
BIOGRAPHICAL SKETCH

NAME Gary L. Williams	POSITION TITLE
Animal Reproduction Laboratory Texas A&M AgriLife Research Station 3507 Hwy 59E, Beeville, TX 78102 Ph. 361-358-6390	Regents Fellow, AgriLife Research Senior Faculty Fellow, and Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
New Mexico State University	B.S.	1972	Animal Science
New Mexico State University	M.S.	1974	Animal Science (Reproductive Physiology)
University of Arizona	Ph.D.	1978	Animal Physiology
Texas A&M University	Sabbatical	1997	Molecular Endocrinology

Positions and Employment

Professor and Research Leader, Animal Reproduction Laboratory, Texas A&M AgriLife Research-Beeville and Department of Animal Science, Texas A&M University-College Station, 1989-present; Associate Professor and Research Leader, 1984-1989
Associate Professor, Department of Animal Science, North Dakota State University, Fargo, 1982-1984
Assistant Professor, Department of Animal Science, North Dakota State University, Fargo, 1978-1982

Professional Recognition and Service

Editorships

Editor-in-Chief, Domestic Animal Endocrinology, 2009-2018
Associate Editor, Animal Growth, Physiology and Reproduction, Journal of Animal Science, 2003-2007

Editorial Boards

Biology of Reproduction, 2009-2013; 2015-2017; Domestic Animal Endocrinology, 2003-2007; Reproductive Biology and Endocrinology, 2002-2005; Journal of Animal Science, 1989-1992 and 2003-2007; The Professional Animal Scientist, 2001-2004

Reviewer, ad hoc

Biology of Reproduction, Reproduction, Endocrinology, Domestic Animal Endocrinology, Experimental Biology and Medicine, Journal of Animal Science, Comparative Biochemistry and Physiology, Theriogenology, Physiology and Behavior, Livestock Production Science Small Ruminant Research, Dukes Physiology of Domestic Animals, Pathways to Pregnancy and Parturition, National Institutes of Health, USDA-National Research Initiative, USDA-Small Business Innovative Research Program, National Science Foundation, Binational Agricultural Research and Development Program

Institutional Service (last 5 years)

- Co-Chair, Agricultural Animal Care and Use Committee, Texas A&M University System, 2016-present
- Member, Graduate Studies Committee, Interdisciplinary Faculty of Reproductive Biology, Texas A&M University, College Station, 2017-present
- Member, Texas A&M University Promotion and Tenure Committee, 2018-2019
- Member, Graduate Program Committee, Department of Animal Science, Texas A&M University, January 1, 2020 -present

National/International Committees, Panels and Boards (last 5 years)

- Chair, Neuroendocrinology of Puberty, International Ruminant Reproduction Symposium, Foz do Iguacu, Brazil, 2017
- Member, Nominating Committee, Society for the Study of Reproduction (SSR), 2015-2016

Professional and Honorary Affiliations

Scientific Societies

Society for the Study of Reproduction, American Society of Animal Science, American Registry of Professional Animal Scientists, Endocrine Society, Equine Science Society

Honorary Societies

Sigma Xi Scientific Research Society, Gamma Sigma Delta Honor Society

Professional Certification

Registered Professional Animal Scientist (PAS)

Diplomate, American College of Animal Physiology (now American College of Animal Science)

Honors

Texas A&M AgriLife Research Senior Research Fellow, 2020

Research Fellow Award, American Society of Animal Science, 2017

Monsanto Animal Physiology and Endocrinology Award, American Society of Animal Science, 2004

Texas A&M AgriLife Research Faculty Fellow, 2004

Regents Fellow, The Texas A&M University System, 2001

Vice Chancellor's Award in Excellence for Individual Research, 1993

Vice Chancellor's Award in Excellence for Team Research, 1990

Relevant Publications (last 5 years)

Book Chapters

Williams, G.L. and R.L. Cardoso. Neuroendocrine control of estrus and ovulation. In *Bovine Reproduction*, Edited by Hopper R. 2020; Wiley-Blackwell, Hoboken, NJ USA. (2nd Edition; in press)

Williams, G.L., B.R.C. Alves, R.C. Cardoso. Female Puberty: Nutrition and Endocrinology. In *Encyclopedia of Reproduction*, 2018; Elsevier, New York, NY USA.

