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PROFESSIONAL EXPERIENCE

Assistant Professor, Nutrition Program, School of Biological and Population Health Sciences, College of Public Health and Human Sciences, Oregon State University, Corvallis, OR. Jan 2016-present.

EDUCATION

University of California, Davis, Davis, California

Ph.D. in Nutritional Biology, Designated Emphasis in Biotechnology, Area of Specialization in Analytical Chemistry. Dissertation title: "Digestomics of Human Milk: Towards Improved Feeding of Premature Infants". Supervisor Prof. J. Bruce German. Received June, 2012.

Rice University, Houston, Texas

B.A. in Kinesiology: Health Sciences, received May 2008

RESEARCH EXPERIENCE

Post-doctoral Research Fellow, Department of Food Science and Technology, UC Davis, California August 2012 to December 2015. Supervisors: Drs. Carlito B. Lebrilla, Daniela Barile, David Mills and J. Bruce German. Fellowship provided by USDA National Institute of Food and Agriculture and the NIH K99 Career Award. Research to identify the digestive products of breast milk in term and premature infants in order to determine improved feeding solutions for premature infants. Examining bioactivity of identified naturally-occurring peptides in milk. Using cutting-edge liquid chromatography mass spectrometry and database searching, I have identified thousands of novel endogenous milk peptides, many of which have antimicrobial or immunomodulatory actions.

Graduate Student Research, UC Davis, California

September 2008 to June 2012 under Dr. J. Bruce German. Research determining composition of human milk N-linked glycans, peptides and glycopeptides. The aim of this research was to determine biological differences between premature and term mother's milk and digestion variability in term and premature infants so that an approach can be established for improved feeding of premature infant. Bench skills include a wide array of sample preparation and extraction techniques and mass spectrometry with Chip-TOF, Chip-Q-TOF and MALDI-FTICR.

GRANTS

Current Funding

11/1/17 – 10/31/19

Dallas, D. C. (PI), Scottoline, B. (Co-Investigator). Immunoglobulin Stability in the Infant Gut., Bill & Melinda Gates Foundation, \$815,354.

3/1/17 – 2/28/21

Dallas, D. C. (PI), Scottoline, B. (Co-Investigator). Peptidomics of in vivo digested human milk proteins to reveal novel immunomodulatory and antimicrobial peptides within the infant intestinal tract. USDA NIFA, \$500,000.

- 1/1/17 – 12/31/2020 Dallas, D. C. (PI), Scottoline, B. (Co-Investigator). Determining limitations in premature infant protein digestion capacity via digestomic analysis. Gerber Foundation, \$300,000.
- 1/1/16-12/30/2018 Dallas, D. C. (PI), K99/R00 Pathway to Independence Career Award. NIH NICHD, 4R00HD079561-03. Deciphering the function of naturally occurring peptides in human milk, \$1,074,000.
- 9/1/18 – 8/31/20 Dallas, D. C. (PI), Qu, Y. (Trainee). Digestion, absorption immunomodulation of casein glycomacropeptide in adult humans. BUILD Dairy (Building University-Industry linkages through Learning and Discovery for the dairy industry in the western region) in collaboration with Glanbia, \$127,536.
- 7/1/18 – 6/30/19 Dallas, D. C. (Co-PI), Stevens, F. (Co-PI), Shulzhenko, N. (Co-PI), Morgun, A (Co-PI). Role of *Bifidobacteria infantis* colonization in preterm infants on milk protein utilization and microbial protein fermentation. Joint Interdisciplinary Research Grant Program—Division of Health Sciences and Linus Pauling Institute, Oregon State University, \$20,000.
- 7/1/17 - 6/30/18 (ext.) Dallas, D. C. (Co-Principal), Higgins, A. (Co-Principal). Optimizing premature infant glucose balance via continuous glucose monitoring and data-controlled glucose infusion. Joint Interdisciplinary Research Grant Program—College of Engineering & College of Public Health and Human Sciences, Oregon State University, \$10,000.
- 7/1/17 –6/30/18 (ext.) Dallas, D. C. (Co-PI), Waite-Cusic, J. G. (Co-PI). Alternatives techniques for ensuring microbiological safety of donor breast milk to improve enzyme activity, digestion and premature infant growth. Joint Interdisciplinary Research Grant Program—College of Agriculture & College of Public Health and Human Sciences, Oregon State University, \$10,000.
- 9/1/18 –6/30/19 Grutzmacher, S. K., Dallas, D. C., Tomayko, E. J., Training/Continuing Education. University Graduate Laurels Block Grant for the Nutrition Program. Oregon State University, \$24,678.
- Completed**
- 9/1/17 –6/30/18 Grutzmacher, S. K., Dallas, D. C., Tomayko, E. J., Training/Continuing Education. University Graduate Laurels Block Grant for the Nutrition Program. Oregon State University. \$12,150.
- 4/1/15 – 3/31/16 Dallas, D. C. (Co-PI), Li, Y. (PI), Glycohub (PI), Barile, D. (Co-PI), Mills, D. (Co-PI), German, B. (Co-PI). NIH NICHD, SBIR, 1R43HD083981-01 Enzymatic modification of isolated bovine milk oligosaccharides to mimic human milk oligosaccharides with increased antimicrobial activity. \$150,000.
- 12/1/14 – 12/1/15 Dallas, D. C. (PI). Identification of peptides in whey permeate from bovine milk colostrum., Contract with La Belle Inc., \$5,000.
- 9/1/14 – 12/31/15 Dallas, D. C. (PI). Sensory-guided fractionation of a bioactive casein hydrolysate to determine bitter peptides. Foods for Health, Ireland. \$10,000.

