

RESUME

NAME: Roy Neville Kirkwood

CORRESPONDENCE ADDRESS:

CITIZENSHIP:

QUALIFICATIONS:

BSc. (Hons) Zoology with Applied Zoology (2:1), UCNW Bangor, 1976.

Post Graduate Certificate of Education, UCNW Bangor, 1977.

Ph.D. University of Leeds, 1981.

DVM. University of Saskatchewan, 1995.

Diplomate, European College of Animal Reproduction, 2000

RESEARCH AND TEACHING EXPERIENCE:

October 1977 - August 1981. Graduate student, Department of Animal Physiology and Nutrition, University of Leeds, UK. In addition to PhD research, I assisted in the teaching of on-farm undergraduate courses and supervised undergraduate research projects.

February 1982 - January 1984. Post doctoral fellow, Departments of Animal Science/ Physiology and Anatomy, Massey University, New Zealand. The primary research area was the endocrinology of early weaning. I also presented seminars to various university departments and swine producer groups.

January 1984 - March 1987. Post doctoral fellow, Department of Animal Science, University of Alberta. The research focus during this period was nutrition/reproduction interactions. Additionally, I assisted in the supervision of several graduate students.

March 1987 - May 1995. Research Scientist, Department of Animal and Poultry Science, University of Saskatchewan. Research during this period was varied (see publication list). I also assisted in the supervision of several graduate students and designed and taught an introductory animal physiology course.

August 1991 - May 1995. During this period I continued as a Research Scientist while attending the WCVN from where I obtained my DVM. In my second year, I was awarded the Rogar/STB prize for pharmacology and in my fourth year, the Western Canadian Association of Swine Practitioners award for swine medicine.

May 1995 – March 1999. Research Veterinarian, Alberta Agriculture. During this time I initiated research programs dealing with reproduction and management/nutrition/disease interactions. I taught the swine component of an animal nutrition course at the University of Alberta and gave guest lectures in a reproduction course. I was on one PhD examination committee (S. Huang) and had one graduate student (J. Patterson) examining replacement gilt management and ovarian function. I was an Associate Editor, Canadian Journal of Animal Science and served on the editorial board of Journal of Swine Health and Production. I was a federally accredited veterinarian and I performed herd health duties in association with a local swine health practice. In my role as a research veterinarian, I provided swine management and reproduction advice to swine practitioners and primary producers from several provinces/states as well as organizing and participating in production workshops.

March 1999-October 2001. Senior lecturer, Department of Farm Animal and Equine Medicine and Surgery, Royal Veterinary College, University of London. During this period I developed the swine medicine components of a distance-learning MSc, taught “Pig Science” to fourth year students, the porcine components of the Respiratory, Alimentary, and Urogenital systems modules, and undertook small-group teaching in swine reproduction for final year students. Research during this period focussed on breeding and farrowing with studies being undertaken in Australia, Italy, The Netherlands, and Spain.

October 2001-July 2011. Associate Professor (swine production medicine), Department of Large Animal Clinical Sciences, Michigan State University. **Tenure was granted in 2008.** In addition to extension and research duties, I was responsible for teaching swine components of animal handling, respiratory diseases and theriogenology to pre-clinical students and the swine component of 3 clerkships in the clinical program. I was the originator of a 3-week swine elective (LCS635) and developed a course in swine breeding herd management. I was a visiting professor to St Georges University, Grenada, teaching students the swine components of the preclinical curriculum.

My primary research activities involved improving sow fertility to artificial insemination. I provided clinical support and advice for other faculty investigating *Actinobacillus pleuropneumoniae*, normal tonsil microbiota, and mammary amino acid transport.

I was the major advisor for 3 MSc students and on the guidance committee for 5 others. I was also on one PhD committee at MSU, I co-advised one PhD student from Chulalongkorn University, Bangkok, Thailand and three from University of Leon, Spain.

I have acted as the external examiner for an MSc thesis from University of Melbourne and a PhD thesis from University of Adelaide. I acted as the opponent for a PhD defence in Uppsala, Sweden.

July 2011-present. Associate Professor, Intensive Production Medicine (Pigs), School of Animal and Veterinary Sciences, University of Adelaide.

Current research has continued to involve reproduction, particularly management of the farrowing sow and her litter. A new focus has been the investigation of management effects on the pig enteric microbiome.

I teach into various animal science, veterinary bioscience, vet tech and DVM courses. I am leading a team involved in producing a modular course that can lead to certificate, diploma or MSc qualifications both domestically and internationally by on-site or on-line presentations.

PUBLICATION SUMMARY

Original research	194
Reviews	39

REFEREED PUBLICATIONS

Kirkwood RN, Hughes PE. The influence of age at first boar contact on puberty attainment in the gilt. *Anim Prod* 1979; 29:231-238.

Kirkwood RN, Hughes PE. A note on the efficacy of continuous v. limited boar exposure on puberty attainment in the gilt. *Anim Prod.* 1980; 3:205-207.

