Welcome to the 75th Reciprocal Meat Conference!

Thank you for joining us in Des Moines, Iowa for the annual meeting of the American Meat Science Association. We are excited to return to Iowa for this year’s meeting, just as we did for the 25th and 50th Reciprocal Meat Conferences. We will take this opportunity to celebrate seventy-five years of RMC heritage but also cast our eyes towards the future and envision what’s next for the field of meat science. Our hosts, Iowa State University, Kemin Food Technologies, the National Pork Board, and Hormel Foods Corporation, are all eager to welcome you to their hometowns of Des Moines and Ames as we return to our traditional in-person format. That includes plenty of time for greeting old friends and making new ones as well as time to learn about the latest in scientific advancements in meat science, safety, processing, ingredients, technologies, and more.

One hallmark of RMC is our tremendous line-up of student activities, and this year is no different. We begin on Saturday with the Iron Chef Product Development Competition and Processed Meats Course held at Des Moines Area Community College. Students will have the opportunity to compete in both these activities simultaneously. On Sunday, teams will gear up for the annual undergraduate Quiz Bowl competition held at the Iowa Events Center. The ePoster Research Competitions will also take place on Sunday at the Iowa Events Center. And in between this all, students and professionals alike can drop in on the Career and Networking Fair. In case you are feeling left out of the competition, check out the golf tournament at Beaver Creek Golf Club in Grimes on Sunday morning or your choice of softball or sand volleyball in Ames on Sunday afternoon. All these events will get our RMC off to a fast and competitive start!

We hope that you’ll join us in Ames on Sunday afternoon for the Kick-Off Reception at Jack Trice Stadium on the campus of Iowa State University. Enjoy some tailgating barbeque favorites before touring the nearby Reiman Gardens. We’ll host the Quiz Bowl finals there and also announce the winners of the ePoster competitions. After this brief sojourn to Ames, the rest of the week’s activities will be in Des Moines, but we couldn’t come all the way to Iowa for an RMC and not visit Ames.

The planning committee is to be congratulated for securing a diverse and innovative set of keynote speakers. On Monday, Anne-Marie Roerink of 210 Analytics, LLC will highlight some findings from the annual Power of Meat study in ‘Meat Perceptions and Realities’. Tuesday, a panel of speakers from industry, academia and non-profits will investigate ‘How Culture, Core Values and Existing Talent, Impact Attracting and Retaining New Talent, While Influencing
Positive and Productive Change’. Then on Wednesday, we will reflect on the last 75 years of RMC with a panel of speakers highlighting the impact and influence of the RMC for the meat industry.

Each day, these keynote sessions will be followed by a series of exciting concurrent sessions including: Automation in the Global Meat Industry, Meat in the Diet-How do we help get it on the plate?, Oxidation of Muscle Proteins, New Approaches to Reducing Salmonellosis Across the Food Industry, Supply Chain – Untangling the Issues, Modern Application of Classic Processed Meat Ingredients, Pet Food Innovation for Pets and Pet Parents, and A Deep Dive into U.S. Pork Business. The work of the concurrent session chairs in securing this excellent set of speakers is greatly appreciated. We hope that you will come, listen, learn, and plan to engage with our speakers to further the dialogue on these issues facing meat science.

On Monday and Tuesday, we have over 25 reciprocation sessions spanning all facets of meat science. Reciprocation is what makes RMC a unique scientific conference. We expect that our reciprocation speakers will challenge you to think, pose questions for you to respond to, and engage you in discussions about their topics. This interaction is how we learn from each other and further scientific advancement in our field. New this year, our Sustaining Partners and members of the Suppliers Coalition will also be sharing their latest advancements during short Tech Talks during the reciprocation sessions. ePosters will also be on display during these times.

Monday evening, we will take a break from the science for a moment and travel to the Des Moines Blank Park Zoo for our own private ‘Zoo Brew’ and enjoy an Iowa favorite, the Pork Chop on a Stick. Tuesday evening, join us in celebrating our award winners at the RMC Award Reception and Banquet held at the Iowa Events Center. After a delicious meal and night of inspiring winners, we will cap it off with some ice cream to close out the evening. Nothing better to prepare you for the Fun Run the next morning, if you are so inclined.

It has been my pleasure to serve as the 2022 RMC Chair alongside a tireless planning committee. A special thank you to Deidrea Mabry and all the AMSA staff for their efforts in making this event a success. My gratitude also extends to Matt Wenger and the host committee as well for their hard work in providing us all an array of fun activities to round out our time in Iowa. We all hope that you have a productive and enlightening RMC!

