Olivia Brummett

EDUCATION

Master of Science (M.S), Major in Integrated Agricultural Sciences **May 2026**
Texas State University, San Marcos, Texas
Thesis title: Bovine β-defensin, pro-inflammatory cytokine, and C-reactive protein expression in blood and nasal mucosal secretions of calves affected with Bovine Respiratory Disease

Bachelor of Science in Agriculture (B.S.A.G), Major in Animal Science **August 2024**
Texas State University, San Marcos, Texas
Suma cum laude

EXPERIENCE

Assistant Professor of Instruction **August 2026-Present**
Texas State University- Department of Agricultural Sciences, San Marcos, Texas

- Instructor for agricultural science courses with an animal science emphasis
- Courses taught include: AG 1101- Basic Animal Science Laboratory
  AG 1301- Basic Animal Science lecture
- Coordinate and deliver laboratories for hands-on, applied learning in the classroom and university-operated facilities such as Freeman Ranch
- Assist with both undergraduate and graduate student research projects in beef cattle health and production
- Serve on departmental committees including the SGBI RAISE cohort and service committee
- Co-advisor for the Beef Cattle Show Team, Academic Quadrathlon team, and Texas Steak-Cook-Off team

Graduate Teaching Assistant **August 2025-May 2026**
Texas State University, San Marcos, Texas

- Primary instructor for two sections of Basic Animal Science Lab (AG 1101)
- Develop course materials and content for hands-on, applied labs in the classroom and Freeman Ranch
- Management, care, feeding, and use of reproductive technologies in 100 head cow herd
- Assist in performing and coordinating research projects in beef cattle health and production

Graduate Instructional Assistant **August 2024-August 2025**
Texas State University, San Marcos, Texas

- Teaching assistant for: AG 4325- Feeds and Feeding
  AG 3314- Animal Health and Disease Control
  AG 4330- Food Technology: Processing Meats
  AG 3381- Beef Cattle Production
- Assisted in coaching the 2024 meat judging team
- Contributed to the development of a new introduction to meat and muscle biology course to enhance the university's meat science curriculum
- Collaborated on drafting a $10,000 grant proposal for the American Meat Science Association's Meat Judging Jumpstart Fund
- Oversee undergraduate research projects

Meat Market Perishables Specialist **August 2024-Present**
HEB, La Vernia, Texas

- Produce 200+ pounds of ground beef daily as a certified meat grinder operator which supplies a sufficient stock status of fresh, quality product
- Train new partners on market department procedures to represent the company's mission and values
- Utilize the store online ordering system (OLO) to evaluate product needs and ensure adequate inventory management and in stocks of meal simple and value-added ingredients for in-store further processing
- Process, package, and label various cuts of meat to produce high-quality products that uphold brand standards
- Perform market fresh production tasks for Meal Simple, Mi Tienda, and H-E-B market brand value-added items

Meat Market Perishables Representative **July 2022-August 2024**
HEB, La Vernia, Texas

- Evaluate market department conditions regularly to maintain HEB standards of stock, sanitation, and organization to sustain daily sales that gross over 50,000 dollars
- Perform Fresh Production Planning (FPP) tasks to maintain accurate records of fresh and value-added products
- Keep accurate digital, inventory records through store system applications to maintain inventory counts

UNDERGRADUATE STUDENTS ADVISED 2024-Present

Ariana Evans: *Investigating immunological peptide function and expression in bovine mucosal and bronchial tissue in calves infected with Bovine Respiratory Disease*

CERTIFICATIONS

Professional Animal Scientist Beef Cattle
American Registry of Professional Animal Scientists

Food Safety and Handling Certification
State Food Safety

Beef Quality Assurance Cow-Calf
National Beef Quality Assurance

Beef Grades, Cuts, and Preparation
Cattlemen's Beef Board- Beef Checkoff

PROFESSIONAL ORGANIZATIONS

American Meat Science Association, student member

American Society of Animal Science, graduate student member

American Registry of Professional Animal Scientists, graduate student member

GRANTS

Awarded

Impacts of Monensin on fetal programming and postnatal supplementation to improve reproductive efficiency of heifers. R. N. Sims, **O. S. Brummett.** Elanco Animal Health Monensin (Rumensin) Research Grant. **$200,000**. **2025**

Meat Judging Team Start-up Funds. R. N. Sims, L. K. Solice, **O. S. Brummett.** American Meat Science Association. **$10,000**. **2024**

Exploring genetic factors influencing meat quality in Santa Gertrudis. **O. S. Brummett**, B. L. Bruner, R. N. Sims. 2025 Santa Gertrudis Breeders International Annual Meeting. **$20,000**. **2025**

Submitted

Bovine defensins expression in bronchial tissue of calves with BRD: A potential biomarker to select healthier calves. R. N. Sims, B. L. Bruner, S. Dridi, E. S. Greene, **O. S. Brummett**. National Institute of Food and Agriculture (NIFA) Agriculture and Food Research Initiative (AFRI). **$300,000**. **2025**

Bovine defensins expression in bronchial tissue of calves with BRD: A potential biomarker to select healthier calves. R. N. Sims, B. L. Bruner, **O. S. Brummett**, A. K. Dela Rosa. Texas State University Research Enhancement Program. **$24,000**. **2025**

ABSTRACTS

O. S. Brummett, A. E. Evans, A. K. Dela Rosa, V. Barrera, B. L. Bruner, M. B. Sims, C. A. Rosales-Nieto, E. S. Greene, S. Dridi, and R. N. Sims. 2026. Bovine β-defensin and cytokine expression in blood of calves diagnosed with Bovine Respiratory Disease by lymphocyte or neutrophil concentration.