- 7/1/14 – 12/30/15 Dallas, D. C. (PI), Barile, D. (Co-PI), de Moura Bell, J. (Co-PI). Development of a bioprocessing method to recover antimicrobial and anti-inflammatory peptides from dairy waste streams. UC Davis Sustainable AgTech Innovation Center Seed Fund Grant. \$25,000.
- 9/1/12 – 6/30/13 Dallas, D. C. (Co-PI), Underwood, M. (PI), Zivkovic, A. (Co-PI). Mechanisms by which human milk peptides and N-glycans shape the infant intestinal microbiota. Rosa B. Sherman/Clinical and Translational Science Center Pediatric Research Award. \$20,000.

AWARDS AND FELLOWSHIPS

1. **K99/R00 Pathway to Independence Career Award. Eunice Kennedy Shriver Institute of Child Health & Development of the National Institutes of Health.** (4R00HD079561-03). May 1, 2014-April 30, 2016. “Deciphering the function of naturally occurring peptides in human milk” \$78,689 per year first 2 years (K99 phase). \$250,000 per year for final 3 years (R00 phase). <http://fgp.ucdavis.edu/news/2014/05/david-dallas-NIH-pathway-to-independence-award>
2. **USDA National Institute of Food and Agriculture, Agriculture and Food Research Institute Post-doctoral Fellowship.** August 1, 2012-September 2014
3. **National Science Foundation Graduate Research Fellowship.** September 2010-July 2013. \$30,000/year stipend, plus tuition and travel expenses
4. **National Institutes of Health Training Program in Biomolecular Technology (2-T3-GM08799).** Oct. 1, 2009-Sept. 30, 2010. \$20,976 stipend, plus tuition, plus \$300 travel expenses.
5. **Graduate Scholars Fellowship.** Fall 2008-Summer 2009. \$23,000 stipend, plus tuition
6. **Kinsella Memorial Prize, 2013.** Established in honor of Professor John E. Kinsella. Awarded to the most outstanding dissertation in the College Agricultural and Environmental Sciences. \$3,000 award. <http://ucdaviscaes.wordpress.com/2013/06/03/kinsella-prize-winner-david-dallas-helps-uncover-secrets-of-human-breast-milk/>
7. **Jastro Shields Research Scholarship Award.** Received three times: June 2009, June 2010 and June 2011. \$8,000 total
8. **American Chemical Society Young Scientist Research Award Finalist, Travel Award winner, 2014.** \$1,000 travel award to present at the ACS conference’s Agricultural and Food Chemistry Division Young Scientist Award Symposium.
9. **Post-doctoral Scholar Association Travel Award.** March, 2013. Travel expenses for Experimental Biology conference to present milk peptide research
10. **Student Travel Award for the International Symposium on Milk Genomics and Human Health (IMGC2012) in Wageningen, Netherlands.** October, 2012
11. **First place in Graduate Student Research Poster Competition, Robert Mondavi Institute for Wine and Food Science, University of California, Davis.** January 2011. \$750 award
12. **Health Education Major of the Year Award, American Association for Health Education.** 2008

PUBLICATIONS

1. Beverly, R. L., Underwood, M. A., **Dallas, D. C.** (2019) Peptidomics analysis of milk protein-derived peptides released over time in the preterm infant stomach. *Journal of Proteome Research*. DOI: 10.1021/acs.jproteome.8b00604
2. Nielsen, S. D., Beverly, R. L.*, Underwood, M. A., Dallas, D. C. (2018) Release of functional peptides from mother’s milk and fortifier proteins in the premature infant stomach. *PLOS One*. 13(11):e0208204. doi.org/10.1371/journal.pone.0208204
3. Demers-Mathieu, V., Underwood, M. A., Beverly, R. L., **Dallas, D. C.** (2018) Survival of Immunoglobulins from Human Milk to Preterm Infant Gastric Samples at 1, 2, and 3 Hours Postprandial. *Neonatology*. 114: 242-250.