Kirkwood RN, Hughes PE. A note on the influence of boar effect component stimuli on puberty attainment in the gilt. *Anim Prod.* 1980; 3:209-211.

Kirkwood RN, Hughes PE. The influence of boar age on its ability to stimulate puberty in gilts. *Anim Prod.* 1981; 32:211-213.

Kirkwood RN, Forbes JM, Hughes PE. The influence of boar contact on puberty attainment in olfactory bulbectomised gilts. *J Reprod Fert.* 1981; 61:193-196.

Kirkwood RN, Rodway RG, Hughes PE. Bromocryptine treatment and puberty attainment in the female rat. *Experientia* 1981; 37:1114.

Kirkwood RN, Booth WD, Hughes PE. The role of boar related odours on puberty attainment in the gilt. *Anim Prod.* 1982; 36:131-136.

Kirkwood RN, Smith WC, Lapwood KR. The effect of partial weaning on lactational oestrus and sow and piglet body weight changes. *NZ J Exp Agric.* 1983; 11:231-233.

Kirkwood RN, Lapwood KR, Smith WC, Anderson IL. Post weaning plasma levels of LH, prolactin, oestradiol 17 β and progesterone in sows following lactations of 10 or 35 days. *J Reprod Fert.* 1984; 70:95-102.

Kirkwood RN, Lapwood KR, Smith WC, Moller K, Garrick DJ. Effects of oestradiol benzoate treatments on the reproductive performance and endocrine status of sows after lactations of 10 or 35 days. *J Reprod Fert.* 1984; 72:329-337.

Kirkwood RN, Moller K, Smith WC, Lapwood KR, Garrick DJ. The influence of allyl trenbolone (Regumate) on the timing, duration and endocrinology of parturition in sows. *Anim Reprod Sci.* 1985; 9:163-171.

Kirkwood RN, Smith WC, Lapwood KR. Influence of oral administration of allyl trenbolone on subsequent litter size of primiparous sows. *NZ J Exp Agric.* 1986; 14:477-480.

Kirkwood RN, Baidoo SK, Aherne FX, Sather AP. The influence of feeding level during lactation on the occurrence and endocrinology of the postweaning estrus in sows. *Can J Anim Sci.* 1987; 67:405-415.

Kirkwood RN, Lythgoe ES, Aherne FX. Effect of lactation feed intake and gonadotrophin-releasing hormone on the reproductive performance of sows. *Can J Anim Sci.* 1987; 67:715-719.

Harbison S, Kirkwood RN, Aherne FX, Sather AP. Reproductive performance of sows inseminated with fresh or thawed semen: influence of insemination at a fixed time or as indicated by changes in vaginal mucus conductivity. *Can J Anim Sci.* 1987; 67:865-867.

Kirkwood RN, Evans FD, Aherne FX. Influence of age, weight and growth rate on basal LH, growth hormone and cortisol, and estrogen induced LH release in prepubertal gilts. *Can J Anim Sci.* 1987; 67:1001-1010.

- Kirkwood RN, Aherne FX.** The influence of feeding allyl trenbolone during late lactation on the reproductive performance of primiparous and multiparous sows. *Can Vet J.* 1988; 29:68-69.
- Kirkwood RN, Mitaru BN, Gooneratne AD, Blair R, Thacker PA.** The influence of pre-mating feed intake on the reproductive performance of gilts. *Can J Vet Res.* 1988; 52:134-136.
- Kirkwood RN, Mitaru BN, Gooneratne AD, Blair R, Thacker PA.** The Influence of dietary energy intake during successive lactations on sow prolificacy. *Can J Anim Sci.* 1988; 68:283-290.
- Kirkwood RN, Aherne FX.** The influence of gilt age on the endocrine and ovulatory response to different doses of exogenous estradiol benzoate. *Can J Anim Sci.* 1988; 68:979-982.
- Kirkwood RN, Thacker PA, Gooneratne AD, Guedo BL, Laarveld B.** The influence of exogenous growth hormone on ovulation rate in gilts. *Can J Anim Sci.* 1988; 68:1097-1103.
- Kirkwood RN, Thacker PA, Korchinski R, Laarveld B.** The influence of exogenous pituitary growth hormone on the ovulatory response to PMSG and hCG and the LH response to estradiol benzoate in prepubertal gilts. *Domestic Anim Endocrinol.* 1988; 5:317-322.
- Kirkwood RN, Thacker PA, Laarveld B.** The influence of exogenous growth hormone on ovulation rate in gilts fed diets with different energy and protein contents. *Can J Anim Sci.* 1989; 69:265-268.
- Gooneratne AD, Kirkwood RN, Thacker PA.** Effects of injection of gonadotropin releasing hormone on sow fertility. *Can J Anim Sci.* 1989; 69:123-129.
- Gilbertson J, Thacker PA, Kirkwood RN.** The influence of altered weaning management on piglet growth and sow reproductive performance. *Can J Anim Sci.* 1989; 69:33-37.
- Kirkwood RN, Thacker PA.** The influence of original breeding weight and estrus of mating on the reproductive performance of sows. *Can Vet J.* 1989; 30:251-252.
- Kirkwood RN, Thacker PA, Laarveld, B.** The influence of growth hormone injections on the endocrine and metabolic status of gilts. *Domestic Anim Endocrinol.* 1989; 6:167-176.
- Van Lunen TA, Kirkwood RN, Thacker PA.** The influence of allyl trenbolone on the occurrence of normal estrous cycles following a gonadotrophin induced ovulation in prepubertal gilts. *Can J Anim Sci.* 1989; 69:1091-1093.
- Kirkwood RN, Thacker PA.** The influence of a pre-mating injection of gonadotrophin-releasing hormone on sow and gilt fertility. *Can Vet J.* 1989; 30:959-960.
- Kirkwood RN, Thacker PA, Guedo BL, Laarveld B.** The effect of exogenous growth hormone on endocrine status and the occurrence of estrus in gilts. *Can J Anim Sci.* 1989; 69:931-937.
- Kirkwood RN, Thacker PA, Korchinski RS, Laarveld B.** The influence of exogenous growth hormone on endocrine status and the ovulatory response to PMSG in prepubertal gilts. *Can J Anim Sci.* 1990; 70:309-312.
- Kirkwood RN, Thacker PA.** Failure of an induced ovulation during lactation to improve sow or litter performance. *Can J Anim Sci.* 1990; 70:135-138.
- Kirkwood RN, Thacker PA, Guedo BL, Laarveld B.** Effect of exogenous growth hormone during the follicular phase on hCG binding by porcine luteal tissue. *Can J Anim Sci.* 1990; 70:719-721.

