

CURRICULUM VITAE

Last Name: GREENWOOD

First Name: SABRINA

University: The University of Vermont

Department: Animal and Veterinary Sciences

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EDUCATION

Ph.D. (Animal Science)	2009	University of Guelph, Canada
M.Sc. (Animal Science)	2006	University of Alberta, Canada
B.Sc. (Animal Biology)	2004	University of Guelph, Canada

EMPLOYMENT HISTORY

Assistant Professor	2012-Present	The University of Vermont, USA
Lecturer (Assistant Professor)	2009-2012	Lincoln University, New Zealand
Sessional Instructor	2009	University of Guelph, Canada
Teaching Assistant	Intermittent 2004-08	Univ. of Guelph & Alberta, Canada
Project Coordinator	Fall 2005	University of Alberta, Canada

PRIMARY APPOINTMENT INFORMATION

Appointed as a tenure track Assistant Professor in the Department of Animal and Veterinary Sciences at the University of Vermont.

SECONDARY APPOINTMENTS

Food Systems Faculty	2012-Present	The University of Vermont
Graduate College Faculty	2012-Present	The University of Vermont

TEACHING AND MENTORSHIP

Undergraduate teaching at the University of Vermont:

Term	Course	Type of class
Fall 2017	Animal nutrition, metabolism & feeding	REQUIRED Lecture & Lab
Fall 2015	Animal nutrition, metabolism & feeding	REQUIRED Lecture & Lab
Fall 2013	Animal nutrition, metabolism & feeding	REQUIRED Lecture & Lab
Spring 2013	Animal nutrition, metabolism & feeding	REQUIRED Lecture & Lab

Undergraduate teaching at other institutions:

Term	Course	Institution
Spring 2011	Animal Nutrition 1	Lincoln University (NZ)
Spring 2011	Animal Science II	Lincoln University (NZ)
Spring 2011	Biochemistry	Lincoln University (NZ)
Fall 2011	Livestock Production Systems II	Lincoln University (NZ)
Spring 2010	Animal Nutrition 1	Lincoln University (NZ)
Spring 2010	Animal Science II	Lincoln University (NZ)
Spring 2010	Biochemistry	Lincoln University (NZ)
Fall 2010	Livestock Production Systems II	Lincoln University (NZ)
Spring 2009	Agri-Food Systems Trends & Issues	University of Guelph (Canada)

Graduate teaching at the University of Vermont:

Term	Course	Type of class
Fall 2017	Adv. ruminant nutrition & production	ELECTIVE graduate course
Fall 2015	Adv. ruminant nutrition & production	ELECTIVE graduate course

Graduate teaching at other institutions:

Term	Course	Institution
Fall 2011	Advanced Dairy Prod. Systems	Lincoln University (NZ)
Fall 2010	Advanced Dairy Prod. Systems	Lincoln University (NZ)

LABORATORY COURSE TEACHING

ASCI 097/098	Intro undergraduate research (UVM)	Elective; 1-4 credits
ASCI 197/198	Undergraduate research (UVM)	Elective; 1-4 credits
ASCI 297/298	Advanced undergraduate research (UVM)	Elective; 1-4 credits

TEACHING-RELATED PUBLICATIONS

1. Robinson, F. E., B. Wuetherick, N. Wolanski, and S. Greenwood. 2007. Building core animal science knowledge through project-based study: Name that tool. *North American Colleges and Teachers of Agriculture (NACTA) Journal*. 51: 33-36.
2. Robinson, F. E., B. Wuetherick, J. Martin, C. Strawson, K. Schmid, S. Greenwood, and N. Wolanski. 2006. Experiences in collaborative project-based study: There's a heifer in your tank. *North American Colleges and Teachers of Agriculture (NACTA) Journal*. 50: 6-10.

GRADUATE STUDENT SUPERVISION IN LAST 5 YEARS

1. Ayers, A. M.S. (Animal Science, UVM) Sept. 2017-Present
Thesis: Supplementation strategies on Vermont organic dairy farms.