4. Demers-Mathieu, V., Underwood, M. A., Beverly, R. L., Drud Nielsen, S., **Dallas, D. C.** (2018) Comparison of human milk immunoglobulin survival during gastric digestion between preterm and term infants. *Nutrients*, Special Issue on Breastfeeding and Human Lactation. 10(5): 631.
5. Demers-Mathieu, V., Underwood, M. A., Beverly, R. L., **Dallas, D. C.** (2018) Survival of Immunoglobulins from Human Milk to Preterm Infant Gastric Samples at 1, 2, and 3 Hours Postprandial. *Neonatology*. 114: 242-250.
6. Nielsen, S. D., Beverly, R. L., **Dallas, D. C.** (2018) Milk proteins are predigested within the mammary gland. *Journal of Mammary Gland Biology and Neoplasia*. 22(4): 251-261.
7. Murray, N. M., O'Riordan, D., Jacquier, J.-C., O'Sullivan, M., Holton, T. A., Wynne, K., Robinson, R. C., Barile, D., Nielsen, S. D., **Dallas, D. C.** (2018) Peptidomic screening of bitter and non-bitter sodium caseinate hydrolysate fractions for bioactive peptides. *Journal of Dairy Science*. doi: 10.3168/jds.2017-13853.
8. Demers-Mathieu, V., Qu, Y., Underwood, M. A., **Dallas, D. C.** (2018) The preterm infant stomach actively degrades milk proteins with increasing breakdown across digestion time. *Acta Paediatrica*. 107(6): 967-974.
9. **Dallas, D. C.**, Traber, M. (2018) How does breast milk enhance lutein absorption? *Journal of Nutrition* 148(1): 1-2.
10. Demers-Mathieu, V., Qu, Y., Underwood, M. A., Borghese, R., **Dallas, D. C.** (2018) Premature infants have lower gastric digestion capacity for human milk proteins than term infants. *Journal of Pediatric Gastroenterology & Nutrition*. 66(5): 816-821.
11. Nielsen, S. D., Beverly, R. L.*, **Dallas, D. C.** (2017) Peptides released from foremilk and hindmilk proteins by breast milk proteases are highly similar. *Frontiers in Nutrition, Nutrition Methodology* 4(54).
12. Demers-Mathieu, V., Nielsen, S. D., Underwood, M. A., Borghese, R., **Dallas, D. C.** (2017) Changes in proteases, antiproteases and bioactive proteins from mother's breast milk to the premature infant stomach. *Journal of Pediatric Gastroenterology and Nutrition* 66(2): 318-324.
13. Nielsen SD, Beverly RL, Qu Y, **Dallas DC** (2017). "Milk bioactive peptide database: A comprehensive database of milk protein-derived bioactive peptides and novel visualization." *Food Chemistry*, 232: 673-682.
14. Demers-Mathieu V, Nielsen SD, Underwood MA, Borghese R, **Dallas DC** (2017). "Analysis of milk from mothers who delivered prematurely reveals few changes in proteases and protease inhibitors across gestational age at birth and infant postnatal age." *Journal of Nutrition*, 147 (6): 1152-1159.
15. Murray NM, O'Riordan D, Jacquier JC, O'Sullivan M, Cohen JL, Heymann H, Barile D, **Dallas DC** (2017). "Validation of a paper-disk approach to facilitate the sensory evaluation of bitterness in dairy protein hydrolysates from a newly developed food-grade fractionation system." *Journal of Sensory Studies*, 32(3): e12266.
16. Picariello G, Addeo F, Ferranti P, Nocerino R, Paparo L, Passariello A, **Dallas DC**, Robinson RC, Barile D, Canani RB (2016). "Antibody-independent identification of bovine milk-derived peptides in breast-milk." *Food & Function*, DOI: 10.1039/c6fo00731g.
17. **Dallas DC**, Sanctuary M, Qu Y, Khajavi SH, Van Zandt A, Dyandra M, Frese SA, Barile D, German JB (2015). "Personalizing protein nourishment." *Critical Reviews in Food Science and Nutrition*, DOI: 10.1080/10408398.2015.1117412.
18. **Dallas DC**, Citerne F, Tian T, Silva VLM, Kalanetra KM, Frese SA, Robinson RC, Mills DA, Barile D (2015). "Peptidomic analysis reveals proteolytic activity of kefir microorganisms on bovine milk proteins." *Food Chemistry*. DOI: 10.1016/j.foodchem.2015.10.116
19. **Dallas DC**, Murray N, Gan J. "Proteolytic Systems in Milk: Perspectives on the Evolutionary Function within the Mammary Gland and the Infant." *Journal of Mammary Gland Biology and Neoplasia*. 2015. DOI: 10.1007/s10911-015-9334-3
20. **Dallas DC**, Smink CJ, Robinson RC, Tian T, Guerrero A, Parker EA, Smilowitz JT, Hettinga KA, Underwood MA, Lebrilla CB, German JB, Barile, D (2015). "Endogenous human milk peptide release is greater following preterm birth than term birth." *Journal of Nutrition*. 145 (3): 425-433.
21. **Dallas DC**, Guerrero A, Parker EA, Robinson RC, Gan J, German JB, Barile D, Lebrilla CB (2015). "Current peptidomics: applications, purification, identification, quantification and functional analysis." *Proteomics*. 15: 1026-1038. DOI: 10.1002/pmic.201400310
22. Guerrero A, **Dallas DC**, Contreras S, Bhandari A, Canovas A, Islas-Trejo A, Medrano JF, Parker EA, Wang M, Hettinga KA, German JB, Barile DB, Parker EA, Lebrilla CB (2014). "Peptidomic analysis of

