

Emma H. Wall, PhD

Physiologist with over ten years of experience in the feed additive industry. Areas of expertise include technical marketing and global technical sales support, customer interaction and key account relationships, multi-species custom solutions, and R&D. Extroverted and energetic; thrives in integrated, cooperative technical roles that require interface with sales/customers, R&D, and marketing.

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EMPLOYMENT

Scientific Consultant

Full Circle Science, Burlington, VT.

Owner/founder of a scientific consulting firm. Services include technical marketing support, writing & editing, experimental design, data analysis and interpretation, and communication of results including presentations, peer-reviewed publications, and popular press articles.

March 2009 – February 2013; July 1 2019-present

Director of Innovation

TriPlant, Erbo Group, Buetzberg, Switzerland

TriPlant is a new business division of the Erbo Group, created to offer customized, exclusive, and independent services to feed manufacturers. Services include scouting and sourcing of new active ingredients for improving animal health and performance, scientific support for proofs of concept and(or) mechanistic insights, and production technology to create new concepts that improve and refine feed additive portfolios. Role includes development and delivery of services, developing projects with key accounts, and managing the scientific networks associated with the services. Multi-species, global responsibilities (currently based in the USA).

October 1 2018 – June 30 2019

Director of Innovation

Pancosma SA, Geneva, Switzerland

Managed the Innovation Incubator, which served as the interface between key accounts and the innovation pipeline. Activities included management of the Incubator team for customer-based innovation projects, cultivation of symbiotic Pancosma-client relationships; exposure of progressive key accounts to strategic research projects and newly acquired knowledge; early-phase product development; single molecule development; and the creation of customized product solutions. Multi-species, global responsibilities including a strong interaction and cooperation with the global sales directors for key account management.

June 1 2016 – August 31 2018

Director of Technology Deployment

Pancosma SA, Geneva, Switzerland

Head of the Department of Technology Deployment; led a team of technical experts to facilitate and optimize the deployment of various integrated feed additives across species. Used research-based approaches to refine the implementation of existing products, to identify new applications of existing products, to work with customers to provide scientific and technical support and custom science-based feed additive solutions. Served as an interface between Marketing and Sales, aligning technical sales needs with marketing tools.

April 1 2015 – May 31 2016

Deputy Director of Research and Development

Pancosma SA, Geneva, Switzerland

Head of ruminant research program; identified and managed research collaborations involving ruminants and calves; designed experiments to aid in the development of new and existing feed additives. Strong interface with marketing and sales to align research activity with relevant field topics and questions.

February 1 2013 – March 31 2015

Herd Manager

Town Farm Dairy, Simsbury, CT.

Managed a small herd of Jersey cows. Management duties included buying and selling of animals, management of all staff (including exchange students from Hungary and Brazil), animal breeding and health, record-keeping, milking chores, and field work.

June 2001-September 2002

EDUCATION AND TRAINING

Postdoctoral Associate Department of Medicine, University of Vermont

Supervisor: Cory Teuscher, Ph.D.

Research focus: Genetic regulation of the cellular and molecular response of reproductive tissues to estrogen.

September 2009 – February 2013

Postdoctoral Associate Department of Animal Science, University of Vermont

Supervisor: Thomas B. McFadden, Ph.D.

Research focus: Lactation physiology.

November 2008 – September 2009

Doctor of Philosophy Department of Animal Science, University of Vermont

Dissertation: Local regulation of milk yield, mammary function, and gene expression in lactating dairy cows.

November 2008

Master of Science Department of Animal Science, University of Vermont

Thesis: Physiology and development of the mammary gland in the transition dairy cow.

December 2004

Bachelor of Science Department of Animal Science, University of Vermont

May 2001

MEMBERSHIPS AND PROFESSIONAL AFFILIATIONS

- Overall Program Committee, American Dairy Science Association (ADSA)** *Summer 2018-present*
- Editorial board, Journal of Dairy Science** *Fall 2011-present*
Physiology and management
- Member, American Dairy Science Association (ADSA)** *Fall 2002-present*
- Member, Dean's Board of Advisors** *Fall 2005-Spring 2008*
College of Agriculture and Life Sciences, University of Vermont
Advised and assisted the Dean, Provost and President of the University on opportunities for enhancement of the College.
- Graduate Student Representative** *Fall 2003-Spring 2007*
Department of Animal Science, University of Vermont
Reported to the Chair of the Graduate Committee to serve as a voice of the graduate students. Organized meetings to discuss the program, and invited speakers from other departments come and talk to graduate students. Created and organized graduate student retreats program to encourage interaction and collaborations of students with each other and with other programs in the department.

