

Jonathan E. Wheaton

Professor

Appointment 60% Research, 40% Teaching

Research Area Reproductive Endocrinology

Appointment History

1988-present	Professor
1980-1988	Associate Professor
1975-1980	Assistant Professor

Graduate Program Affiliations

Animal Sciences – Senior Member
Veterinary Medicine – Affiliate Senior Member

Professional and Honorary Societies

Member, Endocrine Society
Member, Society for the Study of Reproduction
Member, University of Minnesota Cancer Center

Five Most Significant Publications

Bailey, M.T., M.H.T. Troedsson, and J.E. Wheaton. 2002. Inhibin concentrations in mares with granulosa cell tumors. *Theirogenology* 57: 1885-1895.

The paper presented the secretory pattern of plasma inhibin concentrations in mares with ovarian tumors and emphasized their diagnostic value.

Kusina, N.T., R.L. Meyer, K.M. Carlson, and J.E. Wheaton. 1995. Effects of passive immunization of ewes against an inhibin-peptide on gonadotropin levels, ovulation rate and prolificacy. *Biology Reproduction* 52:878-884.

Rather than active immunization, results showed that acute administration of antibodies stimulated ovulation rate.

Wheaton, J.E., K.M. Carlson, H.F. Windels, and L.J. Johnston. 1993. CIDR: A new progesterone-releasing intravaginal device for induction of estrus and cycle control in sheep and goat. *Anim. Reprod. Sci.* 33:127-141.

New information was published regarding the use of a device to control and induce estrus and ovulation in the ewe.

Wheaton, J.E., H.F. Windels, and L.J. Johnston. 1992. Accelerated lambing using exogenous progesterone and the ram effect. *J. Anim. Sci.* 70:2628-2635.

A reproductive management protocol was developed for sheep producers to achieve two lamb crops per year.

Meyer, R.L., K.M. Carlson, J. Rivier, and J.E. Wheaton. 1991. Antiserum to an inhibin alpha-chain peptide neutralizes inhibin bioactivity and increases ovulation rate in sheep. *J. Anim. Sci.* 69:747-754.

The publication provided early evidence that the hormone inhibin plays a key role in the regulation of ovulation rate.

Refereed Journal Publications and Book Chapters (Last Five Years)

Authored or co-authored the following 5 papers in peer-reviewed journals.

- Wheaton J.E.** and R.W. Godfrey. 2003. Plasma LH, FSH, testosterone, and age at puberty in ram lambs actively immunized against an inhibin alpha-subunit peptide. *Theriogenology* 60: 933-941.
- Bailey, M.T., M.H.T. Troedsson, and **J.E. Wheaton**. 2002. Inhibin concentrations in mares with granulosa cell tumors. *Theriogenology* 57: 1885-1895.
- Bailey, M.T., S.A. Christman, **J.E. Wheaton**, M.H.T. Troedsson, T.D. O'Brien, M.M. Ababneh, and E. Santschi. 2000. Inhibin localisation in equine granulosa-theca cell tumours (GTCT) and inhibin forms in tumour fluid. *Journal of Reproduction and Fertility*, Supplement 56-Equine Reproduction VII: 247-255, 2000.
- Christman, S.A., M.T. Bailey, W.A. Head, and **J.E. Wheaton**. 2000. Induction of ovarian cystic follicles in sheep. *Domestic Animal Endocrinology* 19:133-146, 2000.
- Yang, H., J.E. Pettigrew, L.J. Johnston, G.C. Shurson, **J.E. Wheaton**, M.E. White, Y. Koketsu, A.F. Sower, and J.A. Rathmacher. 2000. Effects of dietary lysine intake during lactation on blood metabolites, hormones, and reproductive performance in primiparous sows. *J. Anim. Sci.* 78:1001-1009.

Invited Lectures (8) (Last Five Years)

- Wheaton J.E.**, M.H.T. Troedsson, and T.A. Anttila. 2003. Inhibin in mares with ovarian granulosa cell tumors (GCT). *In: Proc. 5th Int. Ares-Serona Symp. on Inhibins, Activins and Follistatins*. Siena, Italy, July 3-4. p. 88.
- Interdisciplinary Reproductive Biology Group (IRB)-University of Florida, Gainesville, "Inhibin Concentrations in Mares with Granulosa Cell Tumors", Jan. 15, 2003.
- Western Regional Research Project W-112 "Reproduction in Domestic Ruminants" meeting in Reno, NV, May, 2003.
- Western Regional Research Project W-112 "Reproduction in Domestic Ruminants" meeting in Reno, NV, May, 2002.
- Presented abstract at the annual Endocrine Society meeting, San Francisco, June, 2002.
- Wheaton, J.** "Research progress and principal accomplishments". 1999-00. Oral report given at the meeting of *Western Regional Project W-112: Reproduction in Domestic Ruminants*. May 18-19, 2000. Reno, NV.
- Wheaton, J.** "Inhibin production and secretion by granulosa-thecal cell tumors in mares". MWASAS-Physiology Symposium presentation, March 14, 2000. Des Moines, IA.
- Wheaton, J.** Minnesota Research Report (written). 1999. Western Regional Research Project W-112: *Reproduction in Domestic Ruminants*. May 18-19, 2000. Reno, NV.

Funding (Last Five Years) – \$0

Dissertations and Theses (last 5 yrs)

Name	Program	Degree	Thesis Title
Michael T. Bailey	Animal Sciences	Ph.D.	Inhibin production and secretion in mares with granulosa-theca cell tumors.
Shelly Ann Christman	Animal Sciences	M.S.	Induction of ovarian cystic follicles in sheep

Graduate Student and Post-doctoral Supervision - Current Advisees

Alyssa J. Murray	M.S.	Animal Sciences
------------------	------	-----------------

Courses Taught (Last Five Years)

Designator	Name	Cr	% Effort	Term	Years
AnSc 2301	Systemic Physiology	4	40%	Fall	1999-2001
AnSc 8510	Graduate Seminar	1	100%	Spring	2001, 2002
AnSc 2301	Systemic Physiology	4	50%, 85%	Fall	2002, 2003
AnSc 5327	Endocrine & Repro Phys	2	100%	Spring	2004

Service

Reviewer: *Theriogenology, Biology of Reproduction, Endocrinology, Society for the Study of Reproduction, Sheep Research J., Journal of Animal Science.*

Reviewed USDA-NRI grant proposals.

Member, Physiology Program Committee, American Society of Animal Science.

Editorial Board: *Sheep Research Journal, Journal of Animal Science.*

Chair, Local Academic Quadrathlon, 2001, 2000.

Service to National and Regional Research Committees

Representative, W-112 Committee Meeting, Reproductive Performance in Domestic Ruminants

Representative, NCR-190 Committee Meeting, Increased Efficiency of Sheep Production