

CURRICULUM VITAE

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EDUCATION**Academic Degrees**

Year	Institution	Degree	Area
2011-to date	Animal Science Department, UC Davis, Davis, CA	Post Doc	Cancer Research
2008-to date	Veterinary School, Universidad de Leon, Leon, Spain	Ph.D. candidate	Animal Reproduction
2008-2011	Animal Science Department, Michigan State University, Michigan, US	Ph.D.	Nutritional Genomics
2006-2008	Large Animal Clinical Sciences, Michigan State University, Michigan, US	M.S.	Animal Reproduction
1998-2004	Veterinary School, University of Leon, Leon, Spain	DVM	Veterinary Medicine

RESEARCH CONTRIBUTIONS

Refereed Journal Publications

- Trott, J.F., Schennink, A., Petrie, W.K., **Manjarin, R.**, VanKlompenberg, M.K., and R.C. Hovey. Prolactin; the multi-faceted potentitator of mammary growth and function. *J. Anim. Sci.* doi: 10.2527/jas.2011-4682
- Taylor, N.P., **Manjarin, R.**, Woodward, A.D., Holcombe, S.J., Trottier, N.L. 2010. Transcript profile of hexose transporters along the horse gastrointestinal tract. *J. Eq. Vet Clin. In Press*
- Manjarin, R.**, Zamora, V., Wu, G., Steibel, J.P., Kirkwood, R.N., Taylor, N.P., Liesman, J., Trifilo, K., and N.L. Trottier. Inclusion of crystalline amino acids in a reduced-crude protein diet maintains sow performance independently of amino acid transporter gene expression. *J. Anim. Sci. In Press.*
- Manjarin, R.**, Steibel, J.P., Kirkwood, R.N., Taylor, N.P., and N. L. Trottier. 2011. Transcript abundance of hormone receptors, glucose transporters, mTOR pathway related kinases and ligand, and milk protein-encoding genes in mammary tissue of peri-parturient, lactating and post-weaned sows. *J. Anim. Sci.* 90(1);221-230.
- Manjarin, R.**, Trottier, N.L., Weber, P.S., Taylor, N.P., and J.P. Steibel. 2011. Simple analytical and experimental procedure for selection of reference genes for qPCR normalization data. *J. Dairy Sci.* 94(10):4950-4961.
- Manjarin, R.**, Steibel, J.P., Zamora, V., Am-in, N., Kirkwood, R.N., Ernst, C.W., Weber, P.S., Taylor, N.P., Trottier, N.L. 2011. Transcript abundance of amino acid transporters, β -casein and α -lactalbumin in mammary tissue of peri-parturient, lactating and post-weaned sows. *J. Dairy Sci.* 94(7):3467-3476.
- Am-in, N., Tantasuparuk, W., **Manjarin, R.**, Kirkwood, R.N. 2011. Effect of site of sperm deposition on fertility when sows are inseminated with aged semen. *J. Swine Health Prod.* 19:295-297.
- Garcia, J. C., Dominguez, J. C., **Manjarin, R.**, Alegre, B., Kirkwood, R. N. 2011. Effect of thawing frozen boar sperm in 50% seminal plasma on sow fertility. *The Pig Journal* 65:59-61.
- Manjarin, R.**, Garcia, J.C., Dominguez, J.C., Castro, M.J., Alegre, B., Munoz, J.D., Kirkwood, R.N. 2010. Effect of gonadotropin treatment on estrus, ovulation, and litter size in weaned and anestrous sows. *J. Anim. Sci.* 88:2356-2360.
- Manjarin, R.**, Dominguez, J.C., Castro, M.J., Alegre, B., Kirkwood, R.N. 2010. Effect of hCG on early luteal serum progesterone concentrations in PG600-treated gilts. *Reprod. Dom. Anim.* 45(3):555-557.

