

54th AASV Annual Meeting Program

March 4-7, 2023 | Aurora, Colorado

BE THERE!

BE INFORMED

BE PREPARED

BE A LEADER

BE PRESENT

aasv.org/annmtg

Message from the Program Chair, Dr. Bill Hollis

Be There – AASV 2023

Why Be There?

One of my best clients over the last 27 years was a local farmer who served as the president of the first commercial farm we managed. It was a relatively small farm by today's standards, but at the time was attacked as a MEGA FARM. This leader remained friendly, positive, and engaged with the people in our community who really did not want to see change. I remember one of his quotes, "Some of the most important decisions in life and in business will be made by those people who decide to show up!"



I chose "Be There" as the theme for the 2023 AASV Annual Meeting to call out the importance of being present in the moment for all our members. We have critical discussions going on in the sessions and in the halls. We have important deals to be made working through business arrangements with vendors and clients. We also have fellow members in need of peer support. When we choose to "Be There," we have made the decision to engage in the debate while also making the choice to respect the needs of others in our association.

Preconference Seminars

The program planning committee has chosen several mission-critical topics to dig into during the preconference seminars. Members will be sharing in the opportunity to dive deep into topics such as PRRS changes, antibiotic stewardship, and piglet survivability. Exciting new topics this year feature speakers who will challenge us to consider new technological advancements to improve production, as well as a session on the mental and physical health needs of our membership. Our members also bring forward their own great ideas every year during the practice tips seminar.

Main Sessions and Technical Tables Exhibit

Exciting speakers have accepted the challenge to lead off our annual meeting: Dr. Egan Brockhoff will present our Howard Dunne Memorial Lecture and Dr. Attila Farkas will give the Alex Hogg Memorial Lecture.

Both speakers will help us think outside our normal everyday veterinary service. Both have exciting personal stories to share and will challenge us to always consider the needs of the pigs in our care, the clients we serve, and the customers who love pork. During breaks throughout the day, we are fortunate to see a return to a large technical table exhibit. With its location adjacent to the main sessions, we should be able to make those time-critical connections during the meeting. We can search out and connect with new technology and products available to better serve our clients. AASV has always stressed the importance of bringing SCIENCE to the meeting. Technical Table exhibitors are challenged to bring data, share important facts, and limit the sales pitch. We expect you will find important data and technology throughout the exhibit.

Stick It Out

As the AASV Annual Meeting grows with seminars and business meetings on the front end and busy sessions and committee meetings in the middle, it is always a challenge to maintain attendance at the closing Tuesday morning session. Please stick it out through Tuesday! We have an exciting point-counterpoint session of Veterinarian/Nutritionist interactions. We will see the two highly respected systems of AMVC and JBS allow a system veterinarian to share the stage with their nutritionist. What we have all learned to respect is the value that comes from collaboration among scientists. This entertaining exchange will also bring important business considerations to the highest-cost portion of pork production for all of our clients. We are in a time when it is critical to tighten the belt on cost. Please “stick it out” to learn from some of the best in the business.

We look forward to your contributions and participation at the 2023 AASV Annual Meeting. I challenge you to be present and engaged with your peers. We all appreciate the many successes and advancements our organization has enjoyed.

Please BE THERE for the 2023 AASV Annual Meeting.

Sincerely,

Bill Hollis

Program chair

PROGRAM COMMITTEE

Bill Hollis, Program Chair

Mary Battrell
Tyler Bauman
Angela Baysinger
Melissa Billing
Cesar Corzo
Marie Culhane
Jordan Gebhardt
Jordan Graham
Clayton Johnson
Chris Kuster
Daniel Linhares
Rodger Main
Dustin Oedekoven

Jeremy Pittman
Doug Powers
Chris Rademacher
Marisa Rotolo
Cameron Schmitt
Mike Senn
Chris Sievers
Michelle Sprague
Chase Stahl
Amber Stricker
Matthew Turner
Jon Van Blarcom

MOBILE APP & PROCEEDINGS

MOBILE APP

Keep track of when and where you need to be with the free AASV mobile conference app! Use it to create your personal schedule and “to do” list. It contains the most up-to-date schedule, speaker and exhibitor details, maps of the meeting rooms, and links to proceedings papers. The app is available for download to iOS and Android devices using the code provided in your registration packet.

PROCEEDINGS

AASV members and conference attendees may download all proceedings papers (including seminar papers) from the AASV website prior to and during the meeting.

For more information:
aasv.org/annmtg



Register online at aasv.org/annmtg

REGISTRATION & FEES

Register online at aasv.org/annmtg

ON-SITE REGISTRATION

Registration desk located in Convention Center, Level 1

Saturday, March 4	7:00 AM – 5:00 PM
Sunday, March 5	7:00 AM – 5:00 PM
Monday, March 6	7:00 AM – 5:00 PM
Tuesday, March 7	7:00 AM – 12:00 PM

FEES

AASV member pre-registration by Feb 10	\$495
AASV member registration after Feb 10	\$595
Non-member veterinarians	\$875
Add'l Tech Table representatives, each (limit 3)	\$875

AASV student members: Register for free.

AASV graduate student members:

Register for ½ the member rate.

Nonmember vets, grad students and vet students:

Apply for AASV membership before you register:

aasv.org/aasv/member_form.pdf

Non-veterinarians: Must meet eligibility criteria to attend. See aasv.org/annmtg/2023/reginfo.php.

REGISTRATION DUE DATES

February 10: Last day for pre-registration rate

February 24: Last day to register online

February 25: Registration CLOSED until on-site Mar 4

CONFERENCE HOTEL

Gaylord Rockies Resort & Convention Center

6700 North Gaylord Rockies Blvd

Aurora, Colorado 80019

aasv.org/annmtg/2023/lodging.php

CONTINUING EDUCATION CREDIT

Up to twenty (20) credit hours of veterinary continuing education are available for attendance during the regular meeting sessions on Sunday 8:00 AM through Tuesday 12:00 PM. Four (4) additional credit hours are available for attendance at a Saturday pre-conference seminar.

TRAVEL ADVISORY

International
Travelers:

**PRIORITIZE
BIOSECURITY**



As you travel to the AASV Annual Meeting, do your part to protect the US swine herd from foreign animal diseases, including African swine fever (ASF), classical swine fever (CSF), and foot-and-mouth disease (FMD).

If you are traveling from a country or have recently visited a country with cases of ASF, CSF, or FMD, remember to prioritize biosecurity:

- Declare international farm visits upon entry into the United States
- Do not bring prohibited foods into the United States
- Follow farm biosecurity measures and downtime requirements (recommended minimum 5 nights with no swine contact) if visiting a US farm
- Do not wear any items, including footwear, from your international farm visit to a US farm

SATURDAY, MARCH 4

Daily Schedule

7:00 AM

Registration Desk open
Convention Center Level 1

AASV Committee Meetings
Location: Cottonwood Rooms (Level 1)
See page 12

1:00 PM

PRE-CONFERENCE SEMINARS (additional fees apply)

**#1 Max Rodibaugh Memorial Practice Tips Seminar:
Be Transparent** (page 13)
Location: Cottonwood 2-3 (Level 1)

#2 PRRSV Monitoring and Diagnostics (page 15)
Location: Cottonwood 4-5 (Level 1)

#3 Pen Gestation: We're There! (page 17)
Location: Cottonwood 6 (Level 1)

#4 Be a Good Steward: Antibiotics and Sustainability
(page 18)
Location: Cottonwood 7 (Level 1)

**#5 Improving Pig Survivability through Research and
Industry Collaboration** (page 20)
Location: Cottonwood 8 (Level 1)

#6 Our Swine Family Health (page 22)
Location: Cottonwood 9 (Level 1)

5:00 PM

SEMINARS CONCLUDE

6:00 PM

Veterinary Student Trivia Event (page 58)
Sponsored by: **MERCK ANIMAL HEALTH**
Location: Maple 3-4-5 (Level 1)



SUNDAY, MARCH 5

Daily Schedule

6:00 AM

Yoga Exercise Class (page 59)

Hosted by: **DSM ANIMAL NUTRITION & HEALTH**

Location: Maple 1-2 (Level 1)

6:30 AM

AASV Student Breakfast

Location: Colorado A (Level 3)

7:00 AM

Praise Breakfast (page 59)

Sponsored by: **STUART PRODUCTS**

Location: Willow Lake 3-4-5 (Level 3)

Registration Desk open

Location: Convention Center Level 1

8:00 AM

PRE-CONFERENCE SEMINARS (additional fees apply)

#7 Boar Stud Health, Biosecurity, and African Swine Fever Preparedness (page 23)

Location: Cottonwood 6 (Level 1)

#8 Data Integration to Support Real-Time Decision Making (page 25)

Location: Cottonwood 4-5 (Level 1)

#9 New Technologies (page 27)

Location: Cottonwood 7 (Level 1)

#10 Swine Medicine for Students (page 29)

Location: Cottonwood 2-3 (Level 1)

#11 Understanding Swine Business (page 30)

Location: Cottonwood 8 (Level 1)

8:00 AM

RESEARCH TOPICS (page 31)

Location: Maple 3-4-5 (Level 1)

SUNDAY, MARCH 5

Daily Schedule

12:00 PM

POSTER SESSION OPEN

Authors in attendance: 12:00 – 1:00 PM

Location: Adams Prefunction AB (Level 1)

Veterinary Student Posters (page 44)

Funded by the **ZOETIS FOUNDATION**

Research Topics Posters (page 46)

Industrial Partners Posters (page 49)

1:00 PM

CONCURRENT SESSIONS

#1 Student Seminar (page 33)

Funded by the **ZOETIS FOUNDATION**

Location: Adams B-C-D (Level 1)

#2 Industrial Partners (page 35)

Location: Cottonwood 6-7 (Level 1)

#3 Industrial Partners (page 38)

Location: Cottonwood 8-9 (Level 1)

#4 Industrial Partners (page 41)

Location: Maple 3-4-5 (Level 1)

8:30 PM – 11:00 PM

STUDENT RECEPTION (page 60)

Sponsored by **MERCK ANIMAL HEALTH**

Location: Willow Lake 3-4-5 (Level 3)

Security Message

In the event a person or group attempts to disrupt the meeting, report their activities immediately to hotel security personnel or an AASV staff member.

Do not engage or incite anyone exhibiting disruptive behavior.