- healthy and subclinically mastitic bovine milks.” *International Dairy Journal*. DOI: 10.1016/j.idairyj.2014.09.006
23. Holton TA, Vijayakumar V, **Dallas DC**, Guerrero A, Borghese RA, Lebrilla CB, German JB, Barile DB, Underwood MA, Shields DC, Khaldi N (2014). “Following the digestion of milk proteins from mother to baby.” *Journal of Proteome Research*. 13: 5777-5783. DOI: 10.1021/pr5006907
 24. Guerrero A, **Dallas DC**, Contreras S, Chee S, Parker EA, Sun X, Dimapasoc L, Barile D, German JB, Lebrilla CB (2014) “Mechanistic peptidomics: factors that dictate specificity in the formation of endogenous peptides in human milk.” *Molecular and Cellular Proteomics*. 13 (8): 3343-3351. DOI: 10.1074/mcp.M113.036194
 25. Le Parc A, **Dallas DC**, Duaut S, Leonil J, Martin P, Barile D (2014). “Characterization of goat milk lactoferrin *N*-glycans and comparison with the *N*-glycomes of human and bovine milk.” *Electrophoresis*. 35 (11): 1560-1570. DOI: 10.1002/elps.201300619
 26. Khaldi N, Vijayakumar V, **Dallas DC**, Guerrero A, Wickramasinghe S, Smilowitz JT, Medrano JF, Lebrilla CB, Shields DC, German JB (2014). “Predicting the important enzyme players in human breast milk digestion.” *Journal of Agricultural and Food Chemistry*. 62 (29): 7225-7232. DOI: 10.1021/jf405601e
 27. **Dallas DC**, Guerrero A, Khaldi N, Borghese R, Bhandari A, Underwood MA, Lebrilla CB, German JB, Barile D (2014). “A peptidomic analysis of human milk digestion in the infant stomach reveals protein-specific degradation patterns.” *Journal of Nutrition*. 144: 815-820. DOI: 10.3945/jn.113.185793
 28. **Dallas DC**, Bell JML, Wang M, Parker EA, Guerrero A, Hettinga KA, Lebrilla CB, German JB, Barile D (2014). “Comprehensive peptidomic and glycomic evaluation reveals that sweet whey permeate from colostrum is a source of milk protein-derived peptides and oligosaccharides.” *Food Research International*. 63(B): 203–209. DOI: 10.1016/j.foodres.2014.03.021
 29. **Dallas DC**, Guerrero A, Parker EA, Garay LA, Lebrilla CB, Barile D, German JB (2014). “Peptidomic profile of milk of Holstein cows at peak lactation”. *Journal of Agricultural and Food Chemistry*. 62 (1): 58–65.
 30. **Dallas DC**, Guerrero A, Khaldi N, Barile D, German JB, Lebrilla CB (2013). “Extensive identification of naturally occurring peptides in human milk by chip-based mass spectrometry.” *Journal of Proteome Research*. 12 (5): 2295-2304.
 31. **Dallas DC**, Lee H, Le Parc A, Nobrega JM, Barile D (2013). “Coupling mass spectrometry-based “omic” sciences with bioguided processing to unravel milk’s hidden bioactivities.” *Advances in Dairy Science*. 1 (2): 1-9.
 32. Meyrand M*, **Dallas DC***, Caillat H, Bouvier F, Martin P, Barile D (2013). “Comparison of milk oligosaccharides between goats with and without the genetic ability to synthesize α_{s1} -casein.” *Small Ruminant Research*. 113(2-3): 411-420. *Shared principle authorship.
 33. Garrido DA, **Dallas DC**, Mills DA (2013). “Consumption of human milk glycoconjugates by infant-associated bifidobacteria: Mechanisms and implications.” *Microbiology*. 159(4): 649-664.
 34. **Dallas DC**, Underwood MA, Zivkovic AM, German JB (2012). “Digestion of protein in premature and term infants.” *Journal of Nutritional Disorders and Therapy*, 2, 2161.
 35. **Dallas DC**, Martin WF, Hua S, German JB (2012). “Automated glycopeptide analysis—review of current state and future directions.” *Briefings in Bioinformatics*. 14(3): 361-374.
 36. **Dallas DC**, Sela D, Underwood MA, German JB, Lebrilla CB (2012). “Protein-linked glycan degradation in infants fed human milk.” *Journal of Glycomics and Lipidomics*. S1:002.
 37. **Dallas DC**, Martin WF, Strum JS, Zivkovic AZ, Smilowitz JT, Underwood MA, Affolter M, Lebrilla CB, German JB (2011). “*N*-linked glycan profiling of mature human milk by high performance microfluidic chip liquid chromatography time-of-flight tandem mass spectrometry.” *Journal of Agricultural and Food Chemistry*. 59(8): 4255-4263.
 38. German JB, Zivkovic AM, **Dallas DC**, Smilowitz JT (2010). “Nutrigenomics and personalized diets: What will they mean for food?” *Annual Reviews of Food Science and Technology*. 2(1): 97-123.

CHAPTERS

1. **Dallas, D. C.**, Nielsen, S. D. (2018) Milk peptidomics to identify functional peptides and for quality control of dairy products. In Michael Schrader, Lloyd Fricker (Ed.), *Peptidomics--Methods and Protocols* (1st ed., vol. 1719). Methods in Molecular Biology, Springer.
2. **Dallas, D. C.**, German, J. B. (2017) Enzymes in human milk. In: Isolauri E, Sherman P, Walker W, editors. *Intestinal Microbiome: Functional Aspects in Health and Disease*. Basel, Switzerland: Karger Publishers; p. 129-36.
3. **Dallas DC**, Meyrand M., Barile D. (2014). "Production and bioactivity of bovine milk oligosaccharides." in Moreno, F. J. & Sanz, M. L., (Eds), *Food Oligosaccharides: Production, Analysis and Bioactivity*, Chapter 2, Wiley-Blackwell, Ames, USA, ISBN: 978-1-118-42649-4.
4. Lange M, Lee H, **Dallas DC**, Le Parc A, Nobrega JM, Barile D., "Determining functional properties and sources of recently identified bioactive food components: oligosaccharides, glycolipids, glycoproteins and peptides." in: Alfen, N. K. V. (Ed.), *Encyclopedia of Agriculture and Food Systems*, Academic Press, Oxford 2014, pp. 441-461. DOI: 10.1016/B978-0-444-52512-3.00067-X

OUTREACH PUBLICATIONS

1. Robinson RC, **Dallas DC**, Barile D. "Nutritional Platforms for Dairy Peptides." World of Food Ingredients. May, 2014.
2. Robinson RC, Gan J, **Dallas DC**. "The Milk Peptidome: A Goldmine of Bioactivities." In SPLASH! Milk science update. May, 2014.
3. **Dallas DC**, Barile D. "Proteases vs. antiproteases: The battle over milk digestion." In SPLASH! Milk science update. October, 2012.