2. Honan, M. M.S. (Animal Science, UVM) June 2017-Present
Thesis: Origins of the milk proteome.
3. Scuderi, R. A. M.S. (Animal Science, UVM) 2015-Present
Thesis: The effect of diet on the bovine milk proteome.
4. Ordaz, S. M.S. (Animal Science, UVM) 2015-2017 (Completed)
Thesis: Fibrolytic enzymes and silage inoculants to improve nutritive value of silage.
5. Tacoma, R. M.S. (Animal Science, UVM) 2013-2016 (Completed)
Thesis: Examination of the effects breed and nutrition have on the milk protein profile produced by lactating dairy cattle.
6. Priest, N. V. M.S. (Ag.Sci. Lincoln University) 2011-2013 (Completed)
Thesis: The effect of a non-steroidal anti-inflammatory treatment on subclinical endometritis and the identification of at-risk cows (Co-supervisor with S. Meier, DairyNZ).
7. Mandok, K. M.S. (Ag.Sci. Lincoln University) 2010-2013 (Completed)
Thesis: Efficiency with which common feeds for non-lactating dairy cows are used to gain body condition (Co-supervisor with J. Roche, DairyNZ).

HONORS DISSERTATION & DISTINGUISHED UNDERGRADUATE RESEARCH (DUR) SUPERVISION

1. Lipschutz, M. Hons and DUR (Animal Science, UVM) 2016 (Completed)
Dissertation: Effect of branched chain amino acid supplementation on branched chain fatty acid synthesis by rumen microorganisms in continuous culture fermentation.
2. Zeger, S. Hons and DUR (Animal Science, UVM) 2016 (Completed)
Dissertation: The effects of feeding coffee ground to dairy cattle on the bovine milk protein profile.
3. Brown, C. S. Hons (Ag.Sci. Lincoln University) 2011 (Completed)
Dissertation: The effects of whey supplementation on nitrogen partitioning in dairy cows grazing perennial ryegrass pastures.
4. Morrow, A. Hons (Ag.Sci. Lincoln University) 2011 (Completed)
Dissertation: The effect of the level of dietary inclusion of grape marc on nitrogen partitioning in the lactating dairy cow.
5. Harland, R. D. Hons (Ag.Sci. Lincoln University) 2011 (Completed)
Dissertation: Use of dietary grape marc to alter nitrogen metabolism and its effect on milk production of lactating dairy cows.
6. Totty, V. K. Hons (Ag.Sci. Lincoln University) 2010 (Completed)
Dissertation: Milksolids production and nitrogen partitioning of dairy cows grazing high and low diversity pasture mixes.