Anna Dilger, Ph.D.
RMC 2022 Chair
RMC ADDRESSES

AMSA Board Meeting
Des Moines Area Community College
2006 South Ankeny Boulevard · Ankeny, IA 50023

Processed Meats and Iron Chef Competition
Des Moines Area Community College
2006 South Ankeny Boulevard · Ankeny, IA 50023

Golf Tournament
Beaver Creek Golf Club
11200 NW Townes Drive · Grimes, IA 50111

AMSA RMC Technical Program, Awards Banquet and Events
Community Choice Credit Union Convention Center & Hy-Vee Hall
730 3rd St · Des Moines, IA 50309

Iowa State Meat Laboratory
Iowa State University
188 Meat Laboratory
914 Stange Road · Ames, IA 50011

Welcome Reception
Jack Trice Stadium
1800 S 4th St. · Ames, IA 50011

Reiman Gardens
1407 University Blvd. · Ames, IA 50011
RMC ADDRESSES

Softball Game
Iowa State University Intramural Fields – South Pod
Across from Jack Trice Stadium
1800 S 4th St. · Ames, IA 50011

Sand Volleyball Game
Iowa State University Intramural Fields – Sand Volleyball Court
Across from Jack Trice Stadium
1800 S 4th St. · Ames, IA 50011

RMC Family Picnic
Blank Park Zoo
7401 SW 9th St. · Des Moines, IA 50315

Student Mixer
Smash Park
6625 Coachlight Dr. · West Des Moines, IA 50266

Fun Run
Gray’s Lake Park - Kruidenier Trail
2101 Fleur Dr.
Des Moines, IA 50315
SCHEDULE OF EVENTS 
AND TECHNICAL PROGRAM INFORMATION

Saturday, June 11

7:00-8:00 am  Participant Continental Breakfast
Des Moines Area Community College
Sponsored by American Foods Group and Nestle Purina

8:00 am – 4:30 pm  Iron Chef Competition
Des Moines Area Community College
Sponsored by Cargill
Products donated by Cargill, CTI Foods, and Maple Leaf Foods
Spices donated by A.C. Legg, Iowa Culinary Institute, and UltraSource
Gift Cards donated by Farm Credit Services of America and Hy-Vee

8:00 am – 5:00 pm  AMSA Board Meeting
Des Moines Area Community College

11:00 am - 12:00 pm  Iron Chef Competition Participant Lunch
Des Moines Area Community College
Sponsored by Smithfield Foods, Inc.

11:30 am - 3:30 pm  Processed Meats Competition
Des Moines Area Community College
Sponsored by JBS Foods/Pilgrim's
Products donated by Hormel Foods Corporation, Clemens Food Group and UltraSource

6:30–9:30 pm  AMSA Development Council Meeting
Hilton Des Moines Downtown - Matrix Room
Sunday, June 12

8:00 am – 12:00 pm  
**Golf Tournament**

*Beaver Creek Golf Club - 11200 NW Townes Dr. • Grimes, IA 50111*

*Sponsored by John R. White Company and bioMérieux*

*Prizes donated by Hawkins, Inc., Kemin Food Technologies, and National Pork Board*

*Tee Time start at 8:00 am*

*Lunch will be served at the end of play*

8:00 am - 3:00 pm  
**Student Research ePoster Competition**

*Community Choice Credit Union Convention Center & Hy-Vee Hall*

- **8:45 am – General Instructions and Drawing for Order of Presentation**
  - **Room 312** - Undergraduate Student Research ePoster Competition Judging
    *Sponsored by JBS Foods/Pilgrim’s*
  - **Room 313** - Master Student Research ePoster Competition Judging
    *Sponsored by Tyson Foods, Inc.*
  - **Room 314** - Ph.D. Student Research ePoster Competition Judging
    *Sponsored by Hormel Foods Corporation*

8:00 am–4:30 pm  
**Undergraduate Quiz Bowl Preliminary Rounds**

*Community Choice Credit Union Convention Center & Hy-Vee Hall*

**Room 307-308**

*Sponsored by JBS Foods/Pilgrim’s*

11:30 am–1:00 pm  
**Quiz Bowl and Research Competition Participants Only Lunch**

*Community Choice Credit Union Convention Center & Hy-Vee Hall*

**Room 305-306**

*Sponsored by JBS Foods/Pilgrim’s*

12:00– 5:00 pm  
**Student Silent Auction and Promotional Sales**

*Community Choice Credit Union Convention Center & Hy-Vee Hall*

*Pre-Function Area/Room 318*
12:00–5:00 pm  
**ePoster Presentations**  
Community Choice Credit Union Convention Center & Hy-Vee Hall  
Rooms 309-310 and 319-320  
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.

1:00–4:00 pm  
**Career and Networking Fair**  
Community Choice Credit Union Convention Center & Hy-Vee Hall  
Grand Ballroom A

1:00-3:30 pm  
**Long Range Meat Judging Planning Session**  
Community Choice Credit Union Convention Center & Hy-Vee Hall  
Room 304

3:30-4:00 pm  
**Intercollegiate Meat Coaches Association Annual Business Meeting**  
Community Choice Credit Union Convention Center & Hy-Vee Hall  
Room 304

3:00-4:00 pm  
**Meat and Muscle Biology Editorial Board Meeting**  
Community Choice Credit Union Convention Center & Hy-Vee Hall  
Room 311

4:00-6:00 pm  
**Iowa State Meat Laboratory Tours/Open House**  
Iowa State University – 188 Meat Laboratory  
914 Stange Road · Ames, IA 50011

