

BUILT TO LAST

Celebrating
50 Years
of Progress



March 9-12, 2019
Lake Buena Vista, Florida

AASV

Message from the Program Chair, Dr. Nate Winkelman



Welcome to AASV's 50th Anniversary Meeting in Orlando, Florida! Please make it part of your personal history to attend this historic event.

The Venue: This will be our 4th meeting in Orlando, this time at the same beautiful hotel we enjoyed in 2015, adjacent to Disney Springs. Plan on bringing your spouse, kids, and grandparents (to

take care of the kids) to enjoy the climate and sights of the Sunshine State. We expect another year of record-breaking attendance. Over 24% of the attendees last year were from outside the US. We welcome you and have invited many international speakers so we can learn from each other in our global swine industry.

The Theme and Program: In 1969, the AASP was organized by 30 swine veterinarians during the AVMA Convention in Minneapolis. Of the 257 original dues-paying charter members, fifteen are still living and remain AASV members 50 years later! We hope to recognize some of them at this meeting. Handshakes and autographs will be in order. Our meeting theme is "Built to Last: Celebrating 50 Years of Progress." Just think of the tremendous industry challenges, changes, and progress (and set-backs) the AASV has seen over that time period. Our association truly is "Built to Last," because we are based on professional ethics and scientific knowledge to protect the health and welfare of pigs. Our members strive for life-long learning, each year making progress for our clients and the pigs we serve. Let's celebrate that progress, be proud of it, and keep moving forward.

Dunne and Hogg Lectures: Our esteemed colleagues, Drs. John Waddell and Deb Murray will present the Howard Dunne and Alex Hogg Memorial Lectures, respectively. Dr. Waddell will follow our theme: "Built to last - 50 years of AASV" highlighting 50 years of history and nostalgia. Dr. Murray will address our current and future swine veterinary challenges based on her experience as a "company vet" responsible for overseeing 1.4 million pigs and her foresight as a young leader in identifying future technology breakthroughs that may advance our industry forward. I am looking forward to hearing their presentations.

The remainder of Monday's general session will first address our domestic pork production and how Pork Checkoff dollars are working for us with specific research, education and marketing by Bill Even of the National Pork Board. Then we'll have an insightful presentation on international pork export market challenges and opportunities and the four global megatrends that influence these markets by Brett Stuart, president of Global Agritrends.

Don't stay out too late Monday evening, as I'm especially excited about the Tuesday morning line-up on Transboundary Disease Threats and Outbreak Preparedness. With heightened awareness around the potential risk of the global spread of foreign animal diseases, we'll hear updated information on ASF, China, FAD feed risk and our industry response to that risk. Dr. Joe Connor will review our historical US national eradication successes, and Dr. Paul Yeske will challenge us with "What's next for disease elimination?"

Extra! Extra! – Golden Anniversary Video: A special treat after the Monday morning break will be the presentation of our AASV Golden Anniversary Video – do not miss it! Also watch for other displays of historical memorabilia at the meeting.

Social Media: In an effort to educate swine veterinarians (old guys like me) on how to use social media and to promote the AASV conference, the AASV mobile app will link you to #AASV2019. Look for the social media "Help Booth" and participate in the social media challenge to raise money for the AASV Foundation throughout the course of the meeting.

Speaking of the AASV Foundation: "Go for the Gold." Let's surpass the Foundation's goal of raising over 2 million dollars this year by donating to the Leman, Heritage, and Legacy Funds. Wouldn't this be a great year to be recognized for your philanthropy? Thank you in advance to all who contribute to the auctions and raise their hands high at the exciting live auction on Monday night.

Lastly, I appreciate the opportunity and I am honored to be this year's program chair. A great big "Thank You" goes to my hard-working program committee (they're "golden"), the great AASV staff, the corporate sponsors, Tech Table sponsors, and all of the speakers who contribute their time and expertise.

We have a lot to be proud of and a lot more to learn. I'm excited and I hope you are too! Come celebrate 50 years of AASV with us in Orlando! Thanks and see you soon.

Nate Winkelman
Program Chair

Program Committee

Nathan Winkelman, Chair

John Baker

Laura Batista

Emily Byers

George Charbonneau

Marie Culhane

C. Scanlon Daniels

Heather Fowler

Jeff Harker

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Bill Hollis

Jim Kober

Will Lopez

Jay Miller

Deborah Murray

Brent Pepin

Sarah Probst Miller

Chris Rademacher

Alex Ramirez

Darwin Reicks

Jessica Seate

Brad Thacker

Lisa Tokach

Fabio Vannucci

Program & Proceedings

Mobile App

Keep track of when and where you need to be with the free AASV mobile conference app! It's loaded with the most up-to-date schedule, speaker and exhibitor information, interactive maps of the conference rooms, and links to proceedings papers. Use it to create your personal schedule and "to do" list. The app will be available for download from the iOS and Android app stores using the redeem code emailed to conference registrants February 25.