MONDAY, MARCH 6

Daily Schedule

7:00 AM

Registration Desk open

Location: Convention Center Level 1

8:00 AM – 12:30 PM

GENERAL SESSION: **Be There!** (page 52)

Location: Adams B-C-D (Level 1)

Howard Dunne Memorial Lecture: Dr. Egan Brockhoff
Be There. Be the leader for the pig, the client, the customer

Alex Hogg Memorial Lecture: Dr. Attila Farkas
Seizing opportunity within swine veterinary medicine

9:00 AM – 5:00 PM

TECHNICAL TABLES EXHIBIT OPEN (pages 64-66)

Location: Adams A (Level 1)

12:30 PM

LUNCHEON (page 61)

Co-sponsored by **AASV** and the **AASV FOUNDATION**

Location: Colorado A (Level 3)

2:00 – 5:30 PM

CONCURRENT SESSIONS

#1 **Build Back Biosecurity and Make Health Great Again!** (page 53)

Location: Cottonwood 6-7 (Level 1)

#2 **Disease (PRRS and ...)** (page 54)

Location: Cottonwood 8-9 (Level 1)

#3 **Foreign Animal Diseases: Be Prepared – Be Aware** (page 55)

Location: Maple 3-4-5 (Level 1)

6:30 PM – 8:30 PM

AASV AWARDS RECEPTION (page 61)

Sponsored by **MERCK ANIMAL HEALTH**

Location: Colorado A (Level 3)

AASV FOUNDATION LIVE AUCTION (page 63)

Location: Colorado A (Level 3)

TUESDAY, MARCH 7

Daily Schedule

7:00 AM

Registration Desk open

Location: Convention Center Level 1

BREAKFAST and AASV ANNUAL BUSINESS MEETING

Location: Maple 3-4-5 (Level 1)

8:00 AM

GENERAL SESSION: Important Conversations: Be

Engaged and Committed for a Common Goal (page 56)

Location: Adams B-C-D (Level 1)

8:00 AM – 12:00 PM

TECHNICAL TABLES EXHIBIT OPEN (pages 64-66)

Location: Adams A (Level 1)

12:00 PM

MEETING CONCLUDES

AASV OFFICERS

President

Dr. Mike Senn

Vice President

Dr. Angela Baysinger

President Elect

Dr. Bill Hollis

Past President

Dr. Mary Battrell

DISTRICT DIRECTORS

District 1 (Northeast US)

Dr. Melissa Billing

District 7 (Western US)

Dr. Maryn Ptaschinski

District 2 (Southeast US)

Dr. Sara Hough

District 8 (NE, SD)

Dr. Christine Mainquist-Whigham

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Dr. Stephen Patterson

District 9 (MN, ND)

Dr. Chase Stahl

District 4 (IN, MI)

Dr. Megan Inskeep

District 10 (Mexico)

Dr. Cristina Quijano Alvarez

District 5 (IL, WI)

Dr. Attila Farkas

District 11 (Canada)

Dr. Susan Detmer

District 6 (IA)

Dr. Chris Rademacher

SATURDAY MORNING

Committee Meetings

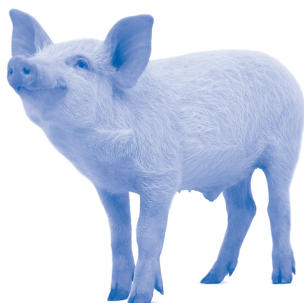
Any AASV member or student member may attend the committee meetings; however, only committee members are eligible to vote. For information on committee activities or to join a committee, see aasv.org/aasv/committee.php.

Date: Saturday, March 4

Location: Cottonwood Rooms (Convention Center Level 1)
See room assignments below; map on pages 67-68.

7:15 – 9:45 AM	Meeting room
Early Career	Cottonwood 5
Influenza	Cottonwood 3
Pharmaceutical Issues	Cottonwood 2
Pig Welfare	Cottonwood 6
Pork Safety	Cottonwood 4
PRRS Task Force	Cottonwood 8
Transboundary/Emerging Diseases	Cottonwood 7

10:00 AM – 12:00 PM	Meeting room
Boar Stud	Cottonwood 2
Communications	Cottonwood 6
Diversity, Equity, and Inclusion	Cottonwood 5
Human Health	Cottonwood 7
Nutrition	Cottonwood 8
Operation Main Street	Cottonwood 4
Student Engagement	Cottonwood 3



SATURDAY SEMINAR 1

Practice Tips

Max Rodibaugh Memorial Practice Tips Seminar: Be Transparent

Date: Saturday, March 4

Time: 1:00 – 5:00 PM

Location: Cottonwood 2-3

Fee: \$105

Seminar chair: Melissa Billing

Come learn valuable lessons from colleagues without even picking up the phone! In this popular preconference seminar, thirteen AASV members share their knowledge on a wide range of topics that will be applicable to both beginner and veteran practitioners. The presenters will be competing for awards sponsored by AASV.

1:00 Welcome and introduction
Melissa Billing

1:05 Proactive decision making
Jeff Luebbe

1:20 Foreign animal disease: Maintaining humanity during the insanity!
Chelsea Hamilton

1:35 Never say “Why me?”
Jim Kober

1:50 Nonverbal communication
Corinne Bromfield

2:05 Lessons learned from an off-site breeding project
Jordan Graham

2:20 Reducing rendering risk
Mary Battrell

2:35 REFRESHMENT BREAK

3:05 Don’t touch that!
Dyneah Classen

Continued on next page

SATURDAY SEMINAR 1

Practice Tips

- 3:20** Mycotoxins: Bins of poison!
R.C. Ebert
- 3:35** Autofill-biotics
Andy Kryzer
- 3:50** Teasing boars: Epididymectomy in farrowing house pigs
Terri Specht-Benson
- 4:05** Be better than before
J.D. Fiechtner
- 4:20** High-volume brochial alveolar lavage: Long name, quick process for *Mycoplasma hyopneumoniae* exposure
Brent Sexton
- 4:35** What you need to know for the first 5 years of practice
Mark Hammer
- 4:50** Conclusion
Melissa Billing
- 5:00** Seminar concludes

STUDENT TRIVIA EVENT



Sponsored by:
MERCK ANIMAL HEALTH

Saturday, March 4
6:00 – 8:00 PM
Maple 3-4-5 (Level 1)

SATURDAY SEMINAR 2

PRRSV Monitoring

PRRSV Monitoring and Diagnostics

Date: Saturday, March 4

Time: 1:00 – 5:00 PM

Location: Cottonwood 4-5

Fee: \$105

Seminar chair: Daniel Linhares

The PRRSV monitoring seminar brings several “flash research updates” from academia on new developments for monitoring and surveillance systems. It also brings perspectives on applications, challenges, and opportunities from practitioners. To put everything together, there will be two panels for Q&A and discussion involving academia, practitioners, and the audience. Come and join us to learn and share your own perspectives!

1:00 Welcome and introduction
Daniel Linhares

Sampling strategies: Sample types and sampling considerations

1:10 Basics of sampling considerations: Allotment over space and time, sample sizes, and age groups
Gustavo Silva

1:25 Tongue-tip fluids: What they are and how they're used
Isadora Machado

1:35 Pooling considerations for processing fluids, serum, and family oral fluids
Henry Osemeke

1:45 Using production and clinical data to screen for PRRSV outbreaks
Mafalda Mil-Homens

1:55 Serum, tongue tips, processing fluids, and family oral fluids: When to use each one
Daniel Linhares

2:05 Effect of pen size on oral fluid sampling in grow-finish pigs
Grzegorz Tarasiuk

SATURDAY SEMINAR 2

PRRSV Monitoring

- 2:15** A Hanor practitioner's monitoring plan for naïve and positive unstable herds
Jon Tangen
- 2:30** A Pipestone practitioner's monitoring plan for naïve and positive unstable herds
Adam Schelkopf
- 2:45** Sampling strategies Q&A panel
Silva, Machado, Osemeke, Mil-Homens, Linhares, Tarasiuk, Tangen, Schelkopf
- 3:05** REFRESHMENT BREAK
- Molecular and next-generation tools for PRRS detection or characterization**
- 3:25** Review of tools to discriminate between wild-type and vaccine-like strains
Phil Gauger
- 3:40** What's new in technologies for PRRSV monitoring in pig populations?
Carmen Alonso
- 3:50** PRRSV genotypes: What's new in the lineage system?
Kim VanderWaal
- 4:00** Cracking the whole genome sequencing code: How to visualize and make sense of results
Giovani Trevisan
- 4:10** An AMVC practitioner's perspectives on, experiences with, and wish list for molecular testing for PRRSV
Joel Sparks
- 4:25** A Swine Vet Center practitioner's perspectives on, experiences with, and wish list for molecular testing for PRRSV
Paul Yeske
- 4:40** Molecular tools Q&A panel
Gauger, Alonso, VanderWaal, Trevisan, Sparks, Yeske
- 5:00** Seminar concludes

SATURDAY SEMINAR 3

Pen Gestation

Pen Gestation: We're There!

Date: Saturday, March 4

Time: 1:00 – 5:00 PM

Location: Cottonwood 6

Fee: \$105

Seminar chair: Michelle Sprague

As we convert more and more sow farms from stall gestation to pen gestation, I often find myself thinking, “I wish we had known then what we know now.” The primary objective of this seminar is to provide practical information for veterinarians advising clients on transitioning from stalls to pens. Our speakers will be sharing what they have learned through their experiences to help others make this transition more seamlessly.

- 1:00** Pen gestation systems and considerations
Jennifer Brown
- 1:45** California Proposition 12
Michael Formica
- 2:10** Packer perspective on sow gestation housing
Tiffany Lee
- 2:40** REFRESHMENT BREAK
- 3:00** Experiences with conversions to pens and free access stalls
Jake Schwartz
- 3:30** Retrofits: What to do and what not to do
Hyatt Frobose
- 4:15** Practical application: Things to know
P.J. Corns
- 5:00** Seminar concludes

SATURDAY SEMINAR 4

Antibiotics and Sustainability

Be a Good Steward: Antibiotics and Sustainability

Date: Saturday, March 4

Time: 1:00 – 5:00 PM

Location: Cottonwood 7

Fee: \$105

Seminar chair: Rebecca Robbins

Everyone is responsible for being a good steward: Doing what's right for people, pigs, and the planet. Come learn about new antimicrobial resistance and stewardship resources for swine veterinarians, establishing metrics to measure antibiotic use and sustainability, and research in these ever-changing fields, and engage in discussion about how the practice of swine medicine can enhance the pork supply chain. You will surely learn something new in one or both areas from our diverse lineup of speakers.