5:00-7:00 pm  
**Softball Game**  
Iowa State University Intramural Fields – South Pod  
Sponsored by American Foods Group

5:00-7:00 pm  
**Sand Volleyball Game**  
Iowa State University Intramural Fields  
Sponsored by Kemin Food Technologies
6:00–10:00 pm  Kick-Off Reception
Jack Trice Stadium - 1800 S 4th St. • Ames, IA 50011
Co-Sponsored by Kemin Food Technologies, Hormel Foods, National Pork Board, and Iowa State University
Featuring product donations from JBS Foods/Pilgrim’s
Buses will begin departure for Jack Trice Stadium at 5:30 pm and leave as each bus fills. Please be prompt. Buses will begin departure from the Stadium at 8:30 pm and leave as each bus fills.
Thanks to Iowa State University for sponsoring the transportation for this event.

5:30 – 9:00 pm  Reiman Gardens Walking Tour (Self-Paced)
1407 University Blvd. • Ames, IA 50011

7:15-7:45 pm  Student Research ePoster Competition Awards
Reiman Gardens - 1407 University Blvd. • Ames, IA 50011
Undergraduate Awards
Sponsored by JBS Foods/Pilgrim’s

Master Awards
Sponsored by Tyson Foods, Inc.

Ph.D. Awards
Sponsored by Hormel Foods Corporation

Dr. Bobby VanStavern Award for Beef Quality Research
Sponsored by AMSA Bob VanStavern Mentor Recognition Fund

7:45–9:00 pm  Quiz Bowl Finals
Reiman Gardens - 1407 University Blvd. • Ames, IA 50011
Sponsored by JBS Foods/Pilgrim’s
Monday, June 13

**Full RMC Technical Program will take place in the Community Choice Credit Union Convention Center & Hy-Vee Hall rooms listed below**

7:15-8:00 am  
**ePoster Presentations**  
Rooms 309-310 and 319-320  
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.  
See ePoster grid pages 34 and 35 for time assignments.

7:30 am–5:00 pm  
**Silent Auction and Student Promotional Sales**  
Room 318

8:00 am – 3:45 pm  
**Accompanying Person Scenic Tour of Iowa and lunch**  
Meet at the bus entrance at the Hilton Hotel - Hotel Landing

8:00-8:30 am  
**Opening Session**  
Grand Ballroom B  
Sponsored by Cargill  
- Call to Order  
- AMSA Welcome  
- Conference Welcome  
- Iowa State University Welcome  
- AMSA Development Council Endowment Campaign  
- 2022 Host Committee Recognition  
- RMC Planning Committee Recognition

8:30-9:30 am  
**Opening Keynote Presentation**  
Grand Ballroom B  
Sponsored by Cargill  
Session proceedings recording funded by the Beef Checkoff  
**Moderator:** KatieRose McCullough, Ph.D., North American Meat Institute

**Meat Perceptions and Realities: The Power of Meat**  
**Speaker:** Anne-Marie Roerink, 210 Analytics, LLC
9:30-10:30 am
Pre-Function Space
Sponsored by Iowa Pork Producers Association
Featuring product donations from Jack Link’s® Protein Snacks and Hormel Foods Corp.

9:30 am – 5:00 pm
RMC Supplier Showcase
Grand Ballroom A

9:45-10:30 am
ePoster Presentations
Rooms 309-310 and 319-320
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.
See ePoster grid pages 36 and 37 for time assignments.

10:30 am–12:30 pm
Concurrent Technical Session I
Automation in the Global Meat Industry
Grand Ballroom B
Sponsored by Nestle Purina
Session proceedings recording funded by the Beef Checkoff
Moderator: Brad Morgan, Ph.D., iQ Foods

We Need to Rethink Production Technology for Meat Packers - The Old Cutting Table is Being Revived
Speaker: Lars Hinrichsen, Ph.D., Danish Technological Institute

The Robotic Workbench and Poultry Processing 2.0
Speaker: Konrad Ahlin, Ph.D., Georgia Tech Research Institute, Aerospace, Transportation & Advances Systems Laboratory

Artificial Intelligence Driven Automation is How We Achieve the Next Level of Efficiency in Meat Processing
Speaker: Chafik Barbar, Marble Technologies
Room 302-304
Sponsored by Hawkins, Inc.
Session proceedings recording funded by the Beef Checkoff

Moderator: Wendy Pinkerton, Zoetis and Diana Clark, Certified Angus Beef

Getting Meat onto School Trays and into Students Bodies
Speaker: Dayle Hayes, Eat Well at School
**Please note Dayle Hayes will be presenting virtually**

Work Within the Des Moines School System and How Meat Fits in the Planning and Delivery of Nutritious, Tasty, Acceptable Meals to Students Year-Round
Speaker: Teresa Wiemerslage, Iowa State University Extension and Outreach

Beef to School Programs: Case Studies from Iowa and Montana
Speaker: Teresa Wiemerslage, Iowa State University

Beef Sticks for Backpacks
Speaker: Bob Delmore, Ph.D., Colorado State University

Room 312-314
Sponsored by Texas Tech University
Session proceedings recording funded by the Beef Checkoff