<http://dx.doi.org/10.1016/B978-0-12-801238-3.64647-0>. ISBN: 9780128118993

Amstalden, M, **G.L. Williams**. Neuroendocrine control of estrus and ovulation. In *Bovine Reproduction*, Edited by Hopper R.; Wiley-Blackwell, Hoboken; 2015, NJ USA

Stewart, J.L., S, Stella, L.L. Cunha, N.W. Dias, I.F. Canisso, V. R. G. Mercadante, R.C. ISBN: 978-1-118-47083-1

Journal Articles

Stewart, J.L., S, Stella, L.L. Cunha, N.W. Dias, I.F. Canisso, V. R. G. Mercadante, R.C.

Cardoso, **G.L. Williams**, K.G. Pohler, F.S. Lima. 2020. Administration of nerve growth factor- β to heifers with a pre-ovulatory follicle enhanced luteal formation and function and promoted LH release. *Theriogenology* <https://doi.org/10.1016/j.theriogenology.2020.02.040> (in press).

Cardoso, R.C., S.M. West, T.S. Maia, B.R.C. Alves, **G.L. Williams**. Nutritional control of puberty in the bovine female: prenatal and early postnatal regulation. *Dom. Anim. Endo.* 2020 (accepted)

Williams, G.L., R.L. Stanko. 2020. Pregnancy rates to fixed-time AI in *Bos indicus* influenced beef cows using PGF 2α with (Bee Synch I) or without (Bee Synch II) GnRH at the onset of the 5-Day CO-Synch + CIDR protocol. *Theriogenology* 142:1-7. <http://dx.doi:10.1016/j.theriogenology.2019.09.047>.

Cardoso R.C., Alves B.R.C, **Williams G.L.** 2018. Neuroendocrine signaling pathways and the nutritional control of puberty in heifers. *Reproduction in Domestic Ruminants IX: Proceedings of the 10th International Symposium on Ruminant Reproduction. Anim. Reprod.* 15, (Suppl.1): 868-878. <http://dx.doi.org/10.21451/1984-3143-AR2018-0013>

O'Neil, M.M., C. M. Korthanke, J. O. Scarpa, S. T. Jaques, T. H. Welsh, Jr., R. C.

Cardoso, **G. L. Williams**. 2019. Differential regulation of gonadotropins in response to continuous infusion of native GnRH in the winter anovulatory mare and effects of exogenous treatment with estradiol-17 β . *J. Equine Vet. Sci.* 75:93-103. doi: 0.1016/j.jevs.2019.01.013

Scarpa, J.O., M.M. O'Neil, R.C. Cardoso, **G.L. Williams**. 2019. Use of prostaglandin F 2α with or without GnRH at the onset of a 5-Day CIDR-based protocol for synchronization of ovulation in *Bos indicus*-influenced cows: Ovarian follicular and luteal dynamics. *Anim. Reprod. Sci* 204:1-9 doi: 10.1016/j.anireprosci.2019.02.013

Bedenbaugh M.N., M. D'Oliveira, R.C. Cardoso, S.M. Hileman, **G. L. Williams**, M. Amstalden. 2018. Pubertal escape from estradiol negative feedback in ewe lambs is not accounted for by decreased ESR1 mRNA or protein in kisspeptin neurons. *Endocrinology* 159: 1-13. doi: 10.1210/en.2017-00593

Korthanke, C. A. J.F. Thorson, L.D. Prezotto, T.H. Welsh, Jr. R.C. Cardoso, **G.L.Williams**. 2017. Secretion of gonadotropins in response to a novel Kiss 1 receptor agonist, RF9 in the mare: modulation by estradiol-17 β and half-life of RF9 in the peripheral circulation. *J. Equine*

Vet. Sci. 57: 100-106. doi:10.1016/j.jevs.2017.07.013

Alves, B.R.C., R.C. Cardoso, R. Doan, Y. Zhang, S.V. Dindot, **G.L. Williams**, M. Amstalden. 2017. Nutritional programming of accelerated puberty in heifers: alterations in DNA methylation in the arcuate nucleus. *Biol. Reprod.* 96(1), 174–184. doi: 10.1095/biolreprod.116.144741.