POSTERS AND PRESENTATIONS

1. Demers-Mathieu, V., Huston, R., Brian Scottoline, **Dallas, D. C.**, Pediatric Academic Societies Meeting. Digestion of Maternal Immunoglobulins specific to influenza A virus from Mother's Own Breast Milk and Donor Breast Milk in Preterm Infants. Poster presentation. (April 27-29, 2019).
2. **Dallas, D. C.**, International Milk Genomics Consortium, Sacramento, CA. Milk protein digestion and bioactive peptide release in term and preterm infants., Invited, oral presentation. (November 13-15, 2018).
3. Demers-Mathieu, V., Underwood, M. A., Beverly, R. L., Nielsen, S. D., **Dallas, D. C.**, International Milk Genomics Consortium, Sacramento, CA. Comparison of Human Milk Immunoglobulin Survival during Gastric Digestion between Preterm and Term Infants., Invited, oral presentation. (November 13-15, 2018).
4. Beverly, R. L.*, Nielsen, S. D., Underwood, M. A., **Dallas, D. C.**, International Milk Genomics Consortium, Sacramento, CA. Release of milk peptides within the infant stomach and possible developmental relevance., Poster presentation. (November 13-15, 2018).
5. Gan, J., Zheng, J., Krishnakumar, N., Beverly, R. L., **Dallas, D. C.**, German, J.B., International Milk Genomics Consortium, Sacramento, CA. Dynamic human milk proteolytic system releases specific peptides from α -lactalbumin in response to pH. Poster presentation. (November 13-15, 2018).
6. **Dallas, D. C.**, Linus Pauling Institute Research Seminar, Linus Pauling Institute, Corvallis, OR. Milk bioactives in infant digestion. (October 25, 2018).
7. Demers-Mathieu, V., Underwood, M.A., Beverly, R. L., **Dallas, D. C.**, International Society for Research in Human Milk and Lactation, Kanagawa, Japan. Comparison of human milk immunoglobulin survival during gastric digestion between preterm and term infants., Invited poster with travel award. (October 6-11, 2018).
8. Victor, A., Waite-Cusic, J., **Dallas, D. C.**, Summer Undergraduate Research Symposium, Oregon State University, Corvallis, OR. Impact of alternative donor breast milk sterilization techniques on bile salt-stimulated lipase activity. Poster presentation. (September 13, 2018).
9. Johnson, G. D., Sepp, A., Handley, Q. M., **Dallas, D. C.**, Summer Undergraduate Research Symposium, Oregon State University, Corvallis, OR. Premature infant glucose control system. Oral presentation. (September 13, 2018).
10. **Dallas, D. C.**, Gates Foundation Synthetic Colostrum Meeting, Bill and Melinda Gates Foundation, Boston, MA. Determining oral immunoglobulin stability within the infant digestive tract., Invited, oral presentation. (July 25-26, 2018).

11. Demers-Mathieu, V., Underwood, M.A., Beverly, R. L.*, **Dallas, D. C.**, American Society for Nutrition, Boston, MA. The survival of human milk immunoglobulins across postprandial time in the premature infant stomach., Invited poster with travel award. (June 9-12, 2018).
12. Hollenbeck, K., **Dallas, D. C.**, OSU Celebration of Undergraduate Excellence, Oregon State University, Corvallis, OR. Nutritional Comparison of Intrauterine and Extrauterine Sources and Preterm Infant Growth., Invited. (May 19, 2018).
13. **Dallas D. C.**, Oregon Dairy Industries Conference, Salem, OR. A2 milk: what's real and what does the science say?, Invited presentation. (April 10, 2018).
14. **Dallas, D. C.**, USDA W3002 Annual Meeting, USDA, Tucson, AZ. Digestion of milk protein in infants and bioactive peptides., Invited. (February 8, 2018).
15. Drud Nielsen, S., Beverly, R. L.*, Qu, Y., **Dallas, D. C.**, Conference on milk composition, functional genomics and health aspects, Larkollen, Norway. Milk Bioactive Peptide Database: utilization and novel visualization., Invited. (November 20, 2017).
16. **Dallas, D. C.**, NIH Workshop on Human Milk Composition--Biological, Environmental, Nutritional, and Methodological Considerations, NIH NIDDK National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, Maryland. Milk proteins and quantified proteomics., Invited. (November 16, 2017).
17. **Dallas, D. C.**, Gates Foundation Synthetic Colostrum Meeting, Bill and Melinda Gates Foundation, Boston, MA. Determining oral immunoglobulin stability within the infant digestive tract via peptidomics, proteomics and ELISA., Invited. (October 4, 2017).
18. Demers-Mathieu, V., Qu, Y., Beverly, R. L., Underwood, M. A., **Dallas, D. C.**, OSU-UO Postdoctoral Research Symposium, Oregon State University, Corvallis, OR. Survival of milk immunoglobulins during gastric digestion in premature infants., Accepted. (October 4, 2017).
19. Drud Nielsen, S., Beverly, R. L.*, Qu, Y., **Dallas, D. C.**, International Milk Genomics Consortium, Quebec City, Canada. Milk Bioactive Peptide Database: A comprehensive milk bioactive peptide database and novel visualization., Invited. (September 27, 2017).
20. **Dallas, D. C.**, International Milk Genomics Consortium, Quebec City, Canada. Milk protein digestion in premature infants and bioactive peptide discovery., Invited. (September 27, 2017).
21. Ahmad, Z., Demers-Mathieu, V., **Dallas, D. C.**, OSU Celebration of Undergraduate Excellence, Oregon State University, Corvallis, OR. Role of milk proteases on gastric digestion of human breast milk in premature and term infants., Invited. (May 19, 2017).
22. **Dallas, D. C.**, OSU Nutrition Update, Moore Center, Corvallis, OR. Milk protein digestion in premature infants: a peptidomics and enzyme analysis approach. (February 23, 2017).
23. **Dallas, D. C.**, Linus Pauling Institute Research Seminar, Linus Pauling Institute, Corvallis, OR. Milk protein digestion in premature infants: a peptidomics and enzyme analysis approach. (December 8, 2016).
24. **Dallas, D. C.**, CPHHS Research Seminar, CPHHS, Corvallis, OR. Breast milk protein digestion in premature infants. (December 2, 2016).
25. Demers-Mathieu, V., **Dallas, D. C.**, International Milk Genomics Consortium, Davis, CA. Impact of the degree of prematurity and time postpartum on milk protease activity in the infant stomach., Invited. (September 29, 2016).
26. Robertson, C., Demers-Mathieu, V., Nielsen, S. D., **Dallas, D. C.**, OSU Celebration of Undergraduate Excellence, Oregon State University, Corvallis, OR. Effects of different heat treatments on total protease and plasmin activity in human milk., Accepted. (May 16, 2016).
27. **Invited speaker.** International Milk Genomics Consortium Conference, Sydney, Australia. "Peptidomics of milk digestion *in vivo*." October, 2015.
28. **Invited speaker.** American Chemical Society Young Scientist Research Award for the Agricultural and Food Chemistry Division Young Scientist Award Symposium. "*Milk peptidomics across infant digestion*." June, 2014.
29. **Invited speaker.** International Dairy Federation conference. Melbourne, Australia. "Lactation: What 200 million years of evolution can teach us about food structure and health." March, 2014.
30. Presentation. Sivamani, R. K., Burney, W., Sharma, S., Killer, G., **Dallas, D. C.**, German, J. B., Isseroff, R. R. (2014) Lipoproteins and bovine milk peptides stimulate lipogenesis and inflammatory response in human sebocytes. Albuquerque, NM: *Society for Investigative Dermatology*.