PUBLICATIONS

Select refereed publications

- A. W. Moran, M. A. Al-Rammahi, K. Daly, E. Grand, C. Ionescu, D. M. Bravo, **E. H. Wall**, S. P. Shirazi-Beechey. Consumption of a natural high intensity sweetener enhances activity and expression of rabbit intestinal Na⁺/glucose cotransporter 1 (SGLT1) and improves colibacillosis- induced enteric disorders. 2019 J. Agric. Food Chem. *Submitted*.
- Nedelkov K., Harper M.T., Melgar A., Chen X., Räisänen S., Martins CMMR, Faugeron J., **Wall E.H.**, Hristov A.N. Acceptance of flavored concentrate premixes by young ruminants following a short-term exposure. *J Dairy Sci.* 2019 Jan; 102(1): 388-394.
- Oh J., Harper M., Lang C. H., **Wall E. H.**, Hristov A. N. Effects of phytonutrients alone or in combination with monensin on productivity in lactating dairy cows. *J Dairy Sci.* 2018 Aug; 101(8):7190-7198.
- Oh J., **Wall E. H.**, Bravo D. M., Hristov A. N. Host-mediated effects of phytonutrients in ruminants: A review. *J Dairy Sci.* 2017 Jul;100(7):5974-5983.
- Connor E. E., **Wall E. H.**, Bravo D. M., Evock-Clover C. M., Elsasser T. H., Baldwin R. L. 6th, Santín M., Vinyard B. T., Kahl S., Walker M. P. Reducing gut effects from *Cryptosporidium parvum* infection in dairy calves through prophylactic glucagon-like peptide 2 therapy or feeding of an artificial sweetener. *J Dairy Sci.* 2017 Apr;100(4):3004-3018.
- Oh J., Harper M., Giallongo F., Bravo D. M., **Wall E. H.**, Hristov A. N. Effects of rumen-protected Capsicum oleoresin on immune responses in dairy cows intravenously challenged with lipopolysaccharide. *J Dairy Sci.* 2017 Mar;100(3):1902-1913.
- Oh J., Harper M., Giallongo F., Bravo D. M., **Wall E. H.**, Hristov A. N. Effects of rumen-protected Capsicum oleoresin on productivity and responses to a glucose tolerance test in lactating dairy cows. *J Dairy Sci.* 2017 Mar;100(3):1888-1901.
- Connor E. E., Evock-Clover C. M., **Wall E. H.**, Baldwin R. L. 6th, Santin-Duran M., Elsasser T. H., Bravo D. M. Glucagon-like peptide 2 and its beneficial effects on gut function and health in production animals. *Domest Anim Endocrinol.* 2016 Jul;56 Suppl:S56-65.
- Bravo D. M., **Wall E. H.** The rumen and beyond: Nutritional physiology of the modern dairy cow. *J Dairy Sci.* 2016 Jun;99(6):4939-40.
- Oh J., Giallongo F., Frederick T., Pate J., Walusimbi S., Elias R. J., **Wall E. H.**, Bravo D., Hristov A. N. Effects of dietary Capsicum oleoresin on productivity and immune responses in lactating dairy cows. *J Dairy Sci.* 2015 Sep;98(9):6327-39.
- Wall EH**, Doane PH, Donkin SS, Bravo D. The effects of supplementation with a blend of cinnamaldehyde and eugenol on feed intake and milk production of dairy cows. *J Dairy Sci.* 2014 Sep;97(9):5709-17.
- Wall EH**, Hewitt SC, Case LK, Lin CY, Korach KS, Teuscher C. The role of genetics in estrogen responses: a critical piece of an intricate puzzle. *FASEB J.* 2014 Sep 11. pii: fj.14-260307.
- Wall, E. H.**, S. C. Hewitt, L. K. Case, T. Vu, K. S. Korach, C. Teuscher, and C-Y Lin 2013. Genetic control of ductal morphology, estrogen-induced outgrowth, and gene expression in mouse mammary gland. *Endocrinology* 155(8):3025-35.
- Wall, E. H.**, J. P. Bond, and T. B. McFadden. 2013. Milk yield responses to changes in milking frequency during early lactation are associated with coordinated and persistent changes in mammary gene expression. *BMC Genomics.* 2(1):296.
- Wall, E. H.**, S. C. Hewitt, L. Liu, R. del Rio, L. K. Case, C. Lin, K. S. Korach, and C. Teuscher. 2013. Genetic control of estrogen-regulated transcriptional and cellular responses in mouse uterus. *FASEB Journal.* 27(5): 1874-1886.
- Wright, J. B., **E. H. Wall**, and T. B. McFadden. 2013. Effects of increased milking frequency during early lactation on milk yield and udder health of primiparous Holstein heifers. *J. Anim. Sci.* 91(1):195-202.