Moderator: Ranjith Ramanathan, Ph.D., Oklahoma State University

Oxidation and Muscle Protein Functionality: An Evolutionary Global Perspective
Speaker: Youling Xiong, Ph.D., University of Kentucky and the 2022 International Lectureship Award Winner
2022 International Lectureship Award sponsored by PIC
Protein Oxidation and Meat Tenderness
Speaker: Elisabeth Huff-Lonergan, Ph.D., Iowa State University

Myoglobin and Hemoglobin: Discoloration, Lipid Oxidation and Solvent Access to the Heme Pocket
Speaker: Mark Richards, Ph.D., University of Wisconsin-Madison

12:30-2:00 pm
Networking Lunch
Grand Ballroom A/Pre-function Space
Sponsored by empirical Foods

12:45-2:00 pm
AMSA Committee Meetings
• RMC Planning – Ballroom B
• Membership and Outreach– Room 308
• National 4-H – Room 307
• AMSA Grading Committee and Stakeholders Meeting – Room 306

2:00-300 pm
Reciprocation Sessions

Societal Role of Meat: Input into the Rhetoric and Dialogue
Room 302-304
Sponsored by Smithfield Foods, Inc.
Speakers: Eric Berg, Ph.D., North Dakota State University; KatieRose McCullough, Ph.D., North American Meat Institute; Collette Kaster, American Meat Science Association; and Rod Polkinghorne, Ph.D., Birkenwood Pty Ltd
Moderator: Declan Troy, Ph.D., Teagasc Food Research Centre
(Working/panel session)

Myoglobin Modifications, Lipid Oxidation, and Implications on Meat Color
Room 305
Sponsored by Sealed Air’s Cryovac
Speaker: Mahesh Nair, Ph.D., Colorado State University
Moderator: Brad Kim, Ph.D., Purdue University
(Research talk)
NuBana™ Green Banana Powder – Sustainable, Clean-Label, Ingredient with Purpose
Room 306
Sponsored by AMSA Robert Merkel and Roger Mandigo Mentor Recognition Funds
Speaker: Manisha Chaudhuri, Terova Inc.
Moderator: Barbara Coty, Cargill
(Research talk)

Foreign Material – A Holistic Approach
Speaker: Tina Rendon, Pilgrim’s

Transforming the Food Industry with Hyperspectral Imaging
Speaker: Andrea Weeks, Ph.D., P&P Optica

Room 307
Sponsored by Mirasco
Moderator: John Marcy, Ph.D., University of Arkansas
(Panels discussion)

Tech Talks
Room 308
See RMC App For Session Titles

Student Session: Refining Your Scientific Presentation
Room 312-314
Sponsored by AMSA Robert Kauffman Mentor Fund
Speakers: Dustin Boler, Ph.D., Carthage Innovative Swine Solutions; Scott Eilert, Ph.D., Cargill; and Kelly Vierck, Ph.D., University of Arkansas
Moderator: Kathryn Hearn, Oklahoma State University
(Panels discussion)
Bob VanStavern and RMC Chairman Selected Abstracts

Room 317
Sponsored by AMSA Bob VanStavern Mentor Recognition Fund

Speakers: Clay Newton, South Dakota State University (Chairman Selected); Sebastian Hernandez, Texas Tech University (Chairman Selected); and Dr. Bobby VanStavern, Award for Beef Quality Research Award Winner

Moderator: Amanda McKeith, Ph.D., Fresno State University (Research talk)

2:15-3:45 pm Marel Off Site Tour
Limited to 24 people – Sign-up required in advance

3:00-4:00 pm Networking Break

Pre-Function Space
Sponsored by Kerry, Inc. and NutriQuest
Featuring product donations from Jack Link’s® Protein Snacks and Hormel Foods Corp.

3:15-4:00 pm ePoster Viewing Session
Rooms 309-310 and 319-320
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.  
See ePoster grid pages 38 and 39 for time assignments.

3:30-5:00 pm Marel Off Site Tour
Limited to 24 people – Sign-up required in advance

4:00-500 pm Reciprocal Sessions

The Application and Mechanistic Action of the Selective β-Adrenergic Modulator Lubadegrone Fumarate
Speaker: Ben Bohrer, Ph.D., The Ohio State University

Lubadegrone Fumarate Acts As A β-Adrenergic Receptor Antagonist in Intramuscular and Subcutaneous and Intramuscular Adipose Tissues and Adipocytes
Speaker: Stephen Smith, Ph.D., Texas A&M University

Room 305
Sponsored by Elanco Animal Health

Moderator: Phil Rincker, Ph.D., Elanco Animal Health (Research talk)
Climate Change and the Beef Industry: Focus Forward
Room 306
Sponsored by Midan
Speaker: Logan Thompson, Ph.D., Colorado State University
Moderator: Chandler Steele, Tyson Foods, Inc.
(Research talk)

Product Development Focusing on Food Safety and Shelf Life
Room 307
Sponsored by Corbion
Speaker: Bryce Gerlach, Ph.D., Tyson Foods, Inc.
Moderator: Carlos Narciso, Ph.D., Cargill
(Research talk)