31. **Invited speaker.** International Milk Genomics Consortium Conference. “Peptidomics of bovine milk and whey and human digestion.” October, 2013.
32. UC Davis Clinical and Translational Science Center Annual Funding Retreat. “Mechanisms by which human milk peptides and *N*-glycans shape the infant intestinal microbiota.” September 2013.
33. Experimental Biology. “Functional milk peptides.” Poster presentation. April 2013.
34. Dietary Bioactives Poster Competition at Experimental Biology. “Milk’s naturally occurring peptides.” Poster presentation. April 2013.
35. Milk Bioactives Group. “Naturally occurring functional milk peptides.” Oral presentation. January 2013.
36. **Invited speaker.** International Milk Genomics Consortium. “Identification of naturally occurring bioactive peptides in intact human milk and gastric samples in infants.” Wageningen, The Netherlands. October 2012.
37. Human Proteome Organization Conference. Boston, MA, USA. “Peptidomics for identification of naturally occurring bioactive peptides in intact human milk and comparison of gastric proteolytic degradation in term and premature infants.” Poster. September 2012.
38. Graduate Group of Nutritional Biology Student Symposium. “Digestomics of human milk: towards improved feeding for premature infants.” Oral presentation. May 2012.
39. Interdisciplinary Graduate and Professional Symposium. “Peptidomics of human milk and digestion in term and premature infants.” Oral presentation. April 2012.
40. Milk Bioactives Group meeting. “Human milk protein and glycoprotein degradation in the infant stomach.” Oral presentation. November 2011.
41. Robert Mondavi Institute Brewery and Winery Poster Competition. “Towards Comparative *N*-linked Glycomics and Glycopeptidomics of Human Milk.” Poster. January 2011.
42. International Milk Genomics Consortium. “Comparative *N*-linked Glycomics of Human Milk.” Poster. October 2010.
43. Interdisciplinary Graduate Symposium. “Digestion of milk and formula in the premature infant.” Oral presentation. April 2010.
44. Milk Bioactives Group meeting. “Infant Glycopeptide Digestome of Breast Milk and Formula Fed Infants.” Oral presentation. April 2010.
45. Designated Emphasis in Biotechnology Retreat. “In Vivo Infant Glycopeptide Digestome of Term and Premature Infants.” Oral presentation and poster. March 2010.

PATENTS

Provisional patent on naturally occurring human milk peptides for antimicrobial actions. “Antibacterial peptides.” US 20140148378 A1.

INDUSTRY

1. Scientific Advisor. International Milk Bank. March, 2015-present.
2. Foods for Health Ireland. Contract to fractionate casein hydrolysates and identify peptide sequences responsible for bitter flavors. September, 2014-current.
3. La Belle. Contract to identify peptides in whey permeate products from bovine milk colostrum. December 2014.

TEACHING EXPERIENCE

- **Nutrition 225, General Human Nutrition**, Oregon State University. Winter 2017.
- **Nutrition 417/517, Human Nutrition Science**, Oregon State University. Fall 2016, 2017.
- **Kinesiology 401, Research and Scholarship**, Oregon State University. Spring 2016.
- **Nutrition 503/603, Thesis Research**, Oregon State University. January 2016-present.
- **Chemical, Biological and Environmental Engineering 416, Engineering Design**. Designed project for and assisted in mentoring of a 3-student chemical engineering team in collaboration with Dr. Adam Higgins. The project required creation of a continuous feedback system for using continuous glucose monitors to control glucose infusion rates to improve preterm infant glucose control and neurodevelopmental outcomes. Oregon State University. 2/5/18-6/30/18.

