

## **BIOGRAPHICAL SKETCH**

### **NANCY H. ING**

Associate Professor, Department of Animal Science, College of Agriculture & Life Sciences  
Department of Veterinary Integrative Biosciences, College of Veterinary Medicine  
Texas A&M University, College Station, TX

#### **EDUCATION:**

1979 B.S. in Zoology, University of Florida, Gainesville, FL  
1984 D.V.M., University of Florida, Gainesville, FL  
1989 Ph.D. in Biochemistry and Molecular Biology, University of Florida, Gainesville, FL  
1992 Post-doctoral training in Cell Biology, Baylor College of Medicine, Houston, TX

#### **PROFESSIONAL EXPERIENCE and APPOINTMENTS:**

1986-1988	Research Assistant	Department of Animal Science	University of Missouri at Columbia
1988-1992	Post-Doctoral Fellow	Department of Cell Biology	Baylor College of Medicine
1992-	Assistant Professor	Department of Animal Science	Texas A&M University
1992-	Joint Appointment	Department of Veterinary Integrative Biosciences	Texas A&M University
1992-	Member	Center for Animal Biotechnology	Texas A&M University
1993-1997	Member	Faculty of Genetics	Texas A&M University
1997-	Full Member	Faculty of Genetics	Texas A&M University
1997-2001	Editorial Board	<i>Biology of Reproduction</i>	
1998-	Associate Professor	Department of Animal Science	Texas A&M University
1998-2002	Editorial Board	<i>Domestic Animal Endocrinology</i>	

#### **HONORS and AWARDS:**

1979	Rita McTigue O'Connell Award	Gainesville Women's Club
1979	Phi Beta Kappa	(and founding member at Texas A&M)
1980	ERF Award	American Medical Association
2000	Elected to Gamma Sigma Delta	Agriculture Honor Society
2005	Elected to Phi Zeta	Veterinary Honor Society

#### **PROFESSIONAL ACTIVITIES:**

##### **LEADERSHIP:**

Reproductive and Developmental Biology Program of the Center for Animal Biotechnology and Genomics - Leader  
Women's Faculty Network – Past President and Treasurer  
Interdisciplinary Faculty of Reproductive Biology- Executive and Seminar Committees  
Interdisciplinary Faculty of Genetics - Member of the Executive Committee  
Interdisciplinary Faculty of Biotechnology - Member of the Executive Committee  
Agriculture Women Excited to Share Opinions, Mentoring, & Experiences - Founder

##### **GRANT REVIEW:**

USDA NRICGP Enhancing Reproductive Efficiency (Panel Member & Ad Hoc), SBIR Animal Production and Protection and Animal Health Grants in TX and OR; NSF Integrative Animal Biology (Panel Member & Ad Hoc); United Kingdom Horserace Betting Levy Board; United Kingdom Breast Cancer Campaign, Korea Research Foundation, Georgia National Science Foundation, Qatar National Research Foundation

## **PROFESSIONAL ACTIVITIES (continued):**

### **MANUSCRIPT REVIEW:**

*Acta Theriologica; American Journal of Reproductive Immunology; Asian Journal of Andrology; Biology of Reproduction; Cellular & Molecular Life Sciences; Cellular Oncology; Domestic Animal Endocrinology; Endocrinology; European Journal of Histochemistry; Fertility & Sterility; Journal of Animal Science; Journal of Biological Chemistry; Maturitas; Molecular and Cellular Endocrinology; Molecular Endocrinology; Molecular Reproduction and Development; Reproduction; Reproduction, Fertility and Development; Reproductive Biology; Reproductive Biology and Endocrinology; Theriogenology*