- 1:00** Welcome
Rebecca Robbins
- 1:05** Test your antibiotic stewardship: New resources for swine veterinarians
Jessica Bonnema
- 1:35** Measuring antimicrobial use: Why and how
Noelle Noyes
- 1:55** FARAD (Food Animal Residue Avoidance Databank) resources for swine veterinarians
Derek Foster
- 2:15** Compounding and regulatory hot topics
Michael Apley
- 2:30** Antibiotics Q&A panel
Bonnema, Noyes, Foster, Apley
- 2:45** REFRESHMENT BREAK
- 3:05** Sustainable pork: On-farm sustainability measures
Marguerite Tan
-

SATURDAY SEMINAR 4

Antibiotics and Sustainability

- 3:25** How to perform research in sustainability and establish benchmarks
Erika Johnson
- 3:45** Sustainable pork: Carbon credits
Molly Peterson
- 4:05** From maximizing productivity to meeting food system expectations: New demands and opportunities
Charlie Arnot
- 4:35** Sustainability Q&A panel
Tan, Johnson, Peterson, Arnot
- 4:50** Wrap-up
Rebecca Robbins
- 5:00** Seminar concludes

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SATURDAY SEMINAR 5

Pig Survivability

Improving Pig Survivability through Research and Industry Collaboration

Date: Saturday, March 4

Time: 1:00 – 5:00 PM

Location: Cottonwood 8

Fee: \$105

Seminar chair: Jordan Gebhardt

Co-sponsored by the National Pork Board and USDA FFAR

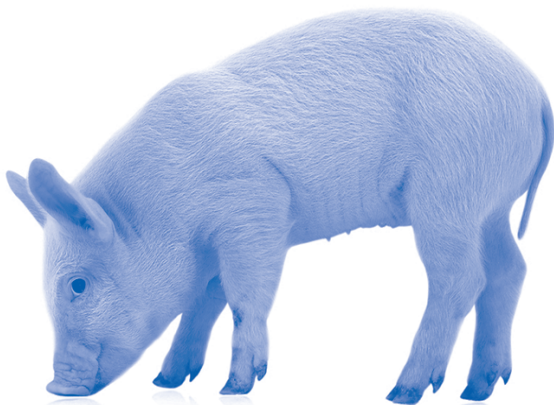
The “Improving Pig Survivability” project is a 5-year project encompassing research, education, and extension efforts with the goal of reducing overall mortality in the US commercial swine industry. The project is funded by the National Pork Board and the Foundation for Food and Agriculture Research (FFAR) and includes researchers from Iowa State University, Kansas State University, and Purdue University. Research efforts seek to identify factors contributing to swine mortality in commercial production, and to develop strategies and information that can be utilized to reduce mortality and maximize pig survivability. This seminar will focus on key findings generated through the first four years of the project, including key takeaway messages to improve pig survivability.

- 1:00** Introduction and overview of the Pig Survivability project
Stacie Matchan
- 1:10** Overview of sow pelvic organ prolapse research
Jason Ross
- 1:30** Is there a genetic basis for pelvic organ prolapse?
Jack Dekkers
- 1:50** Sow robustness: Key areas to maximize sow retention
Sergio Canavate
- 2:10** Early identification of at-risk sows reduces sow mortality
Chris Rademacher

SATURDAY SEMINAR 5

Pig Survivability

- 2:30** Managing noninfectious causes of sow mortality
Clayton Johnson
- 2:50** Sow herd Q&A panel
Ross, Dekkers, Canavate, Rademacher, Johnson
- 3:00** REFRESHMENT BREAK
- 3:30** Overview of nutritional, genetic, and management strategies to influence mortality after weaning
Mike Tokach
- 4:00** Postweaning mortality: Key findings through data analysis
Edison Magalhaes
- 4:30** Postweaning Q&A panel
Tokach, Magalhaes
- 4:45** Overview of available resources and producer tools
Joel DeRouchey
- 5:00** Seminar concludes



SATURDAY SEMINAR 6

Swine Family Health

Our Swine Family Health

Date: Saturday, March 4

Time: 1:00 – 5:00 PM

Location: Cottonwood 9

Fee: \$105

Seminar co-chairs: Emily Byers Taylor and Christa Goodell

Break from tradition and BE THERE Saturday afternoon to focus on YOU along with your colleagues, partners, and our swine vet family! This seminar is brought to you through a collaboration of the AASV Early Career, DEI (Diversity, Equity, and Inclusion), and Human Health, Safety, and Well-being Committees. A great seminar for AASV members of all ages, experience levels, and backgrounds, it guarantees to stimulate your thoughts and expand your professional development across the categories of physical, mental, financial, and social health.

This interactive seminar promises to be engaging, and your active participation will be greatly encouraged.

1:00 Our physical health: Tips for keeping swine vets healthy and safe
Heather Fowler

1:45 Our mental health: Because it matters!
Michele Payn

2:30 Our financial health: Creating a secure financial future
Lance Roasa

3:25 REFRESHMENT BREAK

3:45 Our social health: “Be there” across the generations
Panel moderated by Emily Byers Taylor

4:15 Our social health: “Be engaged” in fostering inclusive communities
Panel moderated by Wesley Lyons

5:00 Seminar concludes

SUNDAY SEMINAR 7

Boar Stud Issues

Boar Stud Health, Biosecurity, and African Swine Fever Preparedness

Date: Sunday, March 5

Time: 8:00 AM – 12:00 noon

Location: Cottonwood 6

Fee: \$105

Seminar chair: Deanne Hemker

The focus of this preconference seminar is to provide attendees with current information on health challenges, biosecurity procedures, and African swine fever preparedness for boar stud facilities.

The seminar will begin with a discussion on impacts to business continuity from an ASF incursion in the US and how best to limit those. Attendees will be presented novel research on ASF infection dynamics in a boar stud and subsequent semen transmission. The seminar will transition into biosecurity, with practitioners from various sectors of the industry providing specific examples of biosecurity protocols utilized for supply entry, boar entry, and semen delivery. This will be followed by a discussion on PRRSV breaks in boar stud facilities and lessons learned from conducting outbreak investigations. The seminar will conclude with a discussion on semen quality analysis focused on compensable versus non-compensable semen traits.

The information covered in this seminar will be valuable for practitioners who work routinely with boar studs, but also for practitioners with sow farm clients, as these topics have impacts on downstream production.

8:00 African swine fever working group for business continuity
Ben Blair

8:30 New: African swine fever boar infection dynamics and semen transmission results
Darwin Reicks

9:10 Certified Swine Sample Collector Program: Applicability to boar studs
Pam Zaabel

9:20 Semen traceability and standardized shipping requirements
Doug Groth

Continued on next page

SUNDAY SEMINAR 7

Boar Stud Issues

- 9:40** African swine fever Q&A panel
Blair, Reicks, Zaabel, Groth
- 9:50** REFRESHMENT BREAK
- 10:20** Boar stud biosecurity: Supply entry, new boar entry, and semen delivery
10:20 **Megan Hood**
10:30 **Joe Fent**
10:40 **Bob Thompson**
- 10:50** Boar stud biosecurity Q&A panel
Hood, Fent, Thompson
- 11:05** PRRSV breaks: Lessons learned
11:05 **Jeff Harker**
11:20 **Bob Thompson**
- 11:35** PRRSV breaks Q&A panel
Harker, Thompson
- 11:40** Compensable versus non-compensable semen traits
Gary Althouse
- 12:00** Seminar concludes

SUNDAY SEMINAR 8

Data Integration

Data Integration to Support Real-Time Decision Making

Date: Sunday, March 5

Time: 8:00 AM – 12:00 noon

Location: Cottonwood 4-5

Fee: \$105

Seminar chair: Gustavo Silva

Co-sponsored by USDA NIFA

The world we live in today continuously generates tons of data from different sources. The swine industry is no exception. This seminar presents and describes tools and technologies already available to veterinarians and producers to integrate different data streams to support real-time decision making. Speakers will share their experiences in the development and application of such tools in the field and share thoughts on how to create the most value from their datasets.

The primary target audience is veterinarians, production managers, and nutritionists. Each presentation includes 3 minutes for questions and answers. Come and join us in this discussion!

- 8:00** Welcome
Gustavo Silva
- 8:02** Experiences moving to cloud data: Return on investment on cyber-infrastructure and benefits
Ximena Paz Portal
- 8:22** Developing a real-time disease classification system based on real-time diagnostics
Swaminathan Jayaraman
- 8:39** Using technology to understand biosecurity compliance: Does it work in the field?
Andreia Arruda
- 8:56** Combining and analyzing streaming environment data for anomaly detection
Brett Ramirez

Continued on next page

SUNDAY SEMINAR 8

Data Integration

- 9:13** Integrating operational data to detect early signs of PRRSV introduction into sow farms
Mafalda Mil-Homens
- 9:30** REFRESHMENT BREAK
- 10:00** Forecasting of nursery mortality and identification of the main drivers before placement
Edison Magalhaes
- 10:24** Experiences monitoring wean-to-finish barns 24/7 to make faster decisions
Caleb Shull
- 10:48** Practical experience of using feed software for allocation and harvesting projections
Jorge Estrada
- 11:12** Use of computer vision technology to identify production deficiencies and set marketing strategies
David Rosero
- 11:36** The next frontier of business intelligence for the swine industry
Beau Peterson
- 12:00** Seminar concludes

STUDENT RECEPTION



Sponsored by:
MERCK ANIMAL HEALTH

Sunday, March 5
8:30 – 11:00 PM

Willow Lake 3-4-5 (Level 3)

SUNDAY SEMINAR 9

New Technologies

New Technologies

Date: Sunday, March 5

Time: 8:00 AM – 12:00 noon

Location: Cottonwood 7

Fee: \$105

Seminar chair: Angela Baysinger

For any new technology to be valuable to pig/pork producers, it must satisfy an operational need. Specific operational needs are defined by use cases. This seminar will cover new technologies from a producer use case perspective. While there are a number of different use case categories, we will focus on four: 1) telehealth, 2) animal behavior, 3) early disease detection, and 4) biosecurity management.