Tech Talks
Room 308
See RMC App For Session Titles

Activities with Students to Attract Students to Meat Science Without Meat Judging
Room 312-314
Sponsored by JBT
Speakers: Phil Bass, Ph.D., University of Idaho; Amanda McKeith, Ph.D., Fresno State University; Wes Schilling; Ph.D., Mississippi State University; and Amilton de Mello, Ph.D., University of Nevada-Reno
Moderator: Andrew Clarke, Ph.D., University of Missouri
(Panel discussion)

Characterizing and Predicting Pork Discoloration
Room 315
Sponsored by Iowa Farm Bureau
Speaker: Bailey Harsh, Ph.D., University of Illinois
Moderator: Dustin Boler, Ph.D., Carthage Innovative Swine Solutions
(Research talk)
Barriers to Adopting Automation
Room 316
Sponsored by Kerry, Inc.
Speaker: Kent Bearson, Tyson Prepared Foods
Moderator: Christine Quinlan, Ph.D., Tyson Foods, Inc.
(Research talk)

Steak Cookoff Association World Championship
Held Outside of the Iowa Events Center
Sponsored by Cargill
Speaker: Marissa Ouverson, Iowa State University
Moderator: Kielee Whitwood, Texas Tech University
(Interactive discussion)

5:30-6:30 pm
Emeritus Reception
Hilton Des Moines Downtown - Matrix Room

6:30-9:30 pm
RMC Family Picnic
Blank Park Zoo - 7401 SW 9th St. • Des Moines, IA 50315
Sponsored by Zoetis
Featuring products donated by Prestage and Superior Farms
Buses will depart every 10 minutes from the Community Choice Credit Union
Convention Center & Hy-Vee Hall throughout the evening starting at 5:30 pm.
• 7:45 pm – AMSA Student T-Shirt Auction

9:00 pm- 12:00 am
Student Mixer
Smash Park - 6625 Coachlight Dr. • West Des Moines, IA 50266
Sponsored by Seaboard Foods
Buses for the Student Mixer at Smash Park will leave the Zoo at 8:30 pm, 8:50 pm, 9:10 pm, and 9:30 pm. Buses will leave Smash Park to return to the Community Choice Credit Union Convention Center & Hy-Vee Hall at 10:30 pm, 10:50 pm, 11:10 pm, 11:30 pm, and 11:50 pm.
**Tuesday, June 14**

**Full RMC Technical Program will take place in the Community Choice Credit Union Convention Center & Hy-Vee Hall rooms listed below**

6:30 – 7:30 am  Women's Meat Industry Network - Coffee and Connections  
Room 401

7:15-8:00 am  ePoster Presentations  
Rooms 309-310 and 319-320  
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.  
See ePoster grid pages 40 and 41 for time assignments.

7:30 am–5:00 pm  Silent Auction and Student Promotional Sales  
Room 318  
Bidding Closes at 3:45 pm

8:00-8:30 am  General Session  
Grand Ballroom B  
Sponsored by American Foods Group  
Session proceedings recording funded by the Beef Checkoff

  • Development Council Mentorship Presentations
      o Benjy Mikel
      o Chris Calkins

  • Processed Meats Competition Results  
    Sponsored by JBS Foods/Pilgrim’s

  • Iron Chef Competition Results  
    Sponsored by Cargill

  • Undergraduate Research Competition Award Winners  
    Sponsored by JBS Foods/Pilgrim’s

  • Master Research Competition Winners  
    Sponsored by Tyson Foods, Inc.

  • Ph.D. Research Competition Winners  
    Sponsored by Hormel Foods Corporation
• Dr. Bobby VanStavern for Beef Quality Research Winners
  Sponsored by AMSA Bob VanStavern Mentor Recognition Fund

• Quiz Bowl Winners
  Sponsored by JBS Foods/Pilgrim’s

• Golf Results
  Sponsored by John R. White Company

• Softball Results
  Sponsored by American Foods Group

• Sand Volleyball Results
  Sponsored by Kemin Food Technologies

8:30-9:30 am  Keynote Presentations

Grand Ballroom B
Sponsored by American Foods Group
Session proceedings recording funded by the Beef Checkoff
Moderator: Sharon Beals, CTI Foods

How Culture, Core Values, and Existing Talent: Impact Attracting and Retaining New Talent, While Influencing Positive and Productive Change
Speakers: Craig Bacon, Ph.D., Simmons Foods; Keith Belk, Ph.D., Colorado State University; Molly McAdams, Ph.D., Texas Beef Council; and Kay Stinson, Seaboard Foods

9:30-10:30 am  Networking Break

Pre-Function Space
Sponsored by Food Safety Net Services and Hawkins, Inc.
Featuring product donations from Jack Link’s® Protein Snacks and Hormel Foods Corp.

9:30 am – 5:00 pm  RMC Supplier Showcase

Grand Ballroom A
9:45-10:30 am  
**ePoster Presentations**  
*Rooms 309-310 and 319-320*  
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.  
See ePoster grid pages 42 and 43 for time assignments.