An HTML5 version will also be available for web-based devices.

Proceedings

All proceedings papers (including seminar papers) will be available for download from the AASV website prior to and during the meeting. Attendees may purchase the proceedings on USB drive for a small additional fee. There will be no printed proceedings.



For more information:
www.aasv.org/annmtg

Registration & Fees

Registration

Registration desk located in
Citron Foyer

Saturday, March 9	7:00 AM – 5:00 PM
Sunday, March 10	7:00 AM – 5:00 PM
Monday, March 11	7:00 AM – 5:00 PM
Tuesday, March 12	7:00 AM – 12:00 PM

Fees

Register online at www.aasv.org/annmtg

Last day for lower pre-registration rate: Friday, February 15

Last day to register online: Monday, February 25

After February 25, registration is CLOSED until Saturday, March 9 in Orlando.

AASV member pre-registration by February 15	\$355
AASV member registration after February 15	\$455
Non-member veterinarians	\$500
Add'l Tech Table representatives (limit 3)	\$500

Veterinary students: Registration is free for veterinary students who are 2018-19 AASV Student Members.

Join and/or register at <http://ecom.aasv.org/annmtg>.

Graduate students: Full-time graduate students may join AASV for ½ regular dues and register for the meeting at ½ the member rate.

Non-veterinarians: Must meet eligibility criteria to attend. See www.aasv.org/annmtg/2019/reginfo.php for details.

Meeting Hotel

Hilton Orlando Buena Vista Palace
1900 E Buena Vista Drive
Lake Buena Vista, Florida 32830
407-827-2727

www.aasv.org/annmtg/2019/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.

Officers

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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.



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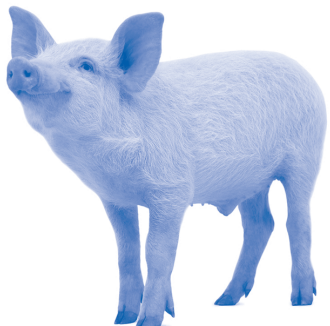
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Technical Tables

Location: Palm Event Center

Monday: 9:00 AM – 5:00 PM

Tuesday: 8:00 AM – 12:00 PM

TECH TABLE EXHIBITORS

AAF Flanders
ABVP
ADDCON
AgCreate Solutions & Pork Avenue Training Portal
Allflex USA/DeStron Fearing
Alltech
Animal Health International
Anpario
AP – Automated Production
APC
ARKO Laboratories
Aurora Pharmaceutical
Big Dutchman
Biomim America
Boehringer Ingelheim Animal Health USA
Cambridge Technologies
Camfil
Central Life Sciences
Ceva Animal Health
C.F. Grass Consulting
Chr Hansen
Diamond V
DNA Genetics
DSM Nutritional Products
Elanco Animal Health
Endovac Animal Health
Fast Genetics
Feedstuffs/National Hog Farmer
Furst-McNess Company
Gallant Custom Laboratories/IDT Biologika
Genesis Genetics
GlobalVetLINK
Hansen Ag Solutions
HIPRA
Hog Slat
Huvepharma
Hypor
IDEXX
IMV Technologies USA
Innovative Heating Technologies
Insight Wealth Group
JBI Distributors
Kemin Industries

Technical Tables

TECH TABLE EXHIBITORS

LANXESS Corporation
MAI Animal Health
Maximum Ag Technologies
MB Swine Reproduction
Merck Animal Health
Minitube USA
MWI Animal Health
National Pork Board
National Pork Producers Council
Neogen
Newport Laboratories
Norbrook
NutriQuest
Olmix NA
Pharmacosmos
Pharmgate Animal Health
Phibro Animal Health Corporation
Phytobiotics North America
PIC
Piedmont Animal Health
PigCHAMP
PigKnows
PMI
Prairie Systems
Provimi
PureTek Genetics
Quality Technology International
Ralco
Ro-Main
Struve Labs International
Stuart Products
Swine Health Information Center
Swine Medicine Education Center (SMEC)
SwineTech
TechMix
Tetracore
Thermo Fisher Animal Health
Tonistry
Topics Norsvin USA
Trouw Nutrition
United Animal Health
USDA
Veterinary Sales & Service
Virox Animal Health
Wilson's Prairie View Farm
Zinpro Corporation
Zoetis

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 www.aasv.org/aasv/committee.php.