8:00 Introduction
Angela Baysinger

8:05 What is required for effective technology adoption into farms, producers, and systems? The big picture
Dale Polson

Engaging the human-technology interface: Telehealth

8:35 Telehealth in poultry: Potential for the swine industry
David Speller

8:45 Digital tools that are transforming quality of care by driving employee engagement, accountability, and ownership
Matthew Rooda

8:55 Digital health records: What is available and how they work
Chris Sievers

9:05 Telehealth Q&A panel
Speller, Rooda, Sievers

Animals, assets, and environment: Animal behavior

9:15 Technologies for measuring normal and abnormal breeding animal behaviors: Their influence on performance
Matt Culbertson

Continued on next page

SUNDAY SEMINAR 9

New Technologies

9:35 Technologies for counting and estimating weight in pig barns
David Rosero

9:55 Next generation grow-finish swine health and growth monitoring
Tami Brown-Brandl

10:15 REFRESHMENT BREAK

Animals, assets, and environment: Early disease detection

10:35 “Wearable” technologies for the early detection and diagnosis of disease episodes
Jim Lowe

10:55 Complementary audio and sampling technologies for the early detection and diagnosis of disease episodes
Carmen Alonso

Animals, assets, and environment: Managing biosecurity

11:15 Technical and human considerations when applying technologies to improve human sanitation on swine and poultry farms
Jean-Pierre Vaillancourt

11:30 Biosecurity from 30,000 feet: Web-based platforms enabling an epidemiological perspective. Above the trees to see the forest(s)
Rebecca Robbins

11:45 Managing biosecurity Q&A panel
Vaillancourt, Robbins

11:55 Wrap-up
Angela Baysinger

12:00 Seminar concludes

SUNDAY SEMINAR 10

Swine Medicine for Students

Swine Medicine for Students

Date: Sunday, March 5

Time: 8:00 AM – 12:00 noon

Location: Cottonwood 2-3

Fee: \$105; no charge for 2021 and 2022 DVM graduates

Seminar co-chairs: Jeremy Pittman and Angie Supple

This seminar is designed to supplement the education of students and recent graduates with topics specific to swine medicine, delivered in a way to provide key learning objectives and “take homes.” Topics focus on areas to which students and recent grads don’t usually receive sufficient exposure.

This year, based on feedback from previous sessions, we will focus on 1) the input costs to raise a pig through weaning, nursery, and market, and 2) a basic understanding and evaluation of the key metrics to evaluate on sow farm records. We will conclude the session with interactive cases, where attendees will use their new skills to evaluate some “real world” sow records and determine some potential differentials for the “problem.”

- 8:00** Introduction
Jeremy Pittman and Angie Supple
- 8:05** What does it cost to raise a pig?
Chase Stahl
- 9:00** Sow farm records 101
Matt Ackerman
- 10:00** REFRESHMENT BREAK
- 10:30** Interactive cases: Sow farm records
Matthew Ackerman
- 12:00** Seminar concludes

SUNDAY SEMINAR 11

Swine Business

Understanding Swine Business

Date: Sunday, March 5

Time: 8:00 AM – 12:00 noon

Location: Cottonwood 8

Fee: \$105

Seminar chair: Tyler Bauman

It's time to set down *Diseases of Swine* and pick up a copy of "Business 101." This seminar is focused solely on expanding your knowledge beyond the bugs and drugs by cultivating a greater understanding of the business aspects specific to the swine industry. Each speaker brings a unique insight of the swine industry business and will leave you with the tools to BE a swine veterinarian magnate!

- 8:00** Global pork exports update
Dan Halstrom
- 8:40** Understanding the basic concepts of marketing mechanisms
Kent Harrison
- 9:30** Assessing return on investment (ROI) and risk (and other financial jargon)
Jeff Diesen
- 10:00** REFRESHMENT BREAK
- 10:20** Combining health decisions with a business view
Ryan Strobel
- 11:00** Becoming a CEO in the swine industry
Brad Heron
- 11:40** Swine business Q&A panel
Halstrom, Harrison, Diesen, Strobel, Heron
- 12:00** Seminar concludes

SUNDAY MORNING

Research Topics

Research Topics

Date: Sunday, March 5

Time: 8:00 AM – 12:00 noon

Location: Maple 3-4-5

Session chair: Chris Rademacher

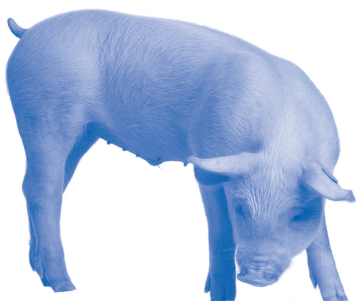
- 8:00** Spatiotemporal relative risk distribution of porcine reproductive and respiratory syndrome virus in the southeastern United States
Felipe Sanchez
- 8:15** In-silico characterization of the relationship between PRRSV prevalence at the individual piglet level and prevalence at the litter level in a farrowing room
Onyekachukwu Henry Osemeke
- 8:30** Refining PRRRS-2 genetic classification based on global ORF5 sequences and investigation of geographic distributions and temporal changes
Jianqiang Zhang
- 8:45** Investigating whether PRRSV can reach groundwater after manure-spreading events
Joaquin Alvarez-Norambuena
- 9:00** Hand sanitation protocols to decrease the risk of influenza transmission in pigs and from pigs to people
Joaquin Alvarez-Norambuena
- 9:15** Divergent pathogenicity between highly pathogenic avian influenza A (H5N1) strains in swine
Bailey Arruda
- 9:30** Modeling the introduction and control of African swine fever within commercial swine populations in the United States
Abagael Sykes
- 9:45** REFRESHMENT BREAK

Continued on next page

SUNDAY MORNING

Research Topics

- 10:15** *Actinobacillus pleuropneumoniae* serotype 15 outbreak investigation: Comparative whole genome sequencing of pan-North American isolates
Alyona Michael
- 10:30** Dynamics of infection of disease-associated *Streptococcus suis* (DASS) in the lactation phase
Robert Mugabi
- 10:45** Antibody response to rotavirus A and C in gilts and their piglets after prenatal natural planned exposure
Deepak Kumar
- 11:00** Effect of rotavirus vaccination of gilts prior to farrowing following natural planned exposure at breeding on piglet growth, prevalence of diarrhea, and preweaning mortality
Lindsey Britton
- 11:15** Assessing the efficacy of different combinations of time and temperature to inactivate PRRSV and PEDV
Mafalda Mil-Homens
- 11:30** Attenuation phenotypes and protective efficacy of cell culture adapted PEDV non-S INDEL strain
Loni Schumacher
- 11:45** Impact of sow farm PED outbreaks on the downstream nursery performance in the absence of PRRS acute herds
Edison Magalhaes



SUNDAY SESSION #1

Student Seminar

Student Seminar

Funded by the **ZOETIS FOUNDATION**

Date: Sunday, March 5

Time: 1:00 – 5:15 PM

Location: Adams B-C-D

Session co-chairs: Andrew Bowman and Justin Brown

- 1:00** Evaluation of on-farm point-of-need testing using influenza A virus in swine (IAV-S) as a model
Adam Tatnall, University of Illinois
- 1:15** Comparison of IFA versus ELISA for assessing maternal and post-vaccination PCV2 antibody levels
Erin Russell, Lincoln Memorial University
- 1:30** Prevalence of IAV-S in unvaccinated postweaning piglets
Alyssa Ruston-Bray, University of Illinois
- 1:45** Water-based foam depopulation in swine: Evaluating brain activity, animal behavior, and logistical aspects
Jack Korenyi-Both, The Ohio State University
- 2:00** Impact of amine-based cleaner on the control of coccidiosis in piglets
Ellen Gibbs, University of Missouri
- 2:15** Everything that grows is not gold; Evaluating the effect of sampling techniques on culture of disease-associated *Streptococcus suis* from diseased nursery-aged pigs
Amber Vegter, Iowa State University
- 2:30** Evaluation of the IgA response to attenuated-live oral *Lawsonia intracellularis* vaccine
Kendall Sattler, Purdue University
- 2:45** REFRESHMENT BREAK

Continued on next page

SUNDAY SESSION #1

Student Seminar

- 3:15** Evaluation of various grueling protocols on nursery pig performance and survivability
Carly Bates, Iowa State University
- 3:30** Mucin 4 is a marker of necrotizing bronchiolitis in influenza A virus infection
Rachel Kanefsky, Tufts University
- 3:45** Comparison of tongue tips, serum, and processing fluids for PRRSV monitoring in neonates
Taylor Jansen, Purdue University
- 4:00** Pharmacokinetics of oral clonazepam and its effect on serum cortisol in growing pigs (*Sus scrofa domesticus*)
Gregory Shanks, University of Tennessee
- 4:15** Comparison of environmental sampling methods to detect PRRSV on contaminated surfaces
Hope Dohlman, Iowa State University
- 4:30** Efficacy of PRRSV vaccination regimens to overcome maternal immunity in PRRSV-positive weaned pigs
Adam Steffensmeier, Iowa State University
- 4:45** Evaluation of porcine reproductive and respiratory syndrome virus maternal antibody interference in commercial wean pig populations using a PRRS modified live virus vaccine
Mallory Wilhelm, Iowa State University
- 5:00** Assessing tongue samples from mortalities as additional PRRSV and IAV-S surveillance on protected nursery and finishing sites
Dylan Wulfekuhle, Iowa State University
- 5:15** Session concludes

SUNDAY SESSION #2

Industrial Partners

Industrial Partners #2

Date: Sunday, March 5

Time: 1:00 – 5:45 PM

Location: Cottonwood 6-7

Session co-chairs: Cesar Corzo and Mary Battrell

- 1:00** The competency impact after initiating a new training program in the boar stud
Megan Hood
AgCreate Solutions/Pork Avenue Training Portal
- 1:15** Epitope analysis confirms a bivalent PCV2 vaccine is relevant to the diversity of current global strains
Meggan Bandrick
Zoetis
- 1:30** Grow-finish model assessing ceftiofur crystalline free acid intervention for control of umbilical infections and hernias in a commercial production system
Lauren Glowzinski
Zoetis
- 1:45** Medium chain fatty acids fed to sows during gestation and lactation and the subsequent effects on the health and performance of the progeny
Stacie Crowder
PMI
- 2:00** Top financial planning tips for veterinarians
Andrew Kleis
Insight Wealth Group
- 2:15** Utilizing hybridization-based next generation sequencing for swine-related pathogen detection
Benjamin Hause
Celemics
- 2:30** Reduction of antibiotic usage in commercial boar semen production through accurate dosage of antibiotics (ADA)
John Quackenbush
Minitube USA

