

**Jessie C. Morrill**  
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**Education and Training**

<i>Institution</i>	<i>Area</i>	<i>Degree</i>	<i>Year Awarded</i>
Texas A&M University	Animal Science	B.S.	2013
Texas A&M University	Animal Science	M.S.	2015
University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences	Biomedical Science, Biochemistry and Cell Biology	Ph.D.	2022

**Research and Professional Experience**

<i>Years</i>	<i>Position</i>
2022-present	Assistant Professor of Animal Science and Meat Biochemistry, University of Nebraska-Lincoln
2018-2022	Graduate Research Assistant, UTHealth McGovern Medical School
2014-2016	Graduate Research and Teaching Assistant, Texas A&M University

**Honors and Awards**

<i>Year</i>	<i>Award</i>
2022	McGovern Medical School Dean's Research Award
2021	Top Poster Award, Association for Clinical and Translational Science Meeting
2021	1 <sup>st</sup> Place Presentation, McGovern Medical School Research Retreat
2021	3 <sup>rd</sup> Place Presentation, Society for Chinese Bioscientists in America – Texas
2020	MD Anderson UTHealth Graduate School Scholarship
2016	Feedlot Nutritionist Boot Camp Chosen Attendee

**Research**

The mission of the Morrill lab is to be at the forefront of scientific discovery for the betterment of both animal and human health. With a specialized focus on beef cattle production and quality and nutritional value of meat, we are dedicated to conducting groundbreaking research that not only enhances the sustainability of beef production, but also contributes to combatting obesity and promoting healthier lifestyles in humans. Through our discoveries, we aim to positively impact the agricultural industry, improve human nutrition, and foster a healthier future for both animals and humans alike.

## Publications

### *Journal Publications*

1. **Morrill, J.C.** and Q. Tong. You are what you eat: feeding neurons in nutrient regulation of behavior. 2023. *Life Metab.* 2:1-2.
2. Li, H., Y. Xu, Z. Jiang, J. Ortiz-Guzman, **J.C. Morrill**, J. Cai, Z. Mao, Y. Xu, B.R. Arenkiel, C. Huang, and Q. Tong. 2023. The melanocortin pathway is biased toward protection from weight loss in mice. *Nat. Commun.* 14:2200.
3. Fan, S., Y. Xu, Y. Lu, Z. Jiang, H. Li, **J.C. Morrill**, J. Cai, Q. Wu, Y. Xu, M. Xue, B.R. Arenkiel, C. Huang, and Q. Tong. 2021. A neural basis for brain leptin action on reducing type 1 diabetic hyperglycemia. *Nat. Commun.* 12:2662.
4. Trubenbach, L.A., T.A. Wickersham, L.N. Bierschwale, **J.C. Morrill**, J.R. Baber, and J.E. Sawyer. 2019. Limit feeding as a strategy to increase energy efficiency in intensified cow-calf production systems. *Transl. Anim. Sci.* 3:796-810.
5. Smith, S.B., T.L. Blackmon, J.E. Sawyer, R.K. Miller, J.R. Baber, **J.C. Morrill**, A.R. Cabral, and T.A. Wickersham. 2018. Glucose and acetate metabolism in bovine intramuscular and subcutaneous adipose tissues from steers infused with glucose, propionate, or acetate. *J. Anim. Sci.* 96:921-929.
6. **Morrill, J.C.**, J.E. Sawyer, S.B., Smith, R.K. Miller, J.R. Baber, and T.A. Wickersham. 2017. Post-extraction algal residue in beef steer finishing diets: I. Nutrient utilization and carcass characteristics. *Algal Res.* 25:584-588.
7. **Morrill, J.C.**, J.E. Sawyer, S.B., Smith, R.K. Miller, M.D. Johnson, and T.A. Wickersham. 2017. Post-extraction algal residue in beef steer finishing diets: II. Beef flavor, fatty acid composition, and tenderness. *Algal Res.* 25:578-583.
8. Johnson, M.D., R.K. Miller, **J.C. Morrill**, D.P. Anderson, T.A. Wickersham, J.E. Sawyer, J.W. Richardson, and M.A. Palma. 2016. The influence of taste in willingness-to-pay valuations of sirloin steaks from post extraction algal residue-fed cattle. *J. Anim. Sci.* 94:1-13.

### *Books and Book Chapters*

1. Cai, J., R. Cassidy, **J. Morrill**, and Q. Tong. 2021. Neurotransmitter co-transmission in brain control of feeding and body weight. In: Q. Tong, editor, *Neuron signaling in metabolic regulation*. CRC Press, Boca Raton, FL. Chapter 3.