- Wall, E. H.** and T. B. McFadden. 2012. A local affair: how the mammary gland adapts to changes in milking frequency. *J. Anim. Sci.* 90: 1695-1707.
- Wall, E. H.**, J. P. Bond, and T. B. McFadden. 2012. The acute milk yield response to frequent milking during early lactation is mediated by genes transiently regulated by milk removal. *Physiol. Genomics.* 44: 25-34.
- Wall, E. H.** and T. B. McFadden. 2010. The effects of milk removal or four-times daily milking on mammary expression of genes involved in the insulin-like growth factor-I axis. *J. Dairy Sci.* 93(9):4062-4070
- Wall, E. H.** and T. B. McFadden. 2008. Use it or lose it: enhancing milk production efficiency by frequent milking of dairy cows. *J. Anim. Sci.* 86 (Suppl. 1):27-36.
- Wall, E. H.** and T. B. McFadden. 2007. Optimal timing and duration of unilateral frequent milking during early lactation of dairy cows. *J. Dairy Sci.* 90(11):5042-5048.
- Wall, E. H.** and T. B. McFadden. 2007. The milk production response to frequent milking during early lactation of dairy cows is locally regulated. *J. Dairy Sci.* 90(2):716-720.
- Wall, E. H.**, H. M. Crawford, S. E. Ellis, G. E. Dahl and T. B. McFadden. 2006. Mammary response to prolactin or frequent milking during early lactation of dairy cows. *J. Dairy Sci.* 89(12):4640-4648.
- Wall, E. H.** and T. B. McFadden. 2005. The 60-day dry period: method or madness? Proceedings of the DIGAL International Dairy Conference, Delicias, Mexico, September 8-10 (presented by T. B. McFadden).
- Wall, E. H.**, T. L. Auchtung-Montgomery, G. E. Dahl and T. B. McFadden. 2005. *Short communication:* Short-day photoperiod during the dry period decreases expression of suppressors of cytokine signaling in mammary gland of dairy cows. *J. Dairy Sci.* 88(9):3145-8.
- Zhao, F. Q., T. B. McFadden, **E. H. Wall**, B. Dong and Y. C. Zheng. 2005. Cloning and expression of bovine sodium/glucose cotransporter SGLT2. *J. Dairy Sci.* 88(8):2738-48.
- Wall, E. H.**, T. L. Auchtung, G. E. Dahl, S. E. Ellis and T. B. McFadden. 2005. Exposure to short day photoperiod during the dry period enhances mammary growth in dairy cows. *J. Dairy Sci.* 2005 88(6):1994-2003.
- Zhao, F. Q., Y. C. Zheng, **E. H. Wall** and T. B. McFadden. 2005. Cloning and expression of bovine sodium/glucose cotransporters. *J. Dairy Sci.* 88(1):182-94.
- Zhao F. Q., P. J. Miller, **E. H. Wall**, Y. C. Zheng, B. Dong, M. C. Neville and T. B. McFadden. 2004. Bovine glucose transporter GLUT8: cloning, expression, and developmental regulation in mammary gland. *Biochim. Biophys. Acta.* 1680(2):103-13.