- Manjarin, R.,** Cassar, G., Sprecher, D.J., Friendship, R.M., Dominguez, J.C., Kirkwood, R.N. 2009. Effect of eCG or eCG plus hCG on oestrus expression and ovulation in prepubertal gilts. *Reprod. Dom. Anim.* 44(3):411-413.
- Manjarin, R.,** Dominguez, J.C., Castro, M.J., Sprecher, D.J., Cassar, G., Friendship, R.M., Kirkwood, R.N. 2009. Effect of hCG treatment on the oestrus and ovulation responses to FSH in prepubertal gilts. *Reprod. Dom. Anim.* 44(3):432-434.
- Manjarin, R.,** Dominguez, J.C., Castro, M.J., Vallado, B., Rodriguez, S., Sprecher, D.J., Cassar, G., Friendship, R.M., Kirkwood, R.N. 2009. Effect of prior FSH treatment on the estrus and ovulation responses to eCG in prepubertal gilts. *Anim. Reprod. Sci.* 110:123-127.

Book Chapters

- Trottier, N.L. and **Manjarin, R.** 2011. Amino acid utilization. In: L. I. Chiba (Ed) *Sustainable Swine Nutrition*. Wiley-Blackwell, Ames, Iowa.

Invited talks (and papers published in conference proceedings)

- Manjarin, R.,** Zamora, V., Wu, G., Steibel, J.P., Kirkwood, R.N., Taylor, N.P., Liesman, J., Trifilo, K., and N.L. Trottier. Effect of amino acids on performance of lactating sows, efficiency of mammary uptake and transporter gene expression. 2012 Midwest ASAS/ADSA Annual Meeting in Des Moines, IA, March 19-21, 2012
- Manjarin, R.,** Taylor, N.P., Trottier, N.L., Weber, P.S., and J. P. Steibel. 2011. Simple analytical and experimental procedure for selection of reference genes for qPCR normalization data. 5th international qPCR Symposium & Industrial Exhibition & Application Workshop, Technical University of Munich, Physiology-Weihenstephan, Germany. 28th March – 1st April.
- Trottier, N.L. and **Manjarin, R.** 2010. Linking our understanding of mammary gland metabolism to amino acid nutrition. Midwest Swine Nutrition Conference, 10th Year Anniversary, Indianapolis, Indiana, September 9. Midwest Swine Nutrition Conference Proceedings: 58-63.
- Manjarin, R.,** Steibel, J.P., Zamora, V., Am-in, N., Kirkwood, R.N., Ernst, C.W., Weber, P.S., Taylor, N.P., Trottier, N.L. 2010. Transcript abundance of amino acid transporters, β -casein and α -lactalbumin in mammary tissue of peri-parturient, lactating and post-weaned sows. 5th Annual Animal Science Graduate Research Forum, September 10. Anthony Hall, Michigan State University.
- Manjarin, R.,** Dominguez, J.C., Castro, M.J., Alegre, B., Kirkwood, R.N. 2010. Effect of hCG on early luteal serum progesterone concentrations in PG600-treated gilts. 4th Annual Animal Science Graduate Research Forum, September 11. Anthony Hall, Michigan State University.