- **Graduate and undergraduate student research mentoring**, Oregon State University and UC Davis. Mentored eight graduate students and four post-doctoral scholars in milk bioactive research, manuscript preparation and fellowship and grant writing. Mentored over 25 undergraduate interns in research.
- **Guest lecture**, 2 hours. “Milk Bioactives and Peptides” for Oregon State University NUTR 514/FST 514, Health Benefits of Functional Foods, Nutraceuticals and Dietary Supplements. November 11, 2018.
- **Guest lecture**, 1.5 hour. “Protein nutrition.” For Oregon State University NUTR 225. October 24, 2017.
- **Guest lecture**. Certified Northwest in Portland. Guest Lecture on "Human Milk and Your Baby's Health". Oregon State University, 20 participants. Portland, OR.
- **Guest lecture**, 1.5 hour. “Protein nutrition.” For Oregon State University NUTR 225. April 26, 2016.
- **Guest lecture**, 1.5 hour, “Protein nutrition.” For Oregon State University NUTR 240, Human Nutrition. 100 participants. 4/21/17.
- **Guest lecture**, 1 hour. “Milk protein digestion: an omics perspective.” For Oregon State University NUTR 507/607. February 19, 2016.
- **Young Scholars Program**. Mentored a high school student in research full time for 6 weeks in analysis of term and preterm milk glycans via mass spectrometry, article writing and presentation development. June 22-Aug 1, 2015.
- **Guest lecture**, 2 hours. “Effect of dietary protein type and treatment on gut bacteria, microbial metabolites, inflammation and disease.” For UC Davis Nutrition 250: Metabolic Homeostasis. December 12, 2014.
- **Lab practical**, 1 hour. Hands-on lecture introducing analytical instrumentation (liquid chromatography, electrospray mass spectrometry) and peptide extraction to UC Davis Food Science 201A: Food Chemistry and Biotechnology graduate class. Nov 6, 2014.
- **Guest lecture**, 2 hours. “Peptidomic Profiling in Food Science.” For UC Davis Food Science 201A: Food Chemistry and Biotechnology. Oct 30, 2014.
- **Guest lecture**, 2 hour. “Milk protein digestomics”. For UC Davis Nutrition 250: Metabolic Homeostasis. December 7, 2013.
- **Guest lecture**, 2 hours. “Peptidomics and Proteomics in Food Science.” For UC Davis Food Science 201A: Food Chemistry and Biotechnology. Nov 7, 2013.
- **Guest lecture**, 1 hour. “Digestomics: unraveling the complexity of naturally occurring milk peptides.” For UC Davis Food Science 290 (graduate seminar). January 23, 2013.
- **Lab practical**, 1 hour. Hands-on lecture introducing analytical instrumentation (liquid chromatography, electrospray and MALDI mass spectrometry) to UC Davis Food Science 201A: Food Chemistry and Biotechnology graduate class. Nov 15, 2012.
- **Guest lecture**, 1 hour. “Peptidomics and degradomics of human milk”. For UC Davis Nutrition 298A graduate level course. Oct 31, 2012.
- **Guest lecture**, 1 hour. “Nutritional Proteomics”. For UC Davis Nutrition 298A graduate level course. October 26, 2012.
- **Guest lecture**, 2 hour. “Proteomics as a tool for understanding metabolism”. For UC Davis Nutrition 250: Metabolic Homeostasis. December 3, 2012.
- **Guest lecture**, 2 hour. “Proteomics for Food Science” For UC Davis Food Science 201A: Food Chemistry and Biotechnology graduate course. October 25, 2012.
- **Health Sciences Department, Rice University**, Houston, Texas. *Teaching Assistant for Introductory Nutrition class*. Spring semester 2007. Assisted Professor Roberta Anding with class administration. Led review sessions and provided individual tutoring. Helped to create and grade exams and homework assignments. Delivered 1 hour guest lecture on health implications of dietary omega-3 and omega-6 fatty acids.

SERVICE

School/Program-level Service

- University Graduate Laurels Block Grant, Writer, approximately 20 hours spent for the year. (December 1, 2017 - December 15, 2017).
- University Graduate Laurels Block Grant, Writer, approximately 20 hours spent for the year. (December 1, 2016 - December 12, 2016).

College-level Service

- CPHHS Stakeholders Committee for Strategic Planning, Committee Member. (August 8, 2017 - Present).
- Search Committee for Nutrition Clinical Assistant Professor, Committee Member, approximately 80 hours spent for the year. (May 27, 2016 - Present).
- Masters of Public Health-Nutrition Development Committee, Committee Member, approximately 40 hours spent for the year. (April 2016 - Present).
- Undergraduate Scholarship Committee, Committee Member, approximately 40 hours spent for the year. (February 2016 - Present).

University-level Service

- Oregon State University Microbiome Initiative Workshop Committee, Committee Member, approximately 30 hours spent for the year. (December 6, 2016 - Present).
- Internal Oversight Committee for the Oregon State Mass Spectrometry Center Orbitrap Fusion Lumos, Committee Member. (March 2018 – Present).

Professional Service

- NIH Committee on Human Milk Composition, Committee Member, Washington, D.C., approximately 80 hours spent for the year. Appointed. (October 6, 2017 - Present).
- USDA Multistate Research Project W3002 "Nutrient Bioavailability - Phytonutrients and Beyond", Member, approximately 60 hours spent for the year. Appointed. (January 1, 2018 - Present).
- Nominating Committee for International Society for Research on Human Milk and Lactation (ISRHML), Committee Member, approximately 20 hours spent for the year. Appointed. (December 6, 2017 - Present).
- Associate Editor, *Frontiers in Nutrition*, Nutrition Methodology Editor, approximately 20 hours spent for the year. (April 2017 - Present).
- Committee Member, Foods for Health Institute, Davis, CA, approximately 80 hours spent for the year. (September 2012 - December 2015).

Grant Reviewer

- Technology Foundation STW, Dutch funding agency, Reviewer, Grant Proposal, approximately 40 hours spent for the year. (October 2014).
- UC Davis Postdoctoral Scholars Association Travel Grants, Reviewer, Grant Proposal. (July 2013).

Journal Reviewer

Note: I regularly review for discipline-based journals. I review approximately 10-15 manuscripts per year.