9:00 am – 2:45 pm  
**Accompanying Person Program**  
**Local Tour of Downtown Des Moines**  
*Meet at the bus entrance at the Hilton Hotel - Hotel Landing*

10:30 am–12:30 pm  
**Concurrent Technical Session IV**  
**New Approaches to Reducing Salmonellosis Across the Food Industry**  
**Grand Ballroom B**  
Sponsored by Arm & Hammer Animal and Food Production  
Session proceedings recording funded by the Beef Checkoff

**Moderators:** Tommy Wheeler, Ph.D., USDA-U.S. Meat Animal Research Center and Christine Quinlan, Ph.D., Tyson Foods, Inc.

**Background of Salmonella Current Situation**  
**Speaker:** Mohammad Koohmaraie, Ph.D., IEH

**FSIS New Regulatory Approaches to Address Salmonella**  
**Speaker:** Emilio Esteban, Ph.D., FSIS

**New Approaches to Address Salmonella in Poultry**  
**Speaker:** Barb Masters, Ph.D., Tyson Foods, Inc.

**New Approaches to Address Salmonella in Pork**  
**Speaker:** Aaron Asmus, Hormel Foods Corporation

**New Approaches to Address Salmonella in Beef**  
**Speaker:** Brian McFarlane, JBS USA Food Company

**New Approaches to Address Salmonella in Produce**  
**Speaker:** Anika Bansal, Bonduelle Fresh Americas
10:30 am–12:30 pm  Concurrent Technical Session V
Supply Chain – Untangling the Issues

Room 302-304
Sponsored by Cargill
Session proceedings recording funded by the Beef Checkoff

**Moderators:** Daniel Clark, Ph.D., Certified Angus Beef and Andrea English, Ph.D., Cargill

**Red Meat Animal Protein Exports, Their Value, and Current Supply Chain Implications**
**Speaker:** Pat Binger, Cargill

**COVID-19 Supply Chain and Customer Issues at a Foodservice Meat and Seafood Processor**
**Speaker:** Norlyn Tipton, Ph.D., Sysco

**Supply Chain – Untangling the Issues Impacting Live Animal Production and Primary Processing**
**Speaker:** John Scanga, Ph.D. Meyer Natural Foods

10:30 am–12:30 pm  Concurrent Technical Session VI
Modern Application of Classic Processed Meat Ingredients

Room 312-314
Sponsored by Hormel Foods Corporation
Session proceedings recording funded by the Beef Checkoff

**Moderators:** Danika Miller, Tyson Foods, Inc. and Kelsey Carlson, Tyson Foods, Inc.

**Innovation in Coatings and Seasonings to Meet Consumer Demands**
**Speaker:** Amanda Bigando, Newly Weds Foods

**A Glimpse to the Next Generation of Casings and Edible Films**
**Speaker:** Alberto Lorés Guerrero, Viscofan

**Customized Enzymes to Improve and Enable New Processes in Meat**
**Speaker:** Michael Miller, Ph.D., Codexis
12:30-2:00 pm  Networking Lunch

Grand Ballroom A
Sponsored by Kemin Food Technologies
Featuring product donations from CIT Foods

12:45-1:45 pm  AMSA Business Meeting

Grand Ballroom B

1:00-1:45 pm  AMSA Student Board Business Meeting

Room 312-314

2:00-300 pm  Reciprocation Sessions

**Strengthening the Position of Meat Science as a Scientific Discipline**
Room 302-304
Sponsored by Corbion

**Speakers:** Mohammad Koohmaraie, Ph.D., IEH Laboratories; Russell Cross, Ph.D., Texas A&M University; Deb Hamernik, Ph.D., National Institute of Food and Agriculture; Kevin Myers, Ph.D., Hormel Foods Corporation; David Gerrard, Ph.D., Virginia Tech University; and Rod Polkinghorne, Ph.D., Birkenwood Pty Ltd

**Moderator:** Mohammad Koohmaraie, Ph.D., IEH Laboratories
(Working/panel session)

**Two Decades of MeatOmics in Post-Mortem Muscle Land: How it Started? Where We Are? What is Needed to Take Proteomics From the Laboratory to Beyond?**
Room 305
Sponsored by Kalsec

**Speaker:** Mohammed Gagaoua, Ph.D., Teagasc Food Research Centre

**Moderator:** Steven Lonergan, Ph.D., Iowa State University
(Research talk)
Beef on Dairy: An Emerging Segment

Room 306
Sponsored by JBT
Speakers: Blake Foraker, Texas Tech University; Nick Hardcastle, Ph.D., Cargill; Daniel Clark, Ph.D., Certified Angus Beef; & Duane Wulf, Ph.D., University of Arizona
Moderator: Dale Woerner, Ph.D, Texas Tech University
(Panel discussion)

Keeping Things in the Right Order: How to Optimize Quality and Maximize Production Through Your Cooking Processes Without Compromising Food Safety

Room 307
Sponsored by Kemin Food Technologies
Speaker: Bob Hanson, HansonTech
Moderator: John Marcy, Ph.D., University of Arkansas
(Research talk)