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SUNDAY SESSION #2

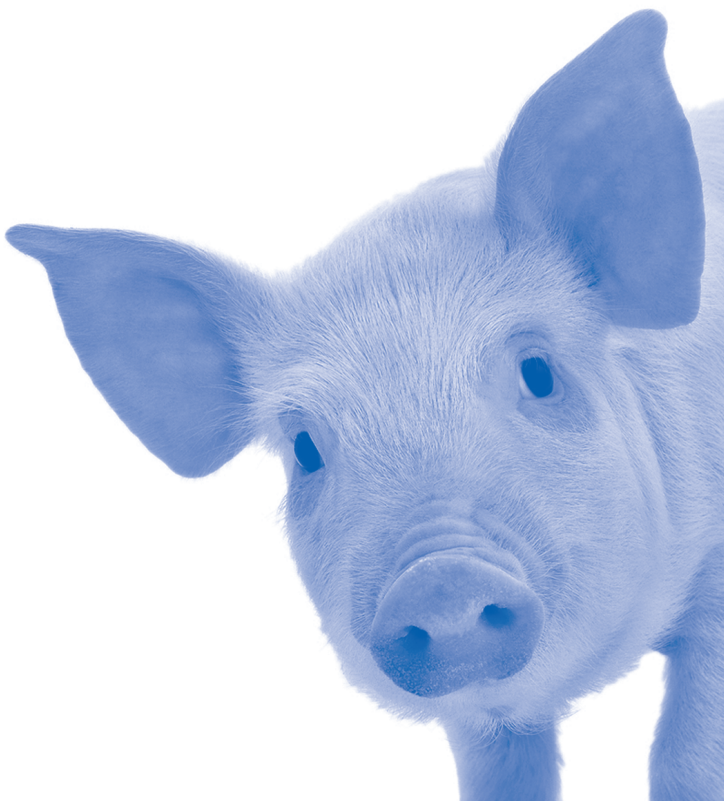
Industrial Partners

- 2:45** Improved performance feeding Baseline in sows and related impact on inflammation biomarker
Tom Petznick
NutriQuest
- 3:00** REFRESHMENT BREAK
- 3:15** A modified live virus prime/autogenous boost vaccination approach stimulates broadly neutralizing antibodies and improved protection to PRRSV
Benjamin Hause
Cambridge Technologies
- 3:30** Viral isolation and sequencing demonstrate flies and gnats may serve as vectors of swine rotaviruses and sapovirus in nurseries
Allison Knox
Central Life Sciences
- 3:45** Effect of various levels of stabilized fish oil source on sperm quality and production in boars
Mark Wilson
Feedworks USA
- 4:00** Conditions of storage and preincubation of boar seminal doses and its effect on motility and kinetic parameters measured with Magavision SCI
Raquel Ausejo
MB Swine Reproduction
- 4:15** Influenza strategies, from serology to vaccination
Pravina Kitikoon
Merck Animal Health
- 4:30** An evaluation of the use of Sequivity® PPV2 prescription vaccine to reduce the impact of lameness in growing pigs from a high health commercial farm
Deb Murray
Merck Animal Health
- 4:45** Circumvent® CML: A newly licensed commercial vaccine for the protection against PCV2a, PCV2d, *Mycoplasma hyopneumoniae*, and *Lawsonia intracellularis*
Brett O'Brien
Merck Animal Health

SUNDAY SESSION #2

Industrial Partners

- 5:00** Biosecurity and biocontainment methodology for swine feed to prevent animal disease
Paul Yeske
APC
- 5:15** Sow herd performance following vaccination of PRRS naive sows with a modified live PRRS vaccine
Corrine Frugé
Elanco Animal Health
- 5:30** Pulmotil® AC used for *Mycoplasma hyopneumoniae* eradication with herd closure
Paul Yeske
Elanco Animal Health
- 5:45** Session concludes



SUNDAY SESSION #3

Industrial Partners

Industrial Partners #3

Date: Sunday, March 5

Time: 1:00 – 5:45 PM

Location: Cottonwood 8-9

Session co-chairs: Clayton Johnson and David Pyburn

- 1:00** The effects of different dietary levels of supplemental vitamin D, 25-OH-D3, and vitamin E on nursery pig performance and vitamin status
Jon Bergstrom
DSM Animal Nutrition & Health
- 1:15** Clinical manifestations of mycotoxin-contaminated feed in swine
Sara Hough
DSM Animal Nutrition & Health
- 1:30** Improving sow livability through selection for better structure and reproductive health
Mitch Christensen
Topigs Norsvin USA
- 1:45** Transforming pig care with PigFlow
Matthew Rooda
SwineTech
- 2:00** Precision pig weights using LeeO
Abigail Jenkins
Prairie Systems
- 2:15** PCR detection of ASFV nucleic acid in oral swabs from clinical and nonclinical sows of three swine farms in Vietnam
Christa Goodell
Longhorn Vaccines and Diagnostics
- 2:30** Evaluation of airborne shedding and production setback postweaning from Pharmgate PRRSGard® vaccine in commercial conditions
Erin Kettelkamp
Pharmgate Animal Health
- 2:45** Comparative efficacy of Aivlosin and tilmicosin for treatment of swine respiratory disease in nursery-age pigs
Cary Sexton
Pharmgate Animal Health
-

SUNDAY SESSION #3

Industrial Partners

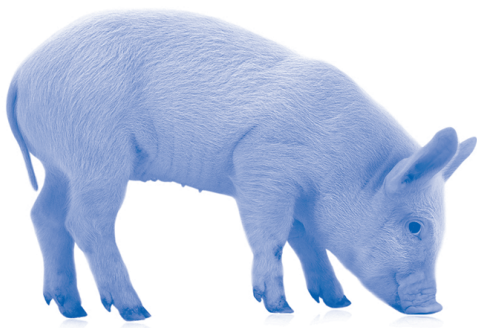
- 3:00** REFRESHMENT BREAK
- 3:15** Impact of nurse sow strategies on preweaning and nursery performance
John Sonderman
DNA Genetics
- 3:30** Enterotoxigenic *E coli* populations across sow herds and neonatal piglets were reduced after using a *Bacillus*-based product
Samantha Hernandez
Arm & Hammer
- 3:45** Efficacy of Tilmovet AC for PRRS control by water medication in nursery pigs
Ulrich Klein
Huvepharma
- 4:00** Impacts of salinomycin and crude protein on coccidiosis-burdened nursery pigs
Mitch Nisley
Huvepharma
- 4:15** Factors affecting different claw lesions in sows: Lessons from a partial least squares approach
Lucas Rodrigues
Zinpro Corporation
- 4:30** Addressing the "why" and "how": Tips for integrating telemedicine into swine veterinary practice
Gil Patterson
VetNOW
- 4:45** Effect of blends of organic acids and monoglycerides on growth performance, diarrhea and systemic inflammation of *Escherichia coli* F18 challenged weaned pigs
Ying Chen
Eastman
- 5:00** VetAssure ATP: Applications for the US pork industry
David Pyburn
BioChek

Continued on next page

SUNDAY SESSION #3

Industrial Partners

- 5:15** Identifying and evaluating anti-inflammatory compounds that inhibit African swine fever virus
Theresia Lavergne
Natural Biologics
- 5:30** Time to PRRS negative response in gilts injected with Ivomec
Grant Allison
Bimeda
- 5:45** Session concludes



SUNDAY SESSION #4

Industrial Partners

Industrial Partners #4

Date: Sunday, March 5

Time: 1:00 – 5:15 PM

Location: Maple 3-4-5

Session co-chairs: Cameron Schmitt and Taylor Spronk

- 1:00** Case report of a PCV2d-based vaccine in a clinical PCV2d challenged flow
Melissa Billing
Boehringer Ingelheim Animal Health
- 1:15** DFM Pak® improves manure characteristics to influence environmental and health benefits in the pit, the pen, and in the air
Jake Lee
United Animal Health
- 1:30** Post-weaning feed and water outage event with concurrent mycotoxin exposure additively impacts gut morphology and performance of nursery pigs
Julie Mahoney
United Animal Health
- 1:45** Effect of water enriched with Nextein APF® on weaned pigs after long duration transport under summer conditions
Tyler Bauman
TechMix
- 2:00** Effects of zinc oxide and mannan-rich fraction (Actigen®) effects on nursery swine performance and removals
Jose Soto
Alltech
- 2:15** High-health herd response to activated phenolic molecules, APMTM (GI-Revive™)
Andrew Bents
Precision Health Technologies

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SUNDAY SESSION #4

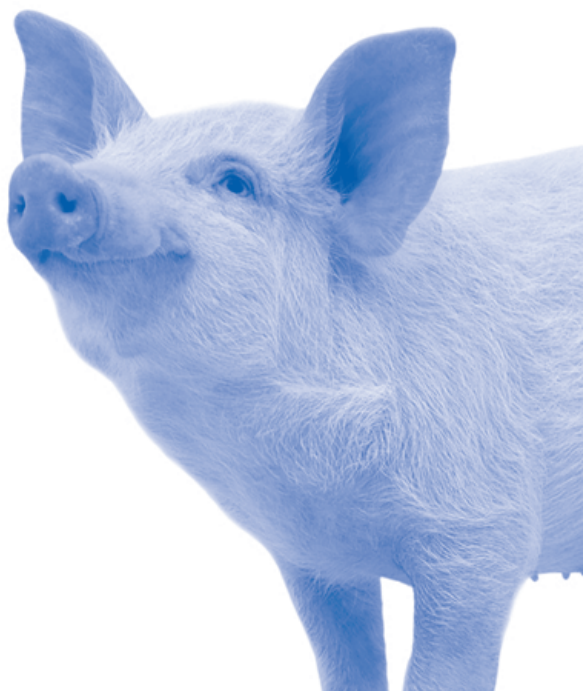
Industrial Partners

- 2:30** Efficacy of Enterisol Salmonella T/C® in reducing the shedding and colonization of multidrug resistant monophasic *Salmonella enterica* serovar I 4,[5],12:i:-
Fernando Leite
Boehringer Ingelheim Animal Health
- 2:45** A methodology for assessing the economic value of early disease detection in growing pigs
Dale Polson
Boehringer Ingelheim Animal Health
- 3:00** REFRESHMENT BREAK
- 3:15** Evaluation of meloxicam in sows post-farrowing on piglet performance
Brian Payne
Veterinary Pharmaceutical Solutions
- 3:30** Novel virulence-associated gene frequency across capsular serotypes and sequence types in *Streptococcus suis*
Steve Tousignant
Newport Laboratories
- 3:45** Developing a model protocol for tracking antibiotic use and AMR monitoring across a large-scale commercial swine production system: The IMAGINE project
Taylor Spronk
National Pork Board
- 4:00** Virabloc impacts viability of an ASFV surrogate (*Emiliana huxleyi*) virus in feed: Implications for ASFV transmission in today's global supply chain
Ashley Wagner
Essential Ag Solutions
- 4:15** Important concepts on the Swine Monitoring Program
Edgar Tapia
IDEXX Laboratories

SUNDAY SESSION #4

Industrial Partners

- 4:30** Overview of the benefits of Furst Protect in sows and nursery pigs
Fredrik Sandberg
Furst-McNess Company
- 4:45** Evaluation of the vaccination in lactation with ERYSENG® PARVO/LEPTO in the follicle genesis, stress-related hormones and other parameters vs a nonvaccinated control group
Joaquin Miguel
HIPRA
- 5:00** Effects of an additional iron dextran injection administered to piglets on hemoglobin, performance, and carcass responses
Merlin Lindemann
Pharmacosmos
- 5:15** Session concludes



SUNDAY - MONDAY

Veterinary Student Posters

Veterinary Student Posters (#1 - #20)

Funded by the ZOETIS FOUNDATION

The Zoetis Foundation and AASV provide a \$250 award to each presenter.