PUBLICATIONS

Published Peer Reviewed Journal Articles

1. Tacoma, R., S. L. Gelsinger, Y. W. Lam, R. A. Scuderi, D. B. Ebenstein, A. J. Heinrichs, and **S. L. Greenwood**. 2017. Exploration of the bovine colostrum proteome and effects of heat treatment time on colostrum protein profile. *J. Dairy Sci.* DOI: <https://doi.org/10.3168/jds/2017-13211>.
2. Tacoma, R., J. Fields, D. B. Ebenstein, Y.-W. Lam, and **S. L. Greenwood**. 2017. Ratio of dietary rumen degradable protein to rumen undegradable protein affects nitrogen partitioning but does not affect the bovine milk proteome produced by mid-lactation Holstein dairy cows. *J. Dairy Sci.* In press. <https://doi.org/10.3168/jds.2017-12647>.
3. Bryant, R. H., M. E. Miller, **S. L. Greenwood**, and G. R. Edwards. 2017. Milk yield and nitrogen excretion of dairy cows grazing binary and multispecies pastures. *Grass Forage Sci.* 00:1-12. Doi:10.1111/gfs.12274.
4. Murdoch, B. M., G. K. Murdoch, **S. Greenwood**, and S. McKay. 2016. Nutritional influence on epigenetic marks and effect on livestock production. *Front Genet.* 7: 182.
5. Tacoma, R., J. Fields, D. Ebenstein, Y-W. Lam, and **S. L. Greenwood**. 2016. Characterization of the bovine milk proteome in early-lactation Holstein and Jersey breeds of dairy cows. *J. Proteomics.* 130: 200-210.
6. Tacoma, R., J. Fields, D. Ebenstein, Y-W. Lam, and **S. L. Greenwood**. 2016. Comparative proteomics dataset of skimmed milk samples from Holstein and Jersey dairy cattle. *Data Brief.* 6: 843-846.
7. Al-marashdeh, O., P. Gregorini, **S. L. Greenwood**, and G. Edwards. 2015. The effect of feeding maize silage 1 h or 9 h before the herbage meal on dry matter intake, milk production, nitrogen partitioning and rumen function of lactating dairy cows. *Anim. Prod. Sci.* DOI: <http://dx.doi.org/10.1071/AN14790>
8. Crookenden, M. A., K. S. Mandok, T. M. Grala, C. V. Phyn, J. K. Kay, **S. L. Greenwood**, and J. R. Roche. 2015. Source of metabolizable energy affects gene transcription in metabolic pathways in adipose and liver tissue of nonlactating, pregnant dairy cows. *J. Anim. Sci.* doi: 10.2527/jas2014-7978
9. Mandok, K. S., J. K. Kay, **S. L. Greenwood**, J. P. McNamara, M. Crookenden, R. White, S. Shields, G. R. Edwards, and J. R. Roche. 2014. Efficiency of use of metabolizable energy for body weight gain in pasture-based, nonlactating dairy cows. *J. Dairy Sci.* 97: 4639-4648.
10. Laarman, A. H., L. Dionissopoulos, O. AlZahal, **S. L. Greenwood**, M. A. Steele, and B. W. McBride. 2013. Butyrate and subacute ruminal acidosis affect abundance of membrane proteins involved with proton and short chain fatty acid transport in the rumen epithelium of dairy cows. *Am. J. Anim. Vet. Sci.* 8: 220-229.
11. Laarman, A. H., L. Dionissopoulos, O. AlZahal, M. A. Steele, **S. L. Greenwood**, J. C. Matthews and B. W. McBride. 2013. Butyrate supplementation affects mRNA abundance of genes involved in glycolysis, oxidative phosphorylation and lipogenesis in the rumen epithelium of Holstein dairy cows. *Am. J. Anim. Vet. Sci.* 8: 239-245.
12. Steele, M. A., O. AlZahal, **S. L. Greenwood**, J. C. Matthews, and B. W. McBride. 2013. Technical note: use of laser capture microdissection for the localization of tissue specific global gene expression in rumen papillae. *J. Dairy Sci.* 96: 7748-7752.
13. Priest, N. V., S. McDougall, C. R. Burke, J. R. Roche, M. Mitchell, K. L. McLeod, **S. L. Greenwood**, and S. Meier. 2013. The responsiveness of subclinical endometritis to a nonsteroidal anti-inflammatory drug in pasture-grazed dairy cows. *J. Dairy Sci.* 96: 4323-4332.