Abstracts in Conference Proceedings

- Manjarin, R.,** Zamora, V., Wu, G., Steibel, J.P., Kirkwood, R.N., Taylor, N.P., Liesman, J., Trifilo, K., and N.L. Trottier. 2011. Crystalline amino acid inclusion in a reduced-crude protein diet increases mammary arginine and lysine apparent utilization and maintains sow performance independently of amino acid transporter gene expression. *J. Anim. Sci.* 89(E-Suppl. 2):80.
- Manjarin, R.,** Steibel, J.P., Kirkwood, R.N., Taylor, N.P., and N. L. Trottier. 2011. Transcript abundance of hormone receptors, glucose transporters, mTOR pathway related kinases and ligand, and milk protein-encoding genes in mammary tissue of peri-parturient, lactating and post-weaned sows. *J. Anim. Sci.* 89(E-Suppl. 2):141.
- Buckley, A., Taylor, N., **Manjarin, R.,** Schott, H.C., Woodward, A.D., Trottier, N.L. 2011. Pars intermedia dysfunction down-regulates mRNA abundance of genes encoding GLUT-4 and insulin receptor in the small intestinal mucosa of the horse. *J. Eq. Vet. Sci.* 31:327-328.
- Buckley, A., Taylor, N., **Manjarin, R.,** Schott, H.C., Woodward, A.D., Trottier, N.L. 2010. Cushing's syndrome down-regulates glucose transporter mRNA abundance in the distal jejunum in the horse. *J. Dairy. Sci.* 93(E-Suppl. 1):762.
- Manjarin, R.,** Garcia, J.C., Dominguez, J.C., Castro, M.J., Alegre, B., Munoz, J.D., Trottier, N., Kirkwood, R.N. 2010. Effect of gonadotropin treatment on estrus, ovulation and litter size in weaned sows. *J. Anim. Sci.* 88(E-Suppl. 3):120.
- Manjarin R.,** Steibel, J.P., Zamora, V., Am-in, N., Kirkwood, R., Ernst, C., Weber, P., Taylor, N.P., Trottier, N.L. 2010. Amino acid transporter mRNA abundance in porcine mammary tissue during pregnancy, lactation and post-weaning periods. *J. Dairy. Sci.* 93(E-Suppl. 1):672.
- Taylor, N.P., Woodward, A.D., **Manjarin, R.,** Holcombe, S.J., Trottier, N.L. 2010. Transcript profile of hexose transporters along the horse gastrointestinal tract. *J. Anim. Sci.* 88(E-Suppl. 3):145.
- Buckley, A., Taylor, N., **Manjarin, R.,** Schott, H.C., Woodward, A.D., Trottier, N.L. 2010. Cushing's syndrome down-regulates glucose transporter mRNA abundance in the distal jejunum in the horse. UURAF. April 16, 2010.
- Taylor, N.P., Woodward, A.D., **Manjarin, R.,** Holcombe, S.J., Trottier, N.L. 2010. Transcript profile of hexose transporters along the horse gastrointestinal tract. UURAF. April 16, 2010.
- Manjarin, R.,** Dominguez, J.C., Castro, M.J., Alegre, B., Kirkwood, R.N. 2008. Effect of hCG on estrus and ovulation responses to PG600 in prepuberal gilts. *Reprod. Dom. Anim.* 43 (Suppl. 4):60-61.

Manjarin, R., Kirkwood, R.N. 2008. Effect of gonadotropin treatment on estrus expression and ovulation responses in seasonally anestrous sows. *J. Anim. Sci.* 86(E-Suppl. 3):28.

Specialized Publications (Bulletins, magazines)

Steibel, J.P., **Manjarín, R.**, and Trottier, N. Novel protocol combining experimental measures and analytical modeling allows selection of reference genes for RT-qPCR. *In Press*

Martín, D., Kirwood, R., Domínguez, J.C., **Manjarin, R.**, Fernández, R., Alegre, B., Gonzalez, R., Garcia, J.C. Assessment of electric conductivity in vaginal mucosa to predict ovulation in post-weaning sows. *Albeitar. In press*

Dominguez, J.C., Osvaldo, H., Kirkwood, R.N., Breining, E., Gonzalez, R., Tejerina, F., Alegre, B., Pelaez, J, Garcia, J.C., Bernal, S.E., Cardenas, S.M. Cordova, C.A., Abad, M., Abad, F., **Manjarin, R.**, Martin, D. 2008. Artificial insemination in swine production. *Albeitar.* 119: 14-15.

GRANTS and GIFTS

- **Effect of hCG on the estrus and ovulation responses to PG600 in prepuberal gilts.** Intervet International, Boxmeer, The Netherlands, \$11,800, 15/12/07.
- **Effect of eCG or eCG plus hCG on estrus expression and ovulation in prepuberal gilts.** Department of Large Animal Clinical Sciences of Michigan State University. \$4,500, 06/14/06.

ACADEMIC HONORS, SCHOLARSHIPS, FELLOWSHIPS

- 2012 ASAS Midwest Section Young Scholar
- 2011 ASAS Wilson G. Pond International Travel Award