Location: Adams Prefunction A-B

Sunday, March 5 12:00 – 5:00 PM

Monday, March 6 8:00 AM – 5:00 PM

Authors present

Sunday

12:00 – 1:00

Posters #1-15 (*) will be judged in the **POSTER COMPETITION** sponsored by **UNITED ANIMAL HEALTH**

- *1. Comparison of high-performing and low-performing suckling pig fecal microbiome
Elisha Snezek, University of Georgia
 - *2. An investigation of the number of pigs in gestation pens that will chew on a rope during oral fluid collection
Brenna Werner, University of Minnesota
 - *3. Evaluation of ozone viricidal effects on porcine reproductive and respiratory syndrome virus within semi-truck cabs
Alexandra Bishop, Iowa State University
 - *4. Serial dilution of serum samples to assess the relative antibody levels generated by ELISA serotests for common swine pathogens
Erin Larsen, Lincoln Memorial University
 - *5. Investigation of factors associated with the receipt of an etiologic diagnosis for suckling piglets at a veterinary diagnostic laboratory
Morgan Johnson, Iowa State University
 - *6. Tissue submission quality of nursery-age enteric cases and effect on receiving a diagnosis
Lauren Tidgren, Iowa State University
 - *7. A field study examining the effects of a novel maternal pheromone on performance and livability of weaned pigs
Braden Steidley, Oklahoma State University
 - *8. Pharmacokinetics of extravascular maropitant citrate in swine
Jessica Gebert, Lincoln Memorial University
 - *9. Evaluating the economic impact of an autogenous influenza vaccine in the finishing phase with a pre-post analysis utilizing closeout data
Kaci Way, The Ohio State University
-

SUNDAY - MONDAY

Veterinary Student Posters

- *10. Evaluation of market trailer hygiene and transmission of porcine enteric coronaviruses
Sarah Albers, University of Wisconsin
- *11. Evaluation of chemical treatments to deactivate PRRSV in water sources
Austin Janssen, Iowa State University
- *12. Evaluation of the relative PCR cycle times (Ct) of rotavirus A and C in natural planned exposure (NPE) materials, colostrum deprived piglets, and environmental samples
Alexis Berte, Iowa State University
- *13. Antibiotic use for the treatment of lameness in sows
Bridget Cincotta, University of Pennsylvania
- *14. Lessons from swine biosecurity outreach programs directed to small producers and show pig exhibitors
Juan Hernandez Cuevas, The Ohio State University
- *15. Impact of foot trimming on gilt productivity and foot health
Amanda Patev, University of Pennsylvania
- 16. The effect of dietary zinc on *Clostridioides difficile* colonization and pathogenicity in neonatal piglets
George DeMers, University of Pennsylvania
- 17. A survey of rectal temperatures immediately after transport and body weight gain for the first 17 days post placement for weaned pigs transported an extended distance during the summer months
Hannah Lathom, North Carolina State University
- 18. Evaluation of the administration cost of feedback
Paul McDonald, Purdue University
- 19. The effect of nucleoprotein reassortment on influenza A virus transmission in swine
Megan Neveau, Iowa State University
- 20. Serologic profiling and viral monitoring of influenza in a large production system
Andrea Prowant, Iowa State University

SUNDAY - MONDAY

Research Topics Posters

Research Topics Posters (#21 - #48)

Location: Adams Prefunction A-B

Sunday, March 5 12:00 – 5:00 PM

Monday, March 6 8:00 AM – 5:00 PM

Authors present
Sunday
12:00 – 1:00

-
21. Evaluation of sanger sequencing detection of porcine reproductive and respiratory syndrome virus (PRRSV) in in vitro co-infections
Joaquin Alvarez-Norambuena
 22. Fine-scale analysis of influenza A virus in swine reveals persistent clade circulation and limited clade diversity within owners
Bailey Arruda
 23. Detection and localization of atypical porcine pestivirus in the reproductive tract of a persistently infected boar
Gyula Balka
 24. Impact of wean age on *Streptococcus suis* and *Mycoplasma hyorhinis* colonization dynamics during nursery period
Alyssa Betlach
 25. Longitudinal study of atypical porcine pestivirus infection dynamics in pigs from birth to market reveals persistent infection in piglets with congenital tremors
Alexandra Buckley
 26. Use of a viability PCR assay for the detection of *Mycoplasma hyopneumoniae*
Albert Canturri
 27. Prevalence and risk factors for *Lawsonia intracellularis* detection in vaccinated and non-vaccinated swine sites
Ting-Yu Cheng
 28. Study of *Mycoplasma hyopneumoniae* gene mutations associated with antimicrobial resistance in field samples
Cipriano De Abreu

SUNDAY - MONDAY

Research Topics Posters

29. Rethinking PCV2 surveillance: Revealing the value of dynamics over time
Gillian Greaves
30. Evaluation of the virucidal activity of Intervention® against PRRSV 1-4-4 L1C and PRRSV 1-7-4
Erin Kettelkamp
31. Progression of the newly emerged PRRSV L1C 144 variant in breeding herds
Mariana Kikuti
32. Tongue tips fluids: a new specimen for PRRSV detection from dead pigs
Isadora Machado
33. Which factors are relevant to identifying high nursery mortality groups under field conditions?
Edison Magalhaes
34. Forecasting swine nursery mortality under field conditions
Edison Magalhaes
35. Porcine reproductive and respiratory syndrome virus encephalitis and myelitis: A retrospective study of cases diagnosed at the Iowa State University Veterinary Diagnostic Laboratory from 2016 to 2022
Marta Mainenti
36. Addressing biocontainment through environmental contamination assessment in farms housing PRRS lineage 1C 1-4-4 positive pigs
Claudio Marcello Melini
37. Evaluation of infectiousness and virulence of the newly emergent and virulent Minnesota PRRS virus variant
Claudio Marcello Melini
38. Ten-year retrospective analysis of bacterial pathogens associated with influenza infections in pigs (2012-2021)
Mariana Meneguzzi

Continued on next page

SUNDAY - MONDAY

Research Topics Posters

39. Neurosensory lesions in field cases of porcine reproductive and respiratory syndrome virus (PRRSV) infection
Alyona Michael
40. Use of family oral fluid to detect influenza A virus in the breeding herd
Daniel Moraes
41. Effect of storage temperature and time on PRRSV RNA detection by RT-qPCR
Berenice Munguia-Ramirez
42. The effect of freeze-thaw on PRRSV RT-qPCR results
Berenice Munguia-Ramirez
43. The impact of management practices in response to fifty PRRSV herd outbreaks in breed-to-wean herds between 2018 and 2022 in the midwestern US
Rodrigo Paiva
44. Assessment of the risk factors associated with weekly sow mortality rate under the condition of a production system in the midwestern United States during 2019-2021
Rodrigo Paiva
45. Virulence comparison of PRRSV 1-4-4L1C variant strain and other PRRSV strains in experimentally inoculated pigs
Gaurav Rawal
46. Bayesian latent class analysis of the sensitivity and specificity of a novel PCR and indirect ELISA for African swine fever virus antibody
Rachel Schambow
47. Influence of barn fill rate on nursery pig exit weight
Haley Schwecke
48. Vaccination with an *Escherichia coli* F4/F18 vaccine improves piglet performance combined with a reduction in antimicrobial use and secondary infections due to *Streptococcus suis*
Frédéric Vangroenweghe

SUNDAY - MONDAY

Industrial Partners Posters

Industrial Partners Posters (#49 - #71)

Location: Adams Prefunction A-B

Sunday, March 5 12:00 – 5:00 PM

Monday, March 6 8:00 AM – 5:00 PM

Authors present
Sunday
12:00 – 1:00

-
49. Improving composting knowledge and competencies to create an impactful mortality management educational method
Sarah Probst Miller
AgCreate Solutions/Pork Avenue Training Portal
50. A survey of *Streptococcus suis* across sow production and neonatal piglets
Samantha Hernandez
Arm & Hammer
51. Assessment of the hyper-local ambient environment in large pig barns
Dale Polson
Boehringer Ingelheim Animal Health
52. Control of cockroaches in swine facilities with new insect growth regulator Exhalt
Gene Spellman
Central Life Sciences
53. Utilizing lung lesion scoring to monitor swine respiratory disease in a commercial swine farm in the Philippines
Mary Grace Alba
Elanco Animal Health
54. The first swine vaccine to show protection against ileitis, salmonellosis and colibacillosis
Curtis Stutheit
Endovac Animal Health
55. The effect of feeding Salmate DHA+ on sperm production and quality in boars, including field data
Darwin Reicks
Feedworks USA

Continued on next page

SUNDAY - MONDAY

Industrial Partners Posters

56. Effects of Furst Strike Direct on mortality and injectable treatments in nursery pigs
Fredrik Sandberg
Furst-McNess Company
57. eCVI integration with AgView from National Pork Board streamlines data sharing
J. Tyler Holck
GlobalVetLink
58. Comparative performance study of three commercial vaccines against *Mycoplasma hyopneumoniae* and porcine circovirus type 2
Mike Degroot
HIPRA
59. Monitoring PCV2 and PCV3 infection
Alvaro Hidalgo
IDEXX
60. Long-term usage of a formaldehyde-based feed mitigant does not have a negative effect on sow performance metrics
Dillon Mellick
Kemin Animal Nutrition and Health
61. Productivity profile in a boar stud in southern Brazil: Genetic index and collection interval
Raquel Ausejo
MB Swine Reproduction
62. Understanding IAV-S diversity over time using the Sequivity® dashboard
Channing Sebo
Merck Animal Health
63. Isolate, antigen concentration, and adjuvants are important when developing autogenous vaccines
Steve Tousignant
Newport Laboratories
64. Biosecurity and biocontainment methodology for swine feed to prevent animal disease
Jake Erceg
NutriQuest

SUNDAY - MONDAY

Industrial Partners Posters

65. Effects of an additional iron dextran injection administered to piglets on differential gene expression at weaning
James Pierce
Pharmacosmos
66. The use of Ambitine™ in late finishing diets and the effect on growth performance and carcass measurements
Stacie Crowder
PMI
67. Utilizing feed allocation system (FAS) data to populate AgView for foreign animal disease preparedness
J. Tyler Holck
Prairie Systems
68. Maternal genetics contribute to enhanced, natural robustness to PRRS in finishing pigs
Heloiza Irtes
Topigs Norsvin USA
69. Evaluation of NSAIDs on weaning/vaccination stress and a subsequent PRRS challenge
Brian Payne
Veterinary Pharmaceutical Solutions
70. Towards the identification of a marker of claw quality in sows using partial least squares analysis and classification and regression trees
Lucas Rodrigues
Zinpro Corporation
71. Characterization of the metabolic conditions contributing to agalactia in sows
Jamie Studer
Zoetis



MONDAY GENERAL SESSION

Be There!