Journal

Current Developments in Nutrition
 Food and Function
 Nucleic Acids Research
 Peptides
 American Journal of Clinical Nutrition
 Food Chemistry
 Oncotarget
 Food and Bioproducts Processing

Timeframe

March 2018-present
 June 2017-present
 January 2017-present
 January 2017-present
 August 2016-present
 June 2016-present
 June 2016-present
 October 2015-present

Dairy Science and Technology	January 2015-present
Journal of Dairy Science	October 2014-present
British Journal of Nutrition	September 2014-present
Journal of Molecular Recognition	May 2014-present
Nutrition: International Journal of Applied and Basic Nutritional Science	January 2014-present
Food Research International	December 2013-present
Nutrition Reviews	April 2013-present

Service to the Public

- Northwest Mother's Milk Bank, Board member, Portland, OR, (September 13, 2016 - Present).
- International Milk Bank, Scientific advisory board member, Reno, NV, (March 2015 - Present).

PROFESSIONAL DEVELOPMENT

- **Grant Writer's Seminar and Workshop**, OSU College of Public Health and Human Sciences. March 11, 2017-December 30, 2017. Workshop to prepare for NIH R01 grant submission.
- **Teaching Talks Workshop**, OSU Center for Teaching and Learning. October 25, 2016 – Present.
- **Advising Doctoral Students Workshop**, OSU. October 13, 2016.
- **Social Justice Education Initiative Workshop**, OSU. 9/22/2016-9/26/2016.
- **Grant Writer's Seminar and Workshop**, OSU College of Public Health and Human Sciences. March 11, 2016-December 30, 2016. Workshop to prepare for NIH R01 grant submission.
- **Iterate**, OSU Advantage Accelerator, Oregon State University. April-May, 2016. Workshop on business design.
- **Ag Innovation Entrepreneurship Academy**, UC Davis. June 23-25, 2014. Course on bringing research innovations to the marketplace.
- **Programming in R Course**, UC Davis. April 5-6th, 2013. Short course for use of R for statistical analysis and programming.
- **Designated Emphasis in Biotechnology**, UC Davis. December, 2008-June 2012. Curriculum designed to teach biotechnology principles, scientific ethics, and bringing science to practice. Attended lectures by industry speakers, took five required courses.
- **Advanced Protein Identification Informatics**, Human Proteome Organization Short Course. September 9th, 2012. Short course for improving implementation of bioinformatic techniques for proteomic analyses.
- **Multivariate Data Analysis Lecture and Lab Series**, UC Davis. August 20-25, 2012. Week-long course learning advanced techniques for multivariate statistical analysis including Principal Component Analysis, Partial Least Squares-Discriminant Analysis, Machine Learning, Correlation Trees. The course taught both theory and hands-on use of these methods in computer lab modules.
- **Foods For Health Entrepreneurship Academy**, UC Davis. February 22-27, 2008. Week-long course on bringing personal research to the marketplace. Learned basics of Intellectual Property licensing and developed and presented business plan to potential investors.

OTHER RELEVANT EXPERIENCE

Houston Department of Health and Human Services, Houston, Texas
Nutrition Policy Intern under Dr. Cathy Troisi. June 2nd to August 4th, 2008. Evaluated and created bills for the City Council on nutritional policy. Bills included a trans fatty acid ban and required nutritional information posted on menu boards at chain restaurants. Additionally, compiled and edited several reports on major project undertaken by entire Department called AIM which aimed to assess and improve the health of people in poor areas of the city. Also organized the Department's internship programs and external affiliations.

Rice Humanitarian Medical Outreach, Rice University, Kpando, Ghana
Intern. July 20-August 18 Summer 2007

Shadowed doctors and nurses in Margaret Marquat Memorial Hospital in the surgical ward, medical ward, pediatric ward and operating theatre. Volunteered extensively at HardtHaven Children's Home, an orphanage for thirteen children whose parents had died from AIDS. Developed an educational nutrition intervention to teach locals to purchase and eat brown rice rather than white in order to aid in the prevention of type II diabetes. Created a series of posterboards which conveyed this message that public health nurses could use to deliver ongoing lectures to groups of locals.

Beyond Traditional Borders, Rice University, Mbabane, Swaziland

Intern. May 24-July 19 Summer 2007

Initiated, organized, ran and trained staff for the World Food Programme distribution of corn-soy blend to families at the Baylor Bristol-Myers-Squibb HIV/AIDS clinic. Created two educational videos in SiSwati for patients to be shown in the waiting room of clinic each day: one to better explain the World Food Programme and how to cook with the corn-soy blend and one on the importance of and techniques for handwashing, making clean water, and sterilizing utensils used to cook for and feed a baby. Learned a great deal about malnutrition, how HIV affects nutritional needs, how to work effectively with those of another culture, various types of nutritional interventions and how to implement an intervention.

USDA/ARS Children's Nutritional Research Center, Baylor College of Medicine, Houston, Texas
Project Intern under Tom Baranowski, Ph.D. and Janice Baranowski, M.P.H., R.D. Fall 2006 to Spring 2007.

Collected data from user review interviews for a computer game called "Nanoswarm" which aims to increase fruit, vegetable and 100% juice consumption among children. Assisted in data collection for a study on the role of PROP sensitivity in the development of obesity among ethnically diverse children. Coded telephone interviews to assess parenting styles.

Oregon State University Agricultural Research Station, Pendleton, Oregon

Research Assistant. May-July 2004

Aided in research to develop a more productive and pest-resistant wheat variety. Maintained, harvested and sampled experimental wheat crops. Prepared and analyzed samples for pest-resistance and yield determination.

PROFESSIONAL MEMBERSHIPS

National Center for Faculty Development and Diversity. December 2015 - present.

American Society for Nutrition member, November 2012-present, Lactation Research Interest Section

International Society for Research in Human Milk and Lactation member, May 2013-present

Human Proteome Organization member, June 2012-present

International Milk Genomics Consortium member, 2008-present

American Chemical Society, April 2014-present

National Center for Faculty Development and Diversity, December 2015-present