmondollar R, Pritchard JY, Osborne PI, Felton EE, Dailey RA. 2009. Effect of weaning regimen on energy profiles and reproductive performance of beef cows. *J Anim Sci.* 87(7):2428-36.
 11. **Odhiambo JF**, Poole DH, Hughes L, DeJarnette JM, Inskeep EK, Dailey RA. 2009. Pregnancy outcome in dairy and beef cattle after artificial insemination and treatment with seminal plasma or transforming growth factor beta-1. *Theriogenology* 74(4):566-71.

Published Abstracts

1. Deng, Q., **J. F. Odhiambo**, U. Farooq, T. Lam, S. Sharma, S. M. Dunn, Y. Wang, M. Gänzle, and B. N. Ametaj. 2013. Application of intravaginal lactic acid bacteria improved reproductive performance of Holstein dairy cows. *J. Anim. Sci.* Vol. 91, E-Suppl. 2/*J. Dairy Sci.* Vol. 96, E-Suppl. 1 (Abstract # T158).
2. Deng, Q., **J. F. Odhiambo**, U. Farooq, T. Lam, S. Sharma, S. M. Dunn, Y. Wang, M. Gänzle, and B. N. Ametaj. 2013. Application of intravaginal lactic acid bacteria modified prostaglandin production of periparturient Holstein dairy cows. *J. Anim. Sci.* Vol. 91, E-Suppl. 2/*J. Dairy Sci.* Vol. 96, E-Suppl. 1 (Abstract # T159).
3. Deng, Q., **J. F. Odhiambo**, T. Lam, S. M. Dunn, and B. N. Ametaj. 2012. Intravaginal administration of lactic acid bacteria modulated selected

- plasma metabolites in transition dairy cows. *J. Anim. Sci.* Vol. 90, Suppl. 3/*J. Dairy Sci.* Vol. 95, Suppl. 2 (Abstract # T11).
4. Deng, Q., **J. F. Odhiambo**, T. Lam, S. M. Dunn, and B. N. Ametaj. 2012. Intravaginal probiotics expedited uterine involution in postpartum dairy cows. *J. Anim. Sci.* Vol. 90, Suppl. 3/*J. Dairy Sci.* Vol. 95, Suppl. 2 (Abstract # T16).
 5. Deng, Q., **J. F. Odhiambo**, T. Lam, S. M. Dunn, and B. N. Ametaj. 2012. Intravaginal administration of lactic acid bacteria modulated innate immune responses of periparturient dairy cows. *J. Anim. Sci.* Vol. 90, Suppl. 3/*J. Dairy Sci.* Vol. 95, Suppl. 2 (Abstract # M22).
 6. Deng Q., **J. F. Odhiambo**, T. Lam, S. M. Dunn, and B. N. Ametaj. 2012. Intravaginal administration of a mixture of lactic acid bacteria lowered the incidence of clinical diseases in transition dairy cows. *J. Anim. Sci.* Vol. 90, Suppl. 3/*J. Dairy Sci.* Vol. 95, Suppl. 2 (Abstract # M23).
 7. Sharma, S., Q. Zebeli, S. Iqbal, S. M. Dunn, **J. F. Odhiambo**, M. Gäenzle, B. N. Ametaj (2011) Peripartal intravaginal application of probiotic bacteria lowered the incidence of uterine infections and improved fertility in dairy cows. *J. Anim. Sci.* Vol. 89, E-Suppl. 1/*J. Dairy Sci.* Vol. 94, E-Suppl. 1 (Abstract # M43).
 8. **Odhiambo, J. F.**, Q. Zebeli, S. Iqbal, D. A. Mansmann, U. Farooq, S. Sharma, S. M. Dunn, and B. N. Ametaj. 2011. Metabolic profiles and immune status of periparturient dairy cows transitioning from conventional to organic management system. *J. Anim. Sci.* Vol. 89, E-Suppl. 1/*J. Dairy Sci.* Vol. 94, E-Suppl. 1 (Abstract # T258).
 9. **Odhiambo, J. F.**, Q. Zebeli, S. Iqbal, D. A. Mansmann, U. Farooq, S. Sharma, S. M. Dunn, and B. N. Ametaj. 2011. Season and stage of lactation affected metabolic profiles and innate immunity of periparturient dairy cows *J. Anim. Sci.* Vol. 89, E-Suppl. 1/*J. Dairy Sci.* Vol. 94, E-Suppl. 1 (Abstract # T259).
 10. **Odhiambo, J. F.**, Q. Zebeli, S. Iqbal, D. A. Mansmann, U. Farooq, S. Sharma, S. M. Dunn, and B. N. Ametaj. 2011. Stage of lactation is associated with differences in the metabolic profiles and innate immunity in dairy cows transitioning to an organic management system. *J. Anim. Sci.* Vol. 89, E-Suppl. 1/*J. Dairy Sci.* Vol. 94, E-Suppl. 1 (Abstract # M278).

11. Zimmerman, S., Yi, Y. J., **Odhiambo, F.**, Manandhar, G., Sutovsky, M., Gupta, S., and Sutovsky, P. 2010. Proteasome-Dependent Acrosome Remodeling During Zona Pellucida-Induced Acrosomal Exocytosis in the Domestic Pig. <http://ssr.org/Documents/2010-07-16Abstracts.pdf> (Abstract # 176).
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1. **Odhiambo, J. F.**, R. A. Dailey, R. Helmondollar, J. Y. Pritchard, and P. I. Osborne. 2013. Evaluation of forage-based weaning systems in spring-born cross-bred beef calves. *Open Journal of Animal Sciences* 3:105-113.
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1. K. A. Elder, R. Fernandez, R. M. Dunn, K. Green, D.J. Coble and, **J. F. Odhiambo**. 2022. Effects of Prenatal Stress on Beef Steer Development. 2022 ASAS-CSAS-WSASAS Annual Meeting & Trade Show. <https://www.eventscribe.net/2022/ASASAnnual/biography.asp?pfp=Speakers> (Abstract # 80)
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