Saturday, March 9	Palm Event Center Room
7:00 – 9:30 AM	
PRRS Task Force	C
7:00 AM – 12:00 PM	
Influenza	K
Pharmaceutical Issues	E F
Pig Welfare	G H
Transboundary/ Emerging Diseases	I J
7:30 – 9:30 AM	
Communications	A
Pork Safety	B
10:00 AM – 12:00 PM	
Boar Stud	L
Human Health/Safety	C
Nutrition	B
Operation Main Street	A
Student Recruitment	D

AASV History Highlight

First Practice Tip

The first AASP practice tips session was led by Dr. David Reeves on Sunday evening during the 1989 AASP Annual Meeting in Des Moines.

Saturday Seminar 1

AASV's Got Talent

AASV's Got Talent

Date: Saturday, March 9

Time: 1:00 – 5:00 PM

Location: Sabal B

Fee: \$80

Seminar chair: Jeff Harker

The 50th anniversary version of practice tips will be unforgettable. With a wide variety of topics and no proceedings to reference later, this is a “can’t miss” seminar. This year’s practice tip session features experienced practitioners as well as recent graduates. As always, these presentations will be high quality as these practitioners are in competition for the “tipster of the year” cash award. Since these practitioners didn’t have to complete papers last fall, their info will be very current and timely.

- 1:00** Improving welfare and increasing cull value of sows utilizing a comfort mat
Ross Kiehne
- 1:17** Getting more out of your AASV membership
Brent Pepin
- 1:34** M and M’s with the Maschhoffs
Amy Maschhoff
- 1:51** Time to replace your PCAI rod for *Mycoplasma hyopneumoniae* detection
Maria Clavijo
- 2:08** Using tech to make your practice life easier
Paul Thomas
- 2:25** Vasectomies: not just for middle-aged men anymore
Shamus Brown
- 2:45** REFRESHMENT BREAK
- 3:15** How to retire and other stuff
Steve Henry

Continued on next page

Saturday Seminar 1

AASV's Got Talent

- 3:32** Practical techNERDology
Alex Ramirez
- 3:49** Instant Pot sterilization of farm syringes
Brad Chappell
- 4:06** Practical use of the EveryPig app
Christine Mainquist-Whigham
- 4:23** Avoid the coverall split: How not to pig out on the road
Katie Woodard
- 4:40** Is anemia playing a role in poor-starting nursery groups?
Chris Olsen
- 5:00** Seminar concludes

STUDENT TRIVIA EVENT

Veterinary students, join us on Saturday, March 9, for a fun-filled, interactive evening of Swine Veterinary Medicine Trivia! Teams will be arranged when you arrive. The competition will be held in the Blue Bar at the Hilton Orlando Buena Vista Palace. Hors d'oeuvres and beverages will be served, thanks to our sponsor, Merck Animal Health.

AASV STUDENT TRIVIA EVENT



Sponsored by:
MERCK ANIMAL HEALTH
Saturday, March 9
7:00 PM
Blue Bar

Saturday Seminar 2

Swine Welfare and Behavior

Swine Welfare and Behavior

Date: Saturday, March 9

Time: 1:00 – 5:00 PM

Location: Sabal A

Fee: \$95

Seminar chair: James Kober

Swine welfare continues to be an important topic in the United States and around the world. Learn what producers are doing to comply with legislative and packer demands. We will have presentations on international standards as well as domestic perspectives. Finally, we will dial down and hear about some current research, boar handling and euthanasia, and more information on tail biting.

- 1:00** Update from the OIE pig chapter
Jennifer Woods
- 1:35** Current research and new welfare-friendly products
Monique Pairis-Garcia
- 2:10** The Canadian code of practice: Criteria, compliance, costs, and consequences
Jessica Law
- 2:50** REFRESHMENT BREAK
- 3:10** Meeting welfare standards
Mary Battrell
- 3:50** Boar euthanasia
Jennifer Woods
- 4:20** Dealing with tail biting
Jer Geiger
- 4:50** Wrap-up
- 5:00** Seminar concludes

Saturday Seminar 3

Emerging Technologies

Emerging Technologies for the Swine Industry

Date: Saturday, March 9

Time: 1:00 – 5:00 PM

Location: Sabal C

Fee: \$95

Seminar co-chairs: Chris Rademacher and Dale Polson

The Internet of Things (IoT) has been growing exponentially, and “SMART” everything is taking over the world – SMART sensors, devices, homes, businesses, cities, ecosystems. Precision Agriculture, the IoT of crop production, has been established for years now and continues to grow rapidly. Precision Livestock Farming (PLF), the IoT of livestock production is just recently gaining momentum, even though it has existed for quite a number of years (predominantly in Europe, and primarily in dairy). This preconference session will explore the emerging technologies and ecosystems that are developing and gaining use in livestock production in general with a focus on what is coming, available and in use across pig/pork production. