

# Laura K. Jefferies

Associate Professor of Food Science  
S-133 ESC Provo, Utah 84602  
(801) 422-9290 LAURA\_JEFFERIES@BYU.EDU

## EDUCATION

|                          |       |      |                                 |
|--------------------------|-------|------|---------------------------------|
| Utah State University    | Ph.D. | 2011 | Food Science                    |
| Brigham Young University | M.S.  | 1998 | Food Science                    |
| Brigham Young University | B.S.  | 1994 | Food Science<br>Chemistry minor |

## PROFESSIONAL EXPERIENCE

|  |   |
|--|---|
| Brigham Young University, Provo<br>Department of Nutrition, Dietetics and Food Science |   |
| 2017 – Present   | Associate Professor                     |
| 2011 – Present   | Assistant Professor                     |
| 1998 – 2011  | Research Associate, Sensory Lab Manager |

## HONORS AND AWARDS

Certified Food Scientist, Institute of Food Technologists, 2013  
Distinguished Service Award, College of Life Sciences, 2010

## RESEARCH FUNDING (projects funded as the PI or co-PI)

|                                |  |           |
|--------------------------------|--|-----------|
| January 2023 to December 2023  | BYU College of Life Sciences CURA          | \$2000    |
| January 2022 to December 2022  | Western Dairy Center                       | \$17,500  |
| January 2021 to December 2023  | Western Dairy Center                       | \$145,600 |
| November 2021 to December 2023 | Alliance for Potato Research and Education | \$53,900  |
| July 2020 – July 2021          | Western Dairy Center                       | \$6000    |
| July 2019 – December 2020      | Basic American Foods                       | \$76,000  |
| January - December 2019        | Western Dairy Center                       | \$33,000  |
| January 2012 – December 2018   | Basic American Foods                       | \$350,000 |
| January – December 2013        | BYU Department of Religious Studies        | \$9,500   |

## PUBLICATIONS

Jonathan Kershaw, Alissa Nolden, Adam R Brown, Tara Hites, Laura Jefferies. T. Tastiness of meat and plant protein foods are associated with political partisanship and may be influenced by partisan messaging. Under third review with Food Qual. Preference.

Hernandez, M., Bellini, S., Christensen, W., **Jefferies, L.**, LeCheminant, J., Patten, E., Redelfs, A., Stokes, N., Wang, J., Rennick, A., Perry, K., Hunt, J., Ahlborn, G. The Effects of Potato Presentation on Vegetable Intake in School Aged Children. Under first review with Nutrients.

Howell, Bryan F.; Lee, Kanae S.; Holbrook, Rebecca N.; Houghton, Sophie J.; Reynolds, Linda; **Jefferies, Laura K.** Multidisciplinary Dairy Milk Packaging Collaboration. Conference Proceedings Engineering & Design Product Education Conference. Barcelona, Spain. September 2023.

Wagner, A., Lloyd Call, M., **Jefferies, L.**, Eggett, D., Richards, R. 2022. Comparison of household perceptions and practices of food and water emergency preparedness between Latter-day Saints and Non-Latter-day Saints in the USA. J Relig Health. 2022 Mar 19:1 – 17. <https://doi.org/10.1007/s10943-022-01535-3>

Fung, G., **Jefferies, L.**, Lloyd Call, M., Eggett, D., Richards, R. 2021. Comparison of emergency preparedness practices between food assistance program participants and non-participants in the United States. Int. J. Environ. Res. Public Health. 18(24), 12937. <https://doi.org/10.3390/ijerph182412937>

Bassett, F., Dunn, M., Pike, O., **Jefferies, L.** 2021. Physical, nutritional, and sensory properties of spray-dried and oven-roasted cricket (*Acheta domesticus*) powders. *Journal of Insects as Food and Feed*.

<https://doi.org/10.3920/JIFF2020.0107>

Quinn, A., Liao, R. Dunn, M., **Jefferies, L.**, Taylor, B. 2021. Isothermal inactivation of *Salmonella*, *Listeria monocytogenes*, and *Enterococcus faecium* NRRL B-2354 in peanut butter, powder infant formula, and wheat flour. *Food Control* (121): 107582. [doi.org/10.1016/j.foodcont.2020.107582](https://doi.org/10.1016/j.foodcont.2020.107582)

Hiatt, E., Belliard, L., Kener, M., Lloyd Call, M., **Jefferies, L.**, Eggett, D., Richards, R. 2020. Household food and water emergency preparedness practices across the United States. *Disaster Medicine and Public Health Preparedness*. <https://doi.org/10.1017/dmp.2020.480>

Smith, A., Dunn, M., **Jefferies, L.**, Eggett, D., Steele, F. 2018. Inhibition of *Clostridium perfringens* Growth During Extended cooling of Cooked Uncured Roast Turkey and Roast Beef Using a Concentrated Buffered Vinegar Product and a Buffered Vinegar Product. *J. Food Prot.* 81 (2):261-266.

Sloan, A., Dunn, M., **Jefferies, L.**, Pike, O., Nielsen, S., Steele, F. 2016. Effect of water activity and packaging material on the quality of dehydrated taro (*Colocasia esculenta* (L.) Schott) slices during accelerated storage. *Int. J. Food Sci.*

Loucks, J., Eggett, D., Dunn, M., Steele, S., **Jefferies, L.** 2016. Effect of Monetary Reward and Food Type on Accuracy and Assessment Time of Untrained Sensory Panelists in Triangle Tests.

*Food Qual. Preference.* 56 (2017):119-125.

Ares, G., Gimenez, A., Vidal, L., Zhou, Y., Krystallis, A., Tsalis, G., Symoneaux, R., Cunha, L., Pinto de Moura, A., Claret, A., Guerrero, L., Cardello, A., Wright, A., **Jefferies, L.**, Lloyd, M., Oliveira, D., Deliza, R. 2016. Do we all perceive food-related wellbeing in the same way? Results from an exploratory cross-cultural study. *Food Qual. Preference.* 52 (2016)62-73.

Bastian, M., Eggett, D., **Jefferies, L.** 2015. Questionnaire Design: Carry-over Effects of Overall Acceptance Question Placement and Pre-evaluation Instructions on Overall Acceptance Scores in Central Location Tests. *J. Food Sci.* 80 (2):S-435-443.

Bastian, M., Eggett, D., **Jefferies, L.** 2015. Panel Conditioning: Effect of Participation Frequency on Overall Acceptance Scores from Consumer Sensory Panels. *J. Sens. Stud.* 29 (6): 450-462.

Kurzer, A., Dunn, M., Pike, O., Eggett, D., **Jefferies, L.** 2014. Antioxidant effects on retinyl palmitate stability and isomerization in nonfat dry milk during thermally accelerated storage. *Intl Dairy J.* 35(2):111-115.

Taylor, R., Dunn, M., Ogden, L., **Jefferies, L.**, Eggett, D., Steele, F. 2013. Conditions associated with *Clostridium sporogenes* growth as a surrogate for *Clostridium botulinum* in non-thermally processed canned butter. *J. Dairy Sci.* 96(5): 2754-2764.

Adolphson, S., Dunn, M., **Jefferies, L.**, Steele, F. 2013. Isolation and characterization of the microflora of nixtamalized corn masa. *Intl J. Food Micro.* 165 (2013):165– 169.

**Jefferies, L.**, Steele, F., Hansen, C. 2012 Translocation and Cross- Contamination of *Escherichia coli* O157 in Beef Eye-of-Round Subprimals Processed with High-Pressure Needleless Injection. *J. Food Sci.* 77(6):E154-E158.

Johnston, P., **Jefferies, L.**, Rodriguez, B., Johnston, D. 2011. The Acceptance of Brown- shelled Eggs in a White-shelled Egg Market. *Poultry Sci.* 20:1074-1079.

**Jefferies, L.** and Hansen, C. 2010. High Pressure Injection Technologies. *Encyclopedia of Agricultural, Food, and Biological Engineering*. 2nd Ed. Editor: DR Heldman, CRC Press. October 2010.

Chapman, J., **Jefferies, L.**, and Pike, O. 2010. Sensory and Nutritional Quality of Split Peas (*Pisum sativum*) Stored up to 34 Years in Residential Storage. *J. Food Sci.* 75(3):S162-S166.

Richens, A., Burton, K., Pahulu, H., **Jefferies, L.**, and Dunn, M. 2008. Effect of Iron Source on Color and Appearance of Micronutrient-Fortified Corn Flour Tortillas. *Cereal Chem.* 85(4): 561-565.

Burton, K., Steele, F., **Jefferies, L.**, Pike, O., and Dunn M. 2008. Effect of micronutrient fortification on nutritional and other properties of nixtamal tortillas. *Cereal Chem.* 85(1): 70-75.

Johnston, P., Pike, O., **Jefferies, L.**, Campos, J., Aduviri, G. 2005. Sensory acceptability of eggs high in omega-3 polyunsaturated fatty acids resulting from feeding flax and canola oils. *J. Poultry Science* 84:58.

## WORKING PAPERS

Szabo, S., **Jefferies, L.** Dunn, M. A Rapid Spectrophotometric Assay for Quantifying Seed Coat Saponins in Quinoa.

Rime, J., Dunn, M., Taylor, B., **Jefferies, L.** Dairy Milk and Plant-Based Alternative Beverage Purchasing Factors: Consumer Insights.

Lee, K., Cooper, K., Houghton, S., Holbrook, R., Howell, B., Reynolds, L., **Jefferies, L.** Influence of Dairy Milk Packaging Design on Consumer Purchase Intent and Sensory Acceptance.

McCleary, M., **Jefferies, L.**, LeCheminant, J. The Effect of Artificial Sweeteners on Cognition.

Newcomb, E., Howell, B., Eggett, D., **Jefferies L.** Effects of GM Disclosure Statements on Consumer Perceptions of Selected Food Products in Survey and Sensory Panel Settings.

## PROFESSIONAL AFFILIATIONS

- Past Chair, Chair, Institute of Food Technologists Bonneville Section, 2020-Present
- Member, BUILD Dairy 2018 - Present
- Chair, Scientific Program Committee, Society of Sensory Professionals, 2017-2018
- Judge, IFTSA Product Development Competition 2017-2021
- Judge, Disney Product Development Competition, 2016-2017
- Jury Member, Graduate Student Scholarships, Sensory & Consumer Science Silver Celebration, 2016
- Committee Member, Scientific Program Committee, Society of Sensory Professionals, 2015-2016
- Member, Society of Sensory Professionals, 2015-Present
- Professional Member, Institute of Food Technologists, 2003-Present
- Member, Institute of Food Technologists, 1993- Present
- Member, Institute of Food Technologists, Bonneville Section, 1993-Present
- Executive Board Member, Institute of Food Technologists Bonneville Section, 2010-2020
- Member at Large, Institute of Food Technologists Bonneville Section, 2010-2012
- Secretary, Institute of Food Technologists Bonneville Section, 1998-2001

## PROFESSIONAL STUDIES/CONTINUING EDUCATION

- Compusense Cloud workshop, 2019
- IFT Emerging Leaders Network, 2016
- Measuring Emotions in Sensory Analysis, H. Meiselman, 2016
- Sensory and Consumer Shelf-Life Measurement and Analysis, G. Hough, 2012
- BYU New Faculty Development Spring Seminar, Spring 2012
- Measuring Emotion in a Product Development Setting, H. Meiselman, 2011
- BYU Grant Writing Basics Workshop, 2011, 2014
- Compusense FCM® Descriptive Analysis Short Course, 2009
- Response Surface Methodology Design Strategy Course, ECHIP, 2004

- Flavor 101®, Flavors of North America, Inc., 2001
- Sensory Consumer Testing, Sensory Spectrum, 2001
- Thermal Process Development, NFPA, 2000
- Thermal Processing Deviation, NFPA, 2000
- Better Process Control School, University of Tennessee, 1999
- ServSafe®, Sysco, 1999, 2013

## TEACHING

|              |           |                                       |
|--------------|-----------|---------------------------------------|
| 2022-Present | NDFS 546  | Essentials of Food Packaging          |
| 2016-Present | NDFS 390R | Special Topics: College Bowl          |
| 2016         | NDFS 445  | Food Service Systems, Lecturer        |
| 2014-Present | NDFS 494R | Undergraduate Research in NDFS        |
| 2013-Present | NDFS 362  | Food Processing 1                     |
| 2012-Present | NDFS 355  | Food Process Engineering              |
| 2005-Present | NDFS 355L | Food Process Engineering Laboratory   |
| 2005-Present | NDFS 464  | Food Sensory Analysis Laboratory      |
| 2002-Present | NDFS 250  | Essentials of Food Science and Lab    |
| 2015-Present | WS 370    | Women in Science, Lecturer            |
| 2007-2008    | IP&T 652  | Assessing Learning Outcomes, Lecturer |

## INTERNATIONAL WORK

|      |   |
|------|---|
| 2008 | Instructor, Solar Drying Workshop, Suva, Fiji                         |
| 2006 | Sensory analysis of calcium-fortified quinoa cookies, La Paz, Bolivia |

## COLLEGE AND DEPARTMENT COMMITTEE AND ADMINISTRATIVE ASSIGNMENTS

|                |   |
|----------------|---|
| 2022 – Present | Chair, NDFS Undergraduate Education Committee                                   |
| 2022 – Present | Food Science Program Undergraduate Advisor                                      |
| 2022 – Present | College Women in Science Annual Event Committee                                 |
| 2022 – Present | Department Strategic Planning Committee   |
| 2019-Present   | College of Life Sciences Curriculum Council                                     |
| 2019- Present  | College of Life Sciences Diversity and Inclusion Committee                      |
| 2019-2022      | Chair, Department Curriculum and Undergraduate Teaching and Mentoring Committee |
| 2017-Present   | Coach, IMPA Product Development Team  |
| 2016-Present   | Coach, College Bowl Team  |
| 2011-Present   | Faculty Advisor, Food Science Club  |
| 2011-Present   | Faculty Advisor, Sensory Laboratory   |
| 2015-2019      | Chair, Department Facilities & Resources Committee                              |
| 2012-2015      | College Scholarship Committee   |
| 2012-2015      | Graduate Student Recruiting Committee   |
| 2011-2015      | Department Graduate Education Committee   |
| 2010-2011      | Department Facilities & Resources Committee                                     |
| 2009-2015      | Department Scholarship Committee  |
| 2005-2015      | Department Web Site Representative  |
| 2003-2004      | Department Scholarship Committee  |
| 1999-2019      | Resource Committee to LDS Welfare Services                                      |
| 1999-2011      | Manager, Sensory Laboratory   |

## SELECT PRESENTATIONS

- Howell, Bryan F.; Lee, Kanae S.; Holbrook, Rebecca N.; Houghton, Sophie J.; Reynolds, Linda; **Jefferies, Laura K.** Multidisciplinary Dairy Milk Packaging Collaboration. Oral presentation at Engineering & Design Product Education Conference. Barcelona, Spain. September 2023.
- Lee, K., Houghton, S., Holbrook, R., Howell, B., Reynolds, L., **Jefferies, L.** The power of packaging design on consumer perception, purchase willingness, and sensory acceptability of dairy milk. Poster Presentation at Pangborn Symposium. Nantes, France. August 2023.
- Nolden, A., Brown, A., **Jefferies, L.**, Lim, T., Kershaw, J. Increasing acceptance of sustainable food choices: Value-based messaging influences perceived taste of plant-based foods. Oral presentation at SSP 2022 Conference. Savannah, Georgia. November 2022.
- Keynote Speaker, “She’s a Scientist,” BYU College of Life Sciences, 2019
- **Jefferies, L.**, Rudolph, G. Sensory Analysis Techniques. Seminar at Institute of Food Technologists Bonneville Section meeting. Salt Lake City, Utah. April 2019.
- Loucks, J., Eggett, D., Dunn, M., Steele, F., **Jefferies, L.** The Effect of Monetary Reward and Food Type on Accuracy and Assessment Time of Untrained Sensory Panelists in Triangle Tests. Poster presentation at SSP Conference, Atlanta, Georgia. October 2016.
- Wright, A., Cardello, A., **Jefferies, L.**, Lloyd, M., Ares, G., Gimenez, A., Deliza, R. 2015. Long-standing, dominant religious society's dietary guidelines' influence on perceptions of wellbeing relative to certain foods. 2015. Oral Presentation, 11<sup>th</sup> Pangborn Sensory Science Symposium, Gothenburg, Sweden.
- Bastian, M., Eggett, D., **Jefferies, L.** Panel Conditioning: Effect of Participation Frequency on Overall Acceptance Scores from Consumer Sensory Panels. Poster Presentation, 11<sup>th</sup> Pangborn Sensory Science Symposium, Gothenburg, Sweden.
- **Jefferies, L.** 2012 Translocation and Cross-Contamination of Escherichia coli O157 in Beef Eye-of-Round Subprimals Processed with High-Pressure Needleless Injection. North Carolina State University Department of Food, Bioprocessing & Nutrition Sciences Seminar, September 2012.

## M.S. COMMITTEE CHAIR

- 2021 – Present, Jozxelle Tongson
- *Potential Clean Label Astringency Maskers for Acidic Whey Protein Beverages*
- 2021 – Present, Tiffany Flatman
- *Predicting protein bar stability over time using differential scanning calorimetry and related sensory testing*
- 2018-2020, Sydney Szabo
- *A Rapid Assay for Quantifying Saponins in Chenopodium Quinoa During Commercial Desaponization*

## Processes

- 2017-2020, Jeffrey Rime
- *Dairy Milk and Plant-Based Alternative Beverage Purchasing Factors: Consumer Insights*
- 2016-2018, Fred Bassett
- *Comparison of Nutritional and Functional Properties and Sensory Acceptance of Spray Dried and Oven Dried Cricket (*Acheta domesticus*) Powder*
- 2015-2017, Ellyn Newcomb
- *The Effects of GMO-Related Labeling Statements on Consumer Attitude, Purchase Intent, and Sensory Acceptance of Common Food Items: A Three-Phase Study*
- 2015-2017, Eddie Crossen
- *A Comparison of Sensory Attributes of Fruits and Vegetables Dried Using Solar and Electric Forced-Air Dehydrators*
- 2014-2016, Jessilee Louckes
- *The Effect of Monetary Reward and Food Type on Accuracy and Assessment Time of Untrained Sensory Panelists in Triangle Tests*
- 2013-2015, Mauresa Bastian
- *Effects of Panelist Participation Frequency and Questionnaire Design on Overall Acceptance Scoring for Food Sensory Evaluation in Central Locations Tests*
- 2011-2013, Amalie Kurzer
- *Antioxidant Effects on Retinyl Palmitate Stability and Isomerization in nonfat Dry Milk during Thermally Accelerated Storage*

## M.S. COMMITTEE MEMBER

- 2022 – Present, Erin Caswell
- Accelerated ripening of Feta and Parmesan cheese with the addition of exogenous microbial lipase
- 2020 –2022, Jeremy Pack
- *Amino acids as emulsifying salt alternatives in processed cheese*
- 2019-2021, Benjamin Woodward
- Efficacy of “Consumer-Friendly” Hydrocolloid Stabilizers in Ice Cream During Accelerated Storage
- 2018-2019, Annie Wagner
- *The Effect of a Religious Environment on Household Perceptions and Practices of Food and Water Emergency Preparedness*
- 2017-2020, Deborah Hutchins
- *Activity and Stability of Immobilized Beta-Galactosidase on Nylon-6 Stable Surfaces*
- 2017-2019, Andrea Boza
- *Evaluation of Chemical, Physical, and Sensory Properties in Tortillas Prepared from Nixtamalized Oats*
- 2017-2018, Bryan Dawson
- *Carbon Dioxide Treatment on Strawberry Fruit Prep and Its Effect on Shelf Life*
- 2017-2018, David Doxey
- *An Observational Study of Physicochemical Changes in Cheddar Enzyme-Modified Cheese During Incubation*

- 2014-2017, Sarah Turner
- *A Rapid Method for Measuring Shelf Life of Whole Grain Flours*
  
- 2014-2016, Andrew Smith
- *Inhibition of Clostridium Perfringens Growth during Extended Cooling of Cooked Uncured Roast Turkey and Roast Beef Using a Concentrated Buffered Vinegar Product and a Buffered Vinegar Product*
  
- 2013-2016, Renee Phillips
- *Folate Stability in Fortified Corn Masa Flour, Tortillas, and Tortilla Chips*
  
- 2012-2015, Victoria Scott
- *Stability of Whole Wheat Flour, Rolled Oats, and Brown Rice during Long-Term Storage and Preparation*
  
- 2012-2014, Virginia West
- *Stability of Selected B Vitamins in Thermally Treated Pinto Beans*
  
- 2011-2013, Jonathan Swindler
- *Effect of Enrichment-Bleaching and Low Oxygen Atmosphere Storage on All- Purpose Wheat Flour Quality*
  
- 2011-2013, Sean Foster *Construction and Performance Testing of a Solar Food Dryer for Use in Developing Countries*
  
- 2011-2013, Stephanie Gerla
- *Emergency Preparedness in Utah Households with Emphasis on Water and Food Storage Conditions*
  
- 2011-2013, Jennifer Chase
- *Utah Red Raspberry Jam: The Effects of Formulation, Heating, and Storage on Color, Flavor, Texture, and Antioxidant Content*
  
- 2011-2012, Stephen Adolphson
- *Microflora of Traditional Mexican Corn Masa and its Effect on Folic Acid Degradation*

#### MILITARY SERVICE

|              |   |
|--------------|---|
| 2022-Present | Service Officer, Veterans of Foreign Wars, Post 7386                    |
| 1991         | Recipient, Amy Commendation medal                                       |
| 1990-1991    | Veteran, Operation Desert Storm, Utah Army National Guard               |
| 1989-1995    | Medical Specialist, 144th Evacuation Hospital, Utah Army National Guard |
| 1990         | Combat Medic Training, Fort Sam Houston, Texas                          |
| 1989         | Basic Training, Fort Jackson, South Carolina                            |