### *Conference Proceedings and Symposium Talks*

1. **Morrill, J.C.**, I. Levental, Y. Xu, and Q. Tong. 2021. Defining the contribution of body temperature to obesity development. Society for Chinese Bioscientists in America, Texas Chapter Virtual Symposium. Third place oral presentation.
2. **Morrill, J.C.**, I. Levental, Y. Xu, and Q. Tong. 2021. Defining the contribution of body temperature to obesity development. McGovern Medical School Research Retreat. Houston, Texas. First place oral presentation.
3. **Morrill, J.C.** and R. Berdeaux. 2018. Techniques and lessons learned during my BCB rotation. Biochemistry and Cell Biology Retreat. Houston, Texas.
4. Sawyer, J.E., **J.C. Morrill**, and T.A. Wickersham. 2016. Do antimicrobials contribute to sustainable beef production? Dr. Kenneth and Caroline Eng Symposium. Lincoln, Nebraska.

**Funding and Support***Current External Awards*

<i>Years</i>	<i>Award</i>
<i>As Project Director</i>	
2023 - 2024	<b>USDA Agricultural Marketing Service</b> (Morrill, Sullivan, and Garcia) Beef grading camera measures <b>Amount: \$49,707</b>
2023 - 2024	<b>USDA Agricultural Marketing Service</b> (Morrill) Intramuscular fat prediction and correlation <b>Amount: \$49,966</b>
2023 - 2025	<b>American Meat Science Association</b> (Morrill) Development of a biopolymer proxy for camera-based grading systems <b>Amount: \$60,000</b>
<i>As Co-Project Director</i>	
2023 - 2024	<b>Bunge, Inc.</b> (Erickson, Watson, Morrill, and MacDonald) Effect of feeding palm oil on finishing cattle performance, carcass characteristics, meat composition, and methane production <b>Amount: \$151,809</b>
2023	<b>USDA Agricultural Marketing Service</b> (Schmidt, Sullivan, Morrill, and Fevold) Cattle and Carcass Training Center Workshop <b>Amount: \$18,773</b>

*Current Internal Awards*

<i>Years</i>	<i>Award</i>
<i>As Project Director</i>	
2023 - 2024	<b>Layman Seed Award</b> (Morrill, Mote, and Sullivan) Mangalitsa pig as a dual-purpose dual benefit model of metabolism <b>Amount: \$10,000</b>

*Expired Awards*

<i>Years</i>	<i>Award</i>
<i>As Project Director</i>	
2020 - 2021	<b>NIH-TL1 Training Grant No. TL1 TR003169</b> (Morrill) Competitive training grant with The University of Texas Health Science Center at Houston Center for Clinical and Translational Sciences TL1 Program <b>Amount: \$95,554.</b>

**Seminar Presentations and Panel Participation**

<i>Count</i>	<i>Audience</i>	<i>Topic</i>	<i>Date(s)</i>
1	International Food Industry Personnel	Panel session on sustainable food systems in global markets	Oct. 2023
3	UNL Dept. Food Science	Seminar on appetite regulation research in the Morrill Lab	Aug. 2023
5	UNL and Nebraska Beef Industry Stakeholders	Panel session on “Sustainable Protein: The Future of Nutrition”	May 2023
6	Students in Ethiopia	Panel session on sustainability in plant and animal production	Mar. 2023
7	UNL Dept. Animal Science	Seminar on meat science research in the Morrill Lab	Feb. 2023

**Research Mentorship***Graduate Committee Membership*

<i>Count</i>	<i>Name</i>	<i>Major</i>	<i>Degree</i>	<i>Role</i>	<i>Graduation Date</i>
1	Anna Kobza	Animal Science	PhD	Member	
2	Kyra Elliott	Animal Science	MS	Chair	

*Undergraduate Research Mentorship*

<i>Count</i>	<i>Name</i>	<i>Major</i>	<i>Degree</i>	<i>Role</i>	<i>Date(s)</i>
1	Anirudh Gadicherla	Neuroscience	BS	Student Mentor	Summer 2021
2	Grace Johnson	Animal Science	BS	Sponsoring Lab	Spring 2023
3	Hayden Hoos	Animal Science	BS	Sponsoring Lab	Fall 2023
4	Corby Cannon	Animal Science	BS	Sponsoring Lab	Fall 2023

*High School Student Research Mentorship*

<i>Count</i>	<i>Name</i>	<i>Degree</i>	<i>Role</i>	<i>Date(s)</i>
1	Maleyea Sutton	Diploma	Sponsoring Lab	Summer 2023
2	Maya Lemburg	Diploma	Sponsoring Lab	Summer 2023