### **REFEREED PUBLICATIONS from 2002-2010:**

- Robertson, J.A., Y. Zhang, L.S. Lindahl and **N. H. Ing** (2002) Estradiol up-regulates estrogen receptor messenger ribonucleic acid in endometrial carcinoma (Ishikawa) cells by stabilizing the message. *J. Mol. Endocrinol.* 29:125-35
- Farnell, Y.Z. and **N. H. Ing** (2003) Endometrial effects of selective estrogen receptor modulators on estrogen-responsive gene expression. *J. Steroid Biochem. Mol. Biol.* 84: 513-526.
- Farnell, Y.Z. and **N. H. Ing** (2003) Myometrial effects of selective estrogen receptor modulators on estrogen-responsive gene expression. *J. Steroid Biochem. Mol. Biol.* 84: 527-536.
- Farnell, Y.Z. and **N. H. Ing** (2003) Estradiol and a selective estrogen receptor affect steroid hormone receptor messenger RNA levels and turnover in explant cultures of sheep endometrium. *In Vitro Cell Dev. Biol.* 38: 595-600.
- Farnell, Y.Z. and **N. H. Ing** (2003) The effects of estradiol and selective estrogen receptor modulators on gene expression and messenger RNA stability in immortalized sheep endometrial stromal cells and human endometrial adenocarcinoma cells. *J. Steroid Biochem. Mol. Biol.* 84: 453-61.
- Mitchell, D. C. and **N. H. Ing** (2003) Estradiol stabilizes estrogen receptor mRNA in sheep endometrium via discrete sequence elements in its 3' untranslated region. *Mol. Endocrinol.* 17: 562-574.
- Ing, N. H.**, A. Laughlin, D. D. Varner, T. H. Welsh Jr., D. W. Forrest, T. L. Blanchard and L. Johnson (2004) Gene expression in the spermatogenically inactive "dark" and the maturing "light" testis tissue of the prepubertal colt. *J. Andrology* 25:535-44.
- Zhang, Y. and **N. H. Ing** (2004) Cell-specific expression of oestrogen-responsive genes in uteri of cyclic, early pregnant and ovariectomized ewes. *Theriogenology* 62:403-14.
- Jaeger, J.A., A.K. Spiegel, **N. H. Ing**, G.A. Johnson, F.W. Bazer, R.C. Burghardt (2005) Functional effects of transforming growth factor beta on adhesive properties of porcine trophectoderm. *Endocrinology* 146:3933-42. (Impact Factor 5.2)
- Ing, N. H.**, R. L. Wolfskill, S. Clark, J. A. deGrauw, C.A. Gill (2006) Steroid hormones acutely regulate expression of a nudix protein-encoding gene in the endometrial epithelium of sheep. *Mol. Reprod. Devel.* 73:67-76.
- Ing, N. H.**, D.A. Massuto, L.A. Jaeger (2008) Estradiol regulates A+U-rich RNA-binding factor 1 p45 binding to stabilizing regions within the 3' untranslated regions of estrogen receptor-alpha mRNA. *J. Biol. Chem.* 283:1764-72. (Impact Factor 5.3)
- Mortensen, C. J., Y. H. Choi, K. Hinrichs, **N. H. Ing**, D. C. Kraemer, S. G. Vogelsang, M. M. Vogelsang (2009) Embryo recovery from exercised mares. *Anim. Reprod. Sci.* 110: 237-44

- Laughlin, A., T. H. Welsh Jr., C. C. Love, D. D. Varner, A. R. Parrish, D. W. Forrest, **N. H. Ing** (2009) In vitro culture of precision-cut testicular tissue as a novel tool for the study of responses to LH. *In Vitro Cell Dev. Biol. – Animal* 46:45-53.
- Massuto, D. A., R. N. Hooper, E.C. Kneese, G. A. Johnson, **N. H. Ing**, B. R. Weeks, L. A. Jaeger (2009) Intrauterine infusion of latency associated peptide (LAP) during early porcine pregnancy affects conceptus elongation and placental size. *Biol. Reprod.* 82: 534-542. (*Impact Factor 4.0*)
- Massuto, D. A., E. C. Kneese, G. A. Johnson, R. C. Burghardt, R. N. Hooper, **N. H. Ing**, L. A. Jaeger (2010) Transforming growth factor beta (TGFbeta) signaling is activated during porcine implantation: proposed role for latency associated peptide-integrins at the conceptus-maternal interface. *Reproduction* 139: 1470-1626.
- Chen, C.-H., D. Abi-Ghanem, L. Njongmeta, J. Bray, W. Mwangi, S. D. Waghela, J. L. McReynolds, **N. H. Ing**, L. R. Berghman (2010) Production and characterization of monoclonal antibodies against chicken CD40. *J. Poultry Sci.* 34: 1139-1143.
- Ing, N. H.** (2010) Estradiol up-regulates expression of the A + U-rich binding factor 1 gene in the sheep uterus. *J. Steroid Biochem. Mol. Biol.* 122: 172-179.
- Mortensen, C. J., Y.-H. Choi, **N. H. Ing**, D. C. Kraemer, M. M. Vogelsang, K. Hinrichs (2010) Heat shock protein 70 gene expression in equine blastocysts after exposure of oocytes to high temperatures in vitro or in vivo after exercise of donor mares. *Theriogenology* 74: 374-383.

#### **REVIEW PUBLICATIONS:**

- Ing, N. H.** (2005). Steroid hormones regulate gene expression post-transcriptionally by altering the stabilities of messenger RNAs. *Biol Reprod* 72:1290-96.
- Ing, N. H.** (2009). Post-transcriptional effects of estrogens on gene expression by altering messenger RNA stability. *J. Med. & Biol. Frontiers* 16:50-59