Popular Press Articles

- Wall, E. H.** and D. Bravo. 2017. Role non-nutrients play in animal health gaining recognition. *Feedstuffs.* March 6: 1-2.
- Wall, E. H.** and D. Bravo. 2015. Comparative gut physiology gaining attention. *Feedstuffs.* June 8: 1-2.
- Wall, E. H.** 2014. Capsicum for ruminants: old player, new game. *AFMA Matrix.* October: 24-27.
- Wall, E. H.** and D. Bravo. 2014. The role of gut physiology in animal feeding. *Feedstuffs.* March 31: 1-2.
- Wall, E. H.** 2013. Novel sites targeted to improve efficiency. *Feedstuffs.* June 3:1-2
- Wall, E. H.** 2012. Research perspectives: Navigating success in the seas of change. *Eastern Dairy Business.* October:30-31
- Wall, E. H.** 2012. Research perspectives: Welfare of the modern dairy cow. *Eastern Dairy Business.* May:10-11
- Wall, E. H.** 2012. Focus on gut health growing. *Feedstuffs.* March 19:1-2
- Wall, E. H.** 2011. Essential oils enhancing poultry performance. *World Poultry.* October:38-39
- Wall, E. H.** 2011. Fat toad farm: sweet success. *Countryside and Smallstock Journal.* September/October:74
- Wall, E. H.** 2011. A pinch of herbs and spices may pay off. *Hoard's Dairyman.* August:500
- Wall, E. H.** 2011. Essential oils promote calf health and performance. *Eastern Dairy Business.* June:30
- Wall, E. H.** 2011. Encapsulation protects feed additive efficacy. *Feedstuffs.* Jan 3:1-2
- Wall, E. H.** 2010. Old problem, new looks: Johne's disease is major research focus. *Eastern Dairy Business.* July 26th (online)
- Wall, E. H.** 2010. A pinch of herbs and spices for your cows. *Hoard's Dairyman.* July:472
- Wall, E. H.** 2010. Essential oils for ruminants. *Countryside and Smallstock Journal.* July/August:67
- Wall, E. H.** 2010. Making all the right moves:Ath-Mor Holsteins. *Country Folks.* April:2
- Wall, E. H.** and T. B. McFadden. 2008. Another vote for increased frequency. *Midwest Dairy Business.* March:8-9.

Wall, E. H. and T. B. McFadden. 2007. Frequent milking of fresh cows is a small investment with a big payoff. *Northeast Dairy Business*. December:28-30.

Book Chapters

Wall, E. H. and T. B. McFadden. 2012. Milk Removal: The Key to Maintaining Milk Production and a Tool to Enhance Efficiency. *in Milk Production - An up-to-date Overview of Animal Nutrition, Management, and Health*. Chapter 12: 235-256.

Wall, E. H. and T. B. McFadden. 2012. Regulation of Mammary Development as It Relates to Changes in Milk Production Efficiency. *in Milk Production - An up-to-date Overview of Animal Nutrition, Management, and Health*. Chapter 13: 257-288.

SCHOLARSHIPS AND AWARDS

New achiever alumni award (University of Vermont)

May 2013

This award is intended to honor those who have achieved excellence in one or more of the following areas: 1) a record of professional achievement, such as job advancements, publications, and/or entrepreneurial efforts, which show promise for future success; 2) demonstrated leadership in a chosen endeavor or interest, such as service on committees, boards or other professional associations; 3) contributions toward the betterment of society through involvement in worthy causes, community service, and/or humanitarian undertakings; and/or 4) demonstrated support of and/or service to the University and/or College.

H. Allen Tucker Graduate Student Travel Scholarship

July 2008

\$500 awarded for travel to Indianapolis, IN for ADSA-ASAS joint annual meeting & triennial Biology of Lactation Workshop

North American Colleges and Teachers of Agriculture (NACTA)

Spring 2005

Graduate teaching award of merit

Graduate Student Enhancement Fund

July 2004, July 2008

\$200 awarded for travel to St. Louis, MO for ADSA-PSA-ASAS joint annual meeting

3rd Place National ADSA/ASAS Graduate Student Paper Contest

July 2004

Awarded 3rd place in graduate student paper competition (awarded \$200)

George Walker Graduate Education Travel Scholarship

October 2003

\$600 awarded for travel to the University of Illinois to pursue collaborative research

1st Place Northeast ADSA/ASAS Graduate Student Paper Contest

June 2003

Awarded 1st place in graduate student paper competition (awarded \$500)