**Teaching***Courses Taught as Instructor of Record at the University of Nebraska*

1. ASCI 300A - Principles of Meat Evaluation, Grading, and Judging (1 cr. hr. lecture)
2. ASCI 400A - Advanced Meat Grading and Evaluation (1 cr. hr., experiential learning)
3. ASCI 419/819 - Meat Investigations (1-3 cr. hr., independent study)
4. ASCI 896 - Data Analysis and Visualization in Animal Research (3 cr. hr., lecture)
5. ASCI 917 - Advanced Meat Science (3 cr. hr., lecture)

<i>Course</i>	<i>Yr./Semester</i>	<i>Students Enrolled</i>	<i>Knowledge of Subject</i>	<i>Prepared for Class</i>	<i>Respect for Students</i>
ASCI 819	2023A	2	<i>Results Not Available</i>		
ASCI 400A	2023A	3			
ASCI 300A	2023C	5			
ASCI 400A	2023C	1			
ASCI 917	2023C	5			
ASCI 896	2024C	11			

*Course and Extracurricular Guest Lectures*

<i>Count</i>	<i>Audience</i>	<i>Topic</i>	<i>Date(s)</i>
1	UNL ASCI 486	Livestock systems research	Fall 2023
2	UNL ASCI 210	Animal proteins in the human diet	Fall 2023
3	UNL ASCI 95	Opportunities for freshmen to get involved in meat science	Fall 2022, Fall 2023
4	UNL ASCI 95	Introduction to UNL faculty for transfer students	Fall 2022
5	UNL ASCI 491	Nutritional value of meat and protein in the diet	Fall 2022
6	TAMU ANSC 303	Lipids: Where energy is stored	2021
7	TAMU ANSC 402	Using an animal science degree in biomedical research	2019
8	TAMU ANSC 107	Growth strategies for beef cattle	2015, 2016
9	TAMU ANSC 317; Meat Judging Team	Writing meat judging reasons	2015 - 2017

## Curriculum Vitae

### *Courses Assisted with as Graduate Teaching Assistant at Texas A&M University*

1. ANSC 108 - General Animal Science (1 cr. hr. lab)
2. ANSC 303 - Principles of Animal Nutrition (3 cr. hr. lecture)
3. ANSC 318 - Livestock Feeds and Feeding (3 cr. hr. lecture with accompanying lab)

<i>Course</i>	<i>Yr./Semester</i>	<i>Students Enrolled</i>	<i>Knowledge of Subject</i>	<i>Prepared for Class</i>	<i>Respect for Students</i>
ANSC 303	2016C	134	<i>Results Not Available</i>		
ANSC 318	2016A	26	4.91	4.95	4.94
ANSC 108	2015A	11	4.80	5.0	5.0
ANSC 108	2014C	22	4.94	4.94	4.95
<b>Averages (5 point scale)</b>			<b>4.88</b>	<b>4.96</b>	<b>4.96</b>

### Service

#### *University of Nebraska - Lincoln*

<i>Count</i>	<i>Event or Organization</i>	<i>Involvement</i>	<i>Date(s)</i>
1	USDA-NIFA	Grant Reviewer	Confidential 2023, 2024
2	Meat and Muscle Biology	Manuscript Reviewer (1 review)	Fall 2023 -
3	Journal of Animal Science	Manuscript Reviewer (2 reviews)	Summer 2023 -
4	Nebraska Congressional Delegation Visit	Contributed to group discussion and delivered talking points about meat workforce development	Summer 2023
5	East Campus Discovery Days	Department Booth	Summer 2023
6	USDA Cattle and Carcass Training Center	Talk given at workshop	Summer 2023
7	US Sustainability Alliance European Media Tour	Contributed to group discussion	Summer 2023
8	UK Agriculture and Horticulture Development Board Visit to UNL	Talk given during meeting	Spring 2023
9	Nebraska State FFA Meat Judging Contest	Judging contest preparation and support	Spring 2023
10	UNL Extension	Assistance with creation of beef recipe cards	Spring 2023
11	World Food Prize Nebraska Youth Institute	Talk on beef in the diet and beef carcass demonstration	Spring 2023
12	UNL Block and Bridle Old Timers' Meat Judging Contest	Judging contest preparation and support	Spring 2023
13	Department Head Search	Attended candidate search dinner	Spring 2023

## Curriculum Vitae

14	Greater Omaha Packing Focus Group	Group Member	Fall 2022 -
15	UNL Beef Innovation Hub	Group Member, Faculty Advisory Committee (Nov. 2023 – present)	Fall 2022 -
16	USDA Cattle and Carcass Training Center at UNL	Group Member, Event Coordination	Fall 2022 -