14. Mandok, K. S., J. K. Kay, **S. L. Greenwood**, G. R. Edwards, and J. R. Roche. 2013. Requirements for zero energy balance of nonlactating, pregnant dairy cows fed fresh autumn pasture are greater than currently estimated. *J. Dairy Sci.* 96: 4070-4076.
15. Dionissopoulos, L., A. H. Laarman, O. AlZahal, **S. L. Greenwood**, M. A. Steele, J. C. Plaizier, J. C. Matthews, and B. W. McBride. 2013. Butyrate-mediated genomic changes involved in non-specific host defenses, matrix remodeling and the immune response in the rumen epithelium of cows afflicted with subacute ruminal acidosis. *Am. J. Anim. Vet. Sci.* 8: 1-20.
16. Totty, V. K., **S. L. Greenwood**, R. H. Bryant, and G. R. Edwards. 2013. Nitrogen partitioning and milk production of dairy cows grazing simple and diverse pastures. *J. Dairy Sci.* 96: 141-149.
17. **Greenwood, S. L.**, G. R. Edwards, R. Harrison. 2012. Short communication: Supplementing grape marc to cows fed a pasture-based diet as a method to alter nitrogen partitioning and excretion. *J. Dairy Sci.* 95:755-758.
18. Steele, M. A., **S. L. Greenwood**, J. Croom, and B. W. McBride. 2012. An increase in dietary non-structural carbohydrate alters the structure and metabolism of the rumen epithelium in lambs. *Can. J. Anim. Sci.* 92: 123-130.
19. **Greenwood, S. L.**, O. AlZahal, N. G. Purdie, K. C. Swanson, and B. W. McBride. 2010. Plasma amino acid concentrations and mRNA expression of components related to protein degradation in lambs with nutritionally induced metabolic acidosis. *Can. J. Anim. Sci.* 90: 537-546.
20. **Greenwood, S. L.**, M. Steele, O. AlZahal, S. E. Hook, K. C. Swanson, and B. W. McBride. 2010. Differential regulation of components of the apoptotic and ubiquitin-mediated proteolytic pathway in red and white muscle type in lambs receiving increasing amounts of dietary non-structural carbohydrate. *Can. J. Anim. Sci.* 90: 421-428.
21. AlZahal, O., M. M. Or-Rashid, **S. L. Greenwood**, and B. W. McBride. 2010. Effect of subacute ruminal acidosis on milk fat concentration, yield and fatty acid profile of dairy cows receiving soybean oil. *J. Dairy Res.* 77: 376-384.
22. Xue, Y., S. F. Liao, K. W. Son, **S. L. Greenwood**, B. W. McBride, J. A. Boling, and J. C. Matthews. 2010. Metabolic acidosis in sheep alters expression of renal and skeletal muscle amino acid enzymes and transporters. *J. Anim. Sci.* 88: 707-717.
23. **Greenwood, S. L.**, O. AlZahal, K. C. Swanson, J. C. Matthews, and B. W. McBride. 2009. Influence of glutamine infusion on ubiquitin, caspase-3, cathepsins L and B, and m-calpain expression in sheep with nutritionally induced metabolic acidosis. *J. Anim. Sci.* 87:2073-2079.
24. **Greenwood, S. L.**, T. C. Wright, N. G. Purdie, J. Doelman, J. P. Cant, and B. W. McBride. 2009. Lactation induces upregulation of the ubiquitin-mediated proteolytic pathway in skeletal muscle of dairy cows but does not alter hepatic expression. *Can. J. Anim. Sci.* 89: 309-313.
25. Odongo, N. E., **S. L. Greenwood**, M. Or-Rashid, D. Radford, O. AlZahal, A. K. Shoveller, M. I. Lindinger, J. C. Matthews, and B. W. McBride. 2009. Effects of nutritionally induced metabolic acidosis with or without glutamine infusion on acid-base balance, plasma amino acids and plasma non-esterified fatty acids in sheep. *J. Anim. Sci.* 87: 1077-1084.
26. AlZahal, O., M. Or-Rashid, **S. L. Greenwood**, M. S. Douglas, and B. W. McBride. 2009. The effect of dietary fiber level on milk fat concentration and fatty acid profile of cows fed diets containing low levels of polyunsaturated fatty acids. *J. Dairy Sci.* 92: 1108-1116.
27. **Greenwood, S. L.**, N. E. Odongo, O. AlZahal, K. C. Swanson, A. K. Shoveller, J. C. Matthews, and B. W. McBride. 2008. Plasma amino acid profile and expression of the ubiquitin-mediated proteolytic pathway in lambs with induced metabolic acidosis. *J. Anim. Sci.* 86: 2651-2656.