Allen, C.C., L.O. Tedeschi, D.H. Keisler, R.C. Cardoso, B.R.C. Alves, M. Amstalden, **G.L. Williams**. 2017. Interaction of dietary energy source and body weight gain during the juvenile period on metabolic endocrine status and age at puberty in beef heifers. *J. Anim. Sci.* 95:2080-2088. doi: 10.2527/jas.2016.1002

Cardoso, R.C., B. R. C. Alves, S. M. Sharpton, **G. L. Williams**, M. Amstalden. Nutritional Programming of Accelerated Puberty in Heifers: Involvement of POMC Neurons in the Arcuate Nucleus. *J. Neuroendo* 2015; 27:647-657. doi: 10.1111/jne.12291

Alves, B. R. C., R. C. Cardoso, L. D. Prezotto, J. F. Thorson, M. Bedenbaugh, S.M. Sharpton, A. Caraty, D. H. Keisler, L.O. Tedeschi, G. L. Williams, and M. Amstalden. 2015. Elevated Body Weight Gain during the Juvenile Period Alters Neuropeptide Y-Gonadotropin-Releasing Hormone Circuitry in Prepubertal Heifers. *Biol. Reprod.* 92(2):46,1–10. doi.org/10.1095/biolreprod.114.124636.

Abstracts

Maia, T.S., M.M. O’Neil, S.M. West, R.C. Cardoso, **G.L. Williams**. 2020. Leptin Transport Across the Blood-Brain Barrier in Postpubertal Heifers Exposed to Nutritional Extremes during the Perinatal Period. *Proc. Soc. Study Reprod.* (submitted)

West, S.M., S. H. Fahey, C.M. Anderson, T.H. Welsh Jr., **G.L. Williams**, R.C. Cardoso. 2020. Effects of Prenatal and Postnatal Nutrition on Neuropeptide Y Neuronal Projections to Kisspeptin Neurons in the Arcuate Nucleus of Beef Heifers. *Proc. Soc. Study Reprod.* (submitted)

Cardoso RC, **Williams GL**. *Nutritional Programming of Puberty in Bos indicus-influenced Heifers*. American Society of Animal Science Annual Meeting, 2019

Reese S.T., G.A. Franco, K.M. Schubach, S.M. West, M.M. O’Neil, A.P. Brandao, R.C. Cardoso, **G.L. Williams**, K.G. Pohler. 2019. Differences in prostaglandin release in cows with high vs low circulating concentrations of pregnancy associated glycoproteins, *Proc. Am. Soc. Anim. Sci.*

Cardoso RC, **Williams GL**. *Neuroendocrine Pathways and the Nutritional Control of Puberty in Heifers*. American Society of Animal Science - Midwest Section Annual Meeting, 2019.

O’Neil, M.M., S.M. West, T.S. Maia, R.C. Cardoso, **G.L. Williams**. 2019. Effects of maternal nutrition on secretion of leptin in the neonatal heifer and interaction of maternal and postnatal nutrition on age at puberty and postpubertal secretion of luteinizing hormone. *Proc. Am. Soc. Anim. Sci.*

O’Neil, M.M., S.M. West, R.C. Cardoso, **G.L. Williams**. 2019. Revisiting third cerebroventricle access in cattle for study of hypothalamic function. *Proc. Soc. Study Reprod.* (Abstr.)

Caraway E.M., J.M. Long, M.M. O’Neil, **G.L. Williams**, T.A. Wickersham, J.E. Sawyer, M.C. Satterfield, R.C. Cardoso. 2018. Nutrient restriction during gestation alters the maternal/fetal endocrine environment and increases NPY neuronal projections to GnRH neurons in the female bovine fetus. *Proc. Soc. Study of Reprod.*

Williams, G.L., B.R.C. Alves R.C. Cardoso. 2018. Nutritional, Genetic and Epigenetic

programming of puberty in beef heifers. Proc. South. Sect. Amer. Soc. Anim. Sci.
Zhang, Y., M. M. O' Neil, J. O. Scarpa, B. R.C. Alves, T.H. Welsh, Jr., R. C. Cardoso, **G. L. Williams**. 2017. Perinatal Nutrition Alters NPY Neuronal Projections to GnRH Neurons and Leptin Receptor Expression in the Choroid Plexus of Prepubertal Heifers. Proc. Soc. Study Reprod.