A. K. Dela Rosa, **O. S. Brummett**, V. Barrera, A. E. Evans, B. L. Bruner, M. B. Sims, E. S. Greene, C. A. Rosales-Nieto, S. Dridi, and R. N. Sims. 2026. Expression of β-defensins in nasal mucosal secretions in calves affected with Bovine Respiratory Disease indicated by elevated neutrophils or lymphocytes.

A. Evans, **O. S. Brummett**, V. Barrera, A. K. Dela Rosa, B. L. Bruner, M. B. Sims, E. S. Greene, C. A. Rosales-Nieto, S. Dridi, and R. N. Sims. 2026. β-defensins gene expression in nasal mucosal secretions of calves diagnosed with Bovine Respiratory Disease by elevated body temperature.

A. Amaro, **O. S. Brummett**, V. Barrera, A. E. Evans, A. K. Dela Rosa, M. B. Sims, C. A. Rosales-Nieto, B. L. Bruner, E. S. Greene, S. Dridi, and R. N. Sims. 2026. β-defensin, cytokine, and C-reactive protein expression within blood in calves diagnosed with Bovine Respiratory Disease indicated by elevated body temperature.

O. S. Brummett, A. Evans, A. K. Dela Rosa, V. Barrera, B. L. Bruner, E. S. Greene, S. Dridi, and R. N. Sims. 2026. Bovine defensin expression in nasal mucosal secretions of calves challenged with Bovine Respiratory Disease: A preliminary analysis.

A. K. Dela Rosa, L. K. Solice, N. E. Reyes, **O. S. Brummett**, M. B. Sims, E. L. Pierdolla, C. A. Rosales-Nieto, B. L. Bruner, J. G. Powell, R. N. Sims. 2026. Effects of a bovine

appeasing substance applied at estrous synchronization on stress, cyclicity, and pregnancy.

A. Amaro, **O. S. Brummett**, A. K. Dela Rosa, R. N. Sims, J. A. De los Santos. 2026. Changes in total white blood cell counts associated with embryo transfer in cattle.

Hayes, A., Sims, M. B., Sims, R. N., **Brummett, O. S.**, Dela Rosa, A. K. , Matney, H. 2026. Effects of compost tea application on nutritive value, yield, and soil organic matter. Texas State University STEM Conference.

O. S. Brummett, R. N. Sims, B. B. Kegley, S. Dridi, M. B. Sims, P. A. Beck, J. G. Powell. 2025. Injectable zinc as an alternative castration method at weaning in beef bulls: effects on growth performance and carcass characteristics. J. Anim. Sci. 103: 73-73.

L. K. Solice, N. E. Reyes, **O. S. Brummett**, M. B. Sims, E. L. Pierdolla, C. A. Rosales-Nieto, B. L. Bruner, J. G. Powell, R. N. Sims. 2025. Effects of a bovine appeasing substance applied at estrous synchronization on stress and reproductive performance. J. Anim. Sci.

PRESENTATIONS

O. S. Brummett, B. L. Bruner, R. N. Sims. Exploring Genetic Factors Influencing Meat Quality in Santa Gertrudis: Future Research Directions. 2025 Santa Gertrudis Breeders International Annual Meeting.

HONORS AND AWARDS

Nomination: College of Science and Engineering Outstanding Graduate Student **March 2026**
Texas State University

Thesis Research Support Fellowship: $2,000 **August 2025**
Texas State University

Houston Livestock Show and Rodeo Graduate Assistantship: $18,000 **August 2025-May 2026**
Texas State University

Graduate Merit Fellowship: $1,286.50 **August 2024**
Texas State University

Glynn and Ann-Cile Key Family Endowment: $10,500 **April 2025**
Texas State University

UNIVERSITY ACTIVITES

College of Science and Engineering Graduate Representative **August 2025-Present**
Texas State University Graduate House of Representatives

Cattle Show Team Co-Advisor **August 2026-Present**
Texas State University

Journal Reviewer **May 2026-Present**
Veterinary Medicine and Science

Texas Steak Cook-Off Team Assistant Coach **May 2025-Present**
Texas State University

Cattle Show Team Graduate Advisor **August 2025-August 2026**
Texas State University

Invited Speaker: TXST Scholarship Impact and Support **October 2025**
Houston Livestock Show and Rodeo Executive Leadership, Donor, and Scholar Banquet

ASAS Academic Quadrathlon Team Advisor **April 2025-Present**
Texas State University

Meat Judging Team Assistant Coach **August 2024-December 2024**
Texas State University

COMMITTEES

Service and Events Committee **August 2026-Present**
Department of Agricultural Sciences Texas State University

SGBI RAISE Cohort Co-Advisor **August 2026-Present**
Texas State University

SGBI RAISE Cohort Graduate Student Advisor **October 2025-August 2026**
Texas State University

Presidential Award for Excellence in Teaching Committee **September 2025-May 2026**
Texas State University

Outstanding Mentor Award Selection Committee **September 2025-October 2025**
Texas State University

INDUSTRY EVENTS AND MEETINGS

Beef Cattle Short Course **2025-2026**
Texas A&M University

ASAS Annual Meeting **2025-2026**
American Society of Animal Science

Akaushi Annual Convention **2026**
American Akaushi Association

Plains Nutrition Council Spring Conference **2026**
Plains Nutrition Council

SGBI Annual Meeting **2025-2026**
Santa Gertrudis Breeders International

National Student Leaders Connecting Conference **2024-2025**

American Meat Science Association

Beyond Fresh Meats Short Course **2025**
American Meat Science Association

Southern Section Meeting **2025**
American Society of Animal Science

Gate to Plate **2024**
American Meat Science Association