Kirkwood RN, Korchinski RS, Thacker PA, Laarveld B. Observations on the influence of active immunization against somatostatin on the reproductive performance of sheep and pigs. *J Reprod Immunol.* 1990; 17:229-238.

Kirkwood RN, Rutter LM, Aherne FX, Thacker PA. The influence of gonadotrophin-releasing hormone at breeding on ovulation rate and the development of corpora lutea in ewes. *Can J Anim Sci.* 1990; 70:983-985.

Kirkwood RN, Thacker PA, Laarveld B. The influence of growth hormone injections on thyroid function in pigs. *Can J Anim Sci.* 1990; 70:991-995.

Kirkwood RN, Thacker PA, Korchinski RS. The influence of dietary monensin on the LH response to GnRH or estradiol and the ovulatory response to PMSG in gilts. *Can J Anim Sci.* 1990; 70:1085-1089.

Kirkwood RN, Baidoo SK, Aherne FX. The influence of feeding level during lactation and gestation on the reproductive performance of second parity sows. *Can J Anim Sci.* 1990; 70:1119-1126.

Beltranena E, Aherne FX, Foxcroft GR, Kirkwood RN. Effects of pre- and postpubertal feeding on production traits at first and second estrus in gilts. *J Anim Sci.* 1991; 69:886-893.

Thacker PA, Gooneratne AD, Kirkwood RN. The influence of purified porcine relaxin on the reproductive performance of sows following artificial insemination with fresh or frozen semen. *Can J Anim Sci.* 1991; 71:237-239.

Kirkwood RN, Thacker PA, Korchinski RS, Gonzalez A, Laarveld B. Effect of pre-mating injections of insulin on fertility and prolificacy of ewes. *Can J Anim Sci.* 1991; 71:241-244.

Kirkwood RN, Thacker PA. The influence of pre-mating feeding level and exogenous insulin on the breeding performance of sows. *Can J Anim Sci.* 1991; 71:249-251.

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King BD, Bo GA, Kirkwood RN, Guenther CL, Cohen RDH, Mapletoft RJ. The effect of zeranol implants on growth and pregnancy loss in beef heifers. *Can J Anim Sci.* 1994; 74:73-76.

Kirkwood RN, Peacock AJ, Van Lunen TA, Thacker PA. The effect of immunoneutralization of PMSG near a gonadotropin-induced oestrus on the reproductive performance of gilts. *Anim Prod.* 1994; 58:401-404.

Peacock AJ, Kirkwood RN, Thacker PA. A note on the influence of added relaxin on the fertility of aged boar semen. *Anim Prod.* 1994; 58:419-421.

Kirkwood RN, Thacker PA. Effect of propranolol on the onset and duration of parturition in sows. *Can Vet J.* 1995; 36:238-239.

Xu Y, Thacker PA, Kirkwood RN, Rajkumar K. Effects of metabolic hormones and growth factors on forskolin and dibutyryl adenosine 3',5'-cyclic monophosphate induced steroidogenic responses by porcine granulosa cells in vitro. *Can J Anim Sci.* 1995; 75:85-91.

Peacock AJ, Thacker PA, Kirkwood RN, Tedesco S. The effect of feed restriction and of a B-adrenergic agonist on plasma melatonin concentrations in domestic pigs. *Can J Anim Sci.* 1995; 75:203-207.

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Kirkwood RN, Thacker PA. Effect of prepartum oestradiol injection on parturition in sows and piglet survival. *Anim Sci.* 1995; 60:481-483.

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