Be There!

Date: Monday, March 6

Time: 8:00 AM – 12:30 PM

Location: Adams B-C-D

Session chair: Bill Hollis

- 8:00** **Howard Dunne Memorial Lecture**
Be there. Be the leader for the pig, the client,
the customer
Egan Brockhoff
- 9:00** **Alex Hogg Memorial Lecture**
Seizing opportunity within swine veterinary
medicine
Attila Farkas
- 10:00** REFRESHMENT BREAK
Co-sponsored by: **HOG SLAT**
- 10:30** Ten industry needs you can meet right now, so be
smart and be prepared ... get involved
Gordon Spronk
- 11:30** Lessons learned from the poultry industry for
housing and health
Craig Rowles
- 12:30** LUNCHEON

AASV LUNCHEON



Co-sponsored by:

AASV & AASV Foundation

Monday, March 6

12:30 – 2:00 PM

Colorado A (Level 3)

MONDAY SESSION #1

Biosecurity

Build Back Biosecurity and Make Health Great Again!

Date: Monday, March 6

Time: 2:00 – 5:30 PM

Location: Cottonwood 6-7

Session chair: Amber Stricker

- 2:00** Stranger than fiction: PRRS in a remote farm
Corrine Frugé
- 2:20** Outbreak of *Actinobacillus pleuropneumoniae* serotype 15 in central Iowa in the winter of 2021-22
Isadora Machado
- 2:40** Biosecurity: Why do we do it and who do we do it for?
Brandi Burton
- 3:00** Farm Health Guardian: What we have learned so far
Brad Chappell
- 3:20** Biosecurity Q&A panel
Frugé, Machado, Burton, Chappell
- 3:30** REFRESHMENT BREAK
Co-sponsored by:
VETERINARY PHARMACEUTICAL SOLUTIONS
- 4:00** Impactful investments: Measuring return on investment (ROI) for biosecurity
Pete Thomas
- 4:20** Water biology: The next frontier for biosecurity
Gabi Doughan
- 4:40** Management and facility factors that impact biosecurity and biocontainment
Jordan Graham
- 5:00** Biosecurity: What is the US missing? An international perspective
Eveline Willems
- 5:20** Biosecurity Q&A panel
Thomas, Doughan, Graham, Willems
- 5:30** Session concludes
-

MONDAY SESSION #2

Disease

Disease (PRRS and ...)

Date: Monday, March 6

Time: 2:00 – 5:30 PM

Location: Cottonwood 8-9

Session chair: Chase Stahl

- 2:00** PRRS: The fight continues
Clayton Johnson
- 2:45** Revenge of *E. coli* – but wait, there’s more ...
Deborah Murray
- 3:30** REFRESHMENT BREAK
Co-sponsored by:
VETERINARY PHARMACEUTICAL SOLUTIONS
- 4:00** Sapovirus: Diagnosis to solution ... a cooperative success
Tom Petznick
- 4:30** Remind me about *Actinobacillus pleuropneumoniae* (APP)
Jon Van Blarcom
- 5:00** Disease Q&A panel
Johnson, Murray, Petznick, Van Blarcom
- 5:30** Session concludes

AASV FOUNDATION AUCTION

Monday, March 6
Colorado A (Level 3)



Silent Auction:
Use ClickBid to bid
anytime, anywhere!
aasvf.cbo.io

Live Auction:
Immediately following
the AASV Awards
Reception

MONDAY SESSION #3

Foreign Animal Diseases

Foreign Animal Diseases: Be Prepared – Be Aware

Date: Monday, March 6

Time: 2:00 – 5:30 PM

Location: Maple 3-4-5

Session co-chairs: Marie Culhane and Marisa Rotolo

- 2:00** Introduction
Marie Culhane and Marisa Rotolo
- 2:05** What's going on? African swine fever global update
Karyn Havas
- 2:30** What's new? African swine fever vaccine update
Douglas Gladue
- 2:55** REFRESHMENT BREAK
Co-sponsored by:
VETERINARY PHARMACEUTICAL SOLUTIONS
- 3:25** Who can test for foreign animal diseases?
Pam Zaabel
- 3:50** How can we get prepared together? US SHIP
Rodger Main
- 4:15** What is targeted, science-based African swine fever surveillance?
Marie Culhane
- 4:40** When does being prepared pay off? Japanese encephalitis: The Australian experience
Chris Richards
- 5:25** Wrap-up and take-home messages
Marie Culhane and Marisa Rotolo
- 5:30** Session concludes

TUESDAY GENERAL SESSION

Important Conversations

Important Conversations: Be Engaged and Committed for a Common Goal

Date: Tuesday, March 7

Time: 8:00 AM – 12:00 PM

Location: Adams B-C-D

Session co-chairs: Matthew Turner and Jordan Gebhardt

- 8:00** The time is now to eliminate porcine epidemic diarrhea virus (PEDV)
Paul Yeske
- 8:25** PEDV controlled exposure: A critical tool
Luc Dufresne
- 8:50** PEDV exposure, a tool for elimination
Karine Talbot
- 9:05** Experiences in removing planned PEDV exposure for acclimatization in a large commercial production system
Lauren Glowzinski
- 9:20** PEDV elimination/exposure Q&A panel
Yeske, Dufresne, Talbot, Glowzinski
- 10:00** REFRESHMENT BREAK
- 10:30** Veterinary medicine and swine nutrition at AMVC
Jason Hocker and Trey Kellner
- 11:15** Veterinary medicine and swine nutrition at JBS
Darin Madson and Kyle Coble
- 12:00** Session and meeting conclude

AASV BUSINESS BREAKFAST



Tuesday, March 7

7:00 – 8:00 AM

Maple 3-4-5 (Level 1)

MEMBER SERVICES

WELL-BEING CENTER

Learn about well-being and take advantage of resources and activities at the AASV Well-Being Center.



Take this opportunity to learn how to help a colleague, client, friend, and yourself!

Annual Meeting Attendee SCAVENGER HUNT

“Find Someone Who ...”

Go on the hunt, get to know your fellow attendees, and you may win a prize!

Scavenger hunt lists available at the Well-Being Center.

MOTHER'S ROOM



Need a quiet, private place to nurse or pump?

AASV has set aside a room for this purpose near the registration desk.

*Pick up the key at the AASV registration desk.
When registration is closed, see Dr. Abbey Canon.*

SOCIAL ACTIVITIES

Saturday, March 4

STUDENT TRIVIA EVENT



Sponsored by:

MERCK ANIMAL HEALTH

Time: 6:00 – 8:00 PM

Location: Maple 3-4-5

Veterinary students, join us at 6:00 PM Saturday evening for appetizers and drinks followed by a fun-filled, interactive evening of competitive swine veterinary medicine trivia!

**Follow AASV on
Facebook, Twitter,
and Instagram**

#AASV2023



@AASwineVets



@AASwineVets
@AASVNews



@AASwineVets

SOCIAL ACTIVITIES

Sunday, March 5

AASV YOGA CLASS

Hosted by

DSM ANIMAL NUTRITION & HEALTH

Time: 6:00 – 7:00 AM | **Location:** Maple 1-2

Coach: Ben Pratte

Join us for an hour of fun and interaction in this yoga class offering mind, body, and spirit workout based on YogaFit. Options will be provided for all levels from the beginner (first timer) to advanced yoga enthusiast.

You will feel physically charged and mentally ready to go into sessions for the remainder of the day!

Mats will be provided – or bring your own. Everyone is welcome, but please register by February 10.

Register here!



PRAISE BREAKFAST

Sponsored by

**STUART PRODUCTS and the
AASV FOUNDATION**

Time: 7:00 – 8:00 AM

Location: Willow Lake 3-4-5

AASV Praise Team: Dave Baum, Mitch Christensen, Monte Fuhrman, Kelly Greiner, Tyler Holck, Jeff Okones, Sarah Probst Miller, Rexanne Struve



Join your AASV friends for breakfast, music, and fellowship at the AASV Praise Breakfast on Sunday morning! We will sing praises to the Lord, join in a responsive reading from Isaiah and Romans, and listen to a panel of colleagues describe how the truth of the responsive reading has encouraged their lives.

Your free-will offering, along with support from Stuart Products, will defray the cost of the breakfast.

SOCIAL ACTIVITIES

Sunday, March 5

STUDENT RECEPTION

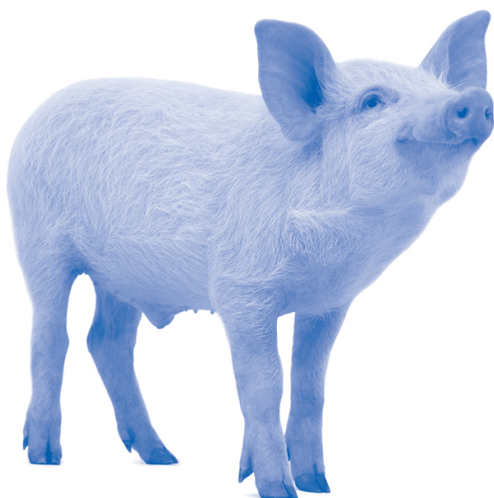
Sponsored by

MERCK ANIMAL HEALTH

Time: 8:30 – 11:00 PM

Location: Willow Lake 3-4-5

Whether you are a veterinarian or veterinary student, you are invited to attend the Student Reception at the AASV Annual Meeting, courtesy of Merck Animal Health! This evening of magical entertainment, desserts, and liquid refreshment provides the perfect opportunity for current and future swine veterinarians to interact and discuss employment and externship possibilities. The drawing for prizes in the veterinary student “Vet Hunt” also happens here. Be There!



SOCIAL ACTIVITIES

Monday, March 6

AASV AND AASV FOUNDATION LUNCHEON

Sponsored by

AASV and the AASV FOUNDATION

Time: 12:30 – 2:00 PM

Location: Colorado A (Level 3)

New! Not only will the veterinary student scholarship recipients be announced as in the past, but the AASV Foundation will also recognize Heritage and Legacy donors and present its annual research grants, debt-relief scholarships, Hogg Scholarship, and more -- all while you enjoy a delicious pork meal. Come see and be a part of the impact the AASV Foundation is having on the swine veterinary profession! Your nametag is your luncheon ticket (sorry, additional tickets are not available).



AASV AWARDS RECEPTION

Sponsored by

MERCK ANIMAL HEALTH

Time: 6:30 – 8:30 PM

Location: Colorado A (Level 3)

Enjoy a casual atmosphere and an inviting food and beverage buffet, thanks to support from Merck Animal Health. Watch the AASV slide presentation while you dine. The highlight of the evening is the presentation of the prestigious AASV awards, followed by the exciting AASV Foundation Live Auction. Tickets are provided to all meeting registrants in their nametag holder. Additional tickets are \$25.00 for adults; free for children under twelve. **Bring your tickets - you'll need them to obtain beverages.**



AASV FOUNDATION PROGRAMS

Memorial Lectures

The foundation provides the speaker stipends for the annual Howard Dunne and Alex Hogg Memorial Lectures.

AASV Foundation Research Grants

Up to \$100,000 per year is awarded to fund research with direct application to the profession.

Hogg Scholarship

Named in honor of early AASP leader Dr. Alex Hogg, the \$10,000 Hogg Scholarship is awarded to a swine practitioner who has left practice to pursue a graduate degree in a field of study related to swine health and production.

Student Debt Relief

Three \$5000 awards are made annually to recent veterinary graduates who have been active in AASV, are engaged in private swine practice, and have significant student debt.

ACAW Scholarship

AASV members seeking board certification in the American College of Animal Welfare (ACAW) can apply for this expense reimbursement scholarship, with an incentive payment of \$10,000 for successful and timely achievement of certification.

Veterinary Student Scholarships

Numerous scholarships are available to veterinary students who participate in the AASV Student Seminar and Poster Competition and to students who demonstrate promise and interest in pursuing a career in swine medicine.

Swine Externship Grants

Veterinary students who have completed a 2-week or longer externship in a swine practice or mixed-animal practice with a considerable swine component can receive up to \$500 of expense reimbursement.

Travel Stipends

In partnership with Newport Laboratories, the foundation provides a \$300 travel stipend to veterinary students who attend the AASV Annual Meeting.

Heritage Videos

The history of AASV is preserved in “member recollection” videos on the AASV website.

AASV FOUNDATION AUCTION



The auction proceeds are a major source of support for the foundation programs described on the facing page.

SILENT AUCTION

Bid anytime from anywhere on your phone using ClickBid. Silent Auction items won't be displayed on-site. Donors will ship items to the winning bidders after the auction.

**Bid now at
aasvf.cbo.io**

It will be "all-in, all-done" for the Silent Auction at 7:00 PM Mountain Standard Time.

LIVE AUCTION

Location: Colorado A

The Live Auction will be held at the conclusion of the AASV Awards Reception. Be There!



*Thank you for supporting
the AASV Foundation!*

aasv.org/foundation

TECHNICAL TABLES EXHIBIT

TECHNICAL TABLES EXHIBIT

Monday, March 6
9:00 AM – 5:00 PM

Tuesday, March 7
8:00 AM – 12:00 PM

LOCATION: Adams A



All refreshment breaks on Monday and Tuesday take place in and around the exhibit tables.

Spend some time visiting with our exhibitors, learn about the products and services they offer, and be sure to thank them for supporting the AASV Annual Meeting!

EXHIBITORS

Acuity/Fast Genetics
AgCreate Solutions/Pork Avenue Training Portal
Allflex Livestock Intelligence
Alltech
American Board of Veterinary Practitioners
Animal Health International
Anpario
APC
ARKO Laboratories
Arm & Hammer
Aurora Pharmaceutical
Automated Production (AP)

TECHNICAL TABLES EXHIBITORS

Bimeda
BioChek
BioSec
Boehringer Ingelheim
Cambridge Technologies
Celemics
Central Life Sciences
Ceva Animal Health
Chr Hansen
Christian Veterinary Mission
CID Lines
Clipper Distributing
DNA Genetics
DPI Global
DSM Animal Nutrition & Health
Eastman
Elanco
Endovac Animal Health
Essential Ag Solutions
Feedworks USA
Furst-McNess Company
Gallant Custom Laboratories
Genesis Genetics
GlobalVetLink
HIPRA
Hog Slat
Huvepharma
Hypor
IDEXX
IMV Technologies USA
Indical
Innovative Heating Technologies
Insight Wealth Group
ISU Office of Innovation Commercialization
Kemin Animal Nutrition & Health
LANXESS Corporation
Longhorn Vaccines and Diagnostics
MAI Animal Health

TECHNICAL TABLES EXHIBITORS

Maximus
MB Swine Reproduction
Medgene
Merck Animal Health
Minitube USA
MWI Animal Health
National Pork Board
Natural Biologics
NEOGEN Corporation
Newport Laboratories
Norbrook
NutriQuest
Pharmacosmos
Pharmgate Animal Health
Phibro Animal Health Corporation
PIC
PigCHAMP
PigKnows
PMI
Prairie Systems
Precision Health Technologies
Purina Animal Nutrition
Ralco
SEPPIC
Stuart Products
Swine Health Information Center
SwineTech
TechMix
Tetracore
Thermo Fisher
Topigs Norsvin USA
United Animal Health
USDA APHIS
Veterinary Pharmaceutical Solutions
VetNOW
Wilson's Prairie View Farm
Zinpro Corporation
Zoetis

Plan now to attend!

55th AASV Annual Meeting

February 24-27, 2024

Gaylord Opryland Resort
and Convention Center

Nashville, Tennessee



Future AASV Meetings:

2025	San Francisco	March 1-4
2026	Las Vegas	Feb 28-Mar 3
2027	Orlando	Feb 27-Mar 2

Please thank the following companies
and organizations for their
generous support of
AASV annual meeting activities:

AASV FOUNDATION

Monday Luncheon
Praise Breakfast

DSM ANIMAL NUTRITION & HEALTH

Yoga Class

ELANCO ANIMAL HEALTH

AASV Foundation Veterinary Student Scholarships

HOG SLAT

Refreshment Break Co-sponsor

HUVEPHARMA

Student Podcaster Award

MERCK ANIMAL HEALTH

AASV Awards Reception
AASV Foundation Veterinary Student Scholarships
Student Reception
Veterinary Student Trivia Event

NEWPORT LABORATORIES

Veterinary Student Travel Stipends

STUART PRODUCTS

Praise Breakfast

UNITED ANIMAL HEALTH

Veterinary Student Poster Awards

VETERINARY PHARMACEUTICAL SOLUTIONS

Refreshment Break Co-sponsor

ZOETIS FOUNDATION

AASV Student Seminar
AASV Student Poster Session
AASV Foundation Veterinary Student Scholarship

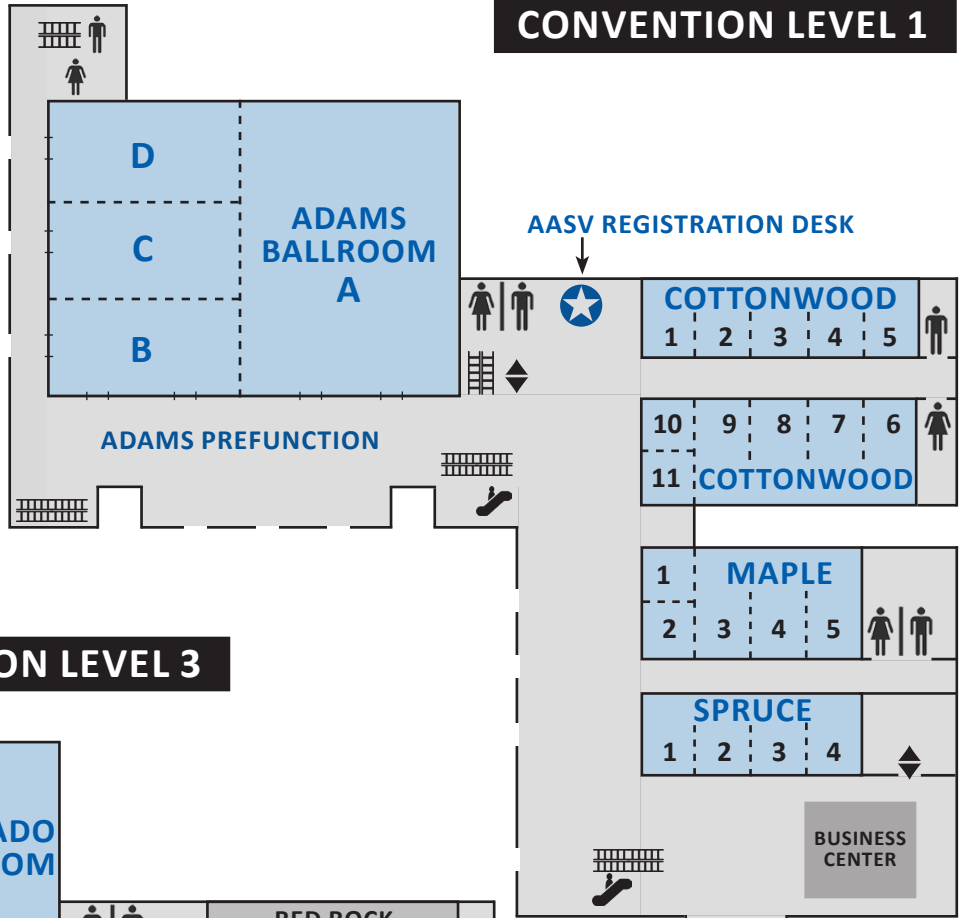
Thank you!

Gaylord Rockies Convention Center

Map Key:

- ◆ = Elevators
- ▧ = Stairs
- ↘ = Escalators
- ♀ | ♂ = Restrooms

CONVENTION LEVEL 1



CONVENTION LEVEL 3