Tech Talks

Room 308
See RMC App For Session Titles

Student Session: Technology in Hiring
Speakers: Olivia Alicea, JBS Foods and Marcia Reeves, Pilgrim’s
Come Build Your Professional Portfolio!
• Professional Head Shot
• Digital Business Cards

Room 312-314
Sponsored by Midan
Moderator: Sierra Jepsen, University of Idaho
(Panel discussion)
Broiler Myopathies – An Update on Detection Methods
Room 315
Sponsored by Mirasco
Speaker: Casey Owens, Ph.D., University of Arkansas
Moderator: Christine Quinlan, Ph.D., Tyson Foods, Inc.
(Research talk)

Social Meat Mythbusting Is Social Meat Marketing
Room 316
Sponsored by Kemin Food Technologies
Speaker: Jess Pryles, Hardcore Carnivore
Moderator: Wendy Pinkerton, Zoetis
(Interactive session)

Eposter Winners 1st place Winners –
Undergraduate, Master and Ph.D. Divisions
Room 317
Sponsored by AMSA Ann Hollingsworth, Dale Huffman, and William Moody Mentor Recognition Funds
Winners will be announced Sunday evening during the Kick-Off Reception
Moderator: Gary Sullivan, Ph.D., University of Nebraska
(Research talk)

3:00-4:00 pm
Networking Break

Pre-Function Space
Sponsored by Johnsonville, LLC
Featuring product donations from Jack Link’s® Protein Snacks and Hormel Foods Corp.

3:15-4:00 pm
ePoster Viewing Session
Rooms 309-310 and 319-320
Co-Sponsored by the Beef Checkoff, National Pork Board, and Smithfield Foods, Inc.
See ePoster grid pages 44 and 45 for time assignments.
4:00-500 pm  

**Funding Opportunities for Meat Quality Research at NIFA**  
**Room 302-304**  
Sponsored by Sealed Air’s Cryovac  
**Speaker:** Deb Hamernik, Ph.D., National Institute of Food and Agriculture  
**Moderator:** Brad Kim, Ph.D., Purdue University  
(Working session)  

**Role of Heat Shock Proteins and Oxidative Stress in the Development of Beef Quality**  
**Room 305**  
Sponsored by U.S. Meat Export Federation  
**Speaker:** Kara Thornton, Ph.D., Utah State University  
**Moderator:** Thu Dinh, Ph.D., Mississippi State University  
(Research talk)  

**Update on Liver Abscesses and the Current Burden of Salmonella in Cattle**  
**Room 306**  
Sponsored by U.S. Meat Export Federation  
**Speakers:** Travis Tennant, Ph.D., West Texas A&M University and Ty Lawrence, Ph.D., West Texas A&M University  
**Moderator:** Andrew Clarke, Ph.D., University of Missouri  
(Panel discussion)  

**How to Conduct Consumer Research in the Pet Industry/Palatability Studies in Pets**  
**Room 307**  
Sponsored by Iowa Farm Bureau  
**Speaker:** Jarrod Kersey, Simmons Foods  
**Moderator:** Mark Hankins, Micreos Food Safety  
(Research talk)  

**Tech Talks**  
**Room 308**  
See RMC App For Session Titles
Get Real: Using Immersive Technologies in Consumer Sensory Testing
Room 312-314
Sponsored by Kraft Heinz Company
Speaker: Chris Simons, Ph.D., Ohio State University
Moderator: Christine Quinlan, Ph.D., Tyson Foods, Inc.
(Research talk)

Supply Chain Ingredients--How to Make the Supply Chain More Resilient
Room 315
Sponsored by AMSA Robert Merkel and Roger Mandigo Mentor Recognition Funds
Speakers: David Rosenstock, Hawkins, Inc.; David Mangine, Hawkins, Inc.; and Greg Jones, Kerry, Inc.
Moderator: Steve Campano, Hawkins, Inc.
(Panel discussion)

Social Meat Mythbusting Is Social Meat Marketing
Room 316
Sponsored by Kemin Food Technologies
Speaker: Jess Pryles, Hardcore Carnivore
Moderator: Kielee Whitewood, Texas Tech University
(Interactive session)

6:00-10:30 pm
AMSA Awards Night

• 6:00 pm – AMSA Awards Reception
  Grand Ballroom Pre-Function Space
  Sponsored by Tyson Foods, Inc.

• 6:45 pm – AMSA Awards Banquet and Presentations
  Grand Ballroom B
  Sponsored by Tyson Foods, Inc.

• 9:30 pm – Ice Cream Social
  Grand Ballroom Pre-Function Space
  Sponsored by Kraft Heinz Company
Wednesday, June 15

6:00–7:00 am  Fun Run
Gray’s Lake Park - Kruidenier Trail - 2101 Fleur Dr. • Des Moines, IA 50315
Sponsored by Hormel Foods Corporation

8:00–8:30 am  Closing General Session and RMC 2023 Welcome Video
Grand Ballroom B
Sponsored by JBS Foods/Pilgrim’s
Session proceedings recording funded by the Beef Checkoff

• AMSA Development Council Mentorship Presentations
  o Jim Riemann
  o Patrick Fleming
• Invitation for 2023 RMC
• T-Shirt Auction Results
  Sponsored by AMSA Student Membership
• Fun Run Results
  Sponsored by Hormel Foods Corporation

8:30–9:30 am  Keynote Presentation - AMSA 75th Celebration of Our History
Grand Ballroom B
Sponsored by JBS Foods/Pilgrim’s
Session proceedings recording funded by the Beef Checkoff

Moderator: Susan Shivas, formerly with Tyson Foods, Inc. and
Anna Dilger, Ph.D., University of Illinois

Meat Science! How Far We Have Come!
Speaker: Russell Cross, Ph.D., Texas A&M University

RMC Comes of Age
Speaker: Rhonda Miller, Ph.D., Texas A&M University
** Please note Rhonda Miller will be presenting virtually**
Importance of RMC and the Impact on Industry - Really Meaty Collaborations
Speaker: Scott Eilert, Ph.D., Cargill

9:30 am – 12:00 pm
Grand Ballroom A

9:30-10:00 am
Networking Break
Pre-Function Space
Co-Sponsored by Phi Tau Sigma and bioMérieux
Featuring product donations from Jack Link’s® Protein Snacks and Hormel Foods Corp.

10:00 am –12:00 pm
Concurrent Technical Session VII
Pet Food Innovation for Pets and Pet Parents
Grand Ballroom B
Sponsored by Simmons Foods
Session proceedings recording funded by the Beef Checkoff
Moderator: Craig Bacon, Ph.D., Simmons Foods

Insights Driven Development of Humanized, Fresh Foods for Pets
Speaker: Brittany White, Ph.D., Simmons Foods

Commercial Pet Food Formats: Nutritional and Wellness Perspectives
Speaker: Maria Regina Cattai de Godoy, Ph.D., University of Illinois

What are Pet Parents looking for in Pet Food
Speaker: Michael Clark, Simmons Foods
Room 302-304
Sponsored by the National Pork Board
Session proceedings recording funded by the Beef Checkoff

Moderators: Ben Bohrer Ph.D., The Ohio State University and
Dustin Boler, Ph.D., Carthage Innovative Swine Solutions

Swine Production Trends and Creating Greater Synergies
with Processing
Speaker: Steve Pollmann, Ph.D., DSP Consulting Firm

Marketing Principals and Market Volatility with International Markets
Speaker: Erin Borror, U.S. Meat Export Federation

Marketing Pork to the U.S. Consumer and Challenges/Opportunities
Presented by the Consumer
Speaker: Bridget Wasser, Midan

12:30 pm - 5:30 pm
Pork Quality Lunch and Workshop
Room 312-314
Lunch Sponsored by the National Pork Board
Workshop Sponsored by the National Pork Board, NutriQuest, and Smithfield Foods, Inc.
*Separate registration required for this event.*
AMS A 2022 RMC Award Winners

R. C. Pollock Award
Sponsored by the AMSA Development Council Robert Bray, Vern Cahill, and R. C. Pollock Mentor Recognition Funds
Jeffrey W. Savell, Ph.D.

Fellows of the American Meat Science Association Signal Service Award
Sponsored by Cargill, Clemens Food Group, CTI Foods, Elanco Animal Health, and Johnsonville, LLC
Jason K. Apple, Ph.D. John A. Scanga, Ph.D.
Amy Down Steward, M.S. Lynn Graves Delmore, Ph.D.
Robert J. Delmore, Ph.D.

Industry and Organizational Leadership Award
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Chad Carr, Ph.D.

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Sponsored by Conagra Brands, Inc.
Surendranath P. Suman, Ph.D.

Distinguished Extension-Industry Service Award
Sponsored by The Foundation for Meat & Poultry Research & Education
Ty E. Lawrence, Ph.D.
Intercollegiate Meat Judging Meritorious Service Award
Sponsored by Food Safety Net Services and Agri-West International
Jerry Cannon, Ph.D.

International Lectureship Award
Sponsored by PIC
Youling Xiong, Ph.D.

Achievement Awards
Sponsored by Burke Corporation
Kaitlyn Compart, Ph.D.
Amilton de Mello, Ph.D.
Benjamin M. Bohrer, Ph.D.

Undergraduate Scholastic Achievement Award Recipients
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Jake Bagby, Texas Tech University
Elizabeth Chmielewski, University of Florida
Lauren Lee, Texas A&M University
Zachary McDonough, West Texas A&M University
Kaitlyn Roley, University of Illinois
Madelyn Scott, Oklahoma State University

Student Teaching “Cleaver” Award Recipients
Sponsored by AMSA Student Membership
Ph.D. Division: Jacob Tuell, Purdue University
M.S. Division: Megan Eckhardt, Angelo State University

AMSA Development Council Mentor Recognitions
Benjy Mikel                  Patrick Fleming
Chris Calkins                Jim Riemann
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Silver Sustaining Partners  (continued)

Bronze Sustaining Partners

Supplier Coalition
RMC 2023
St. Paul, Minnesota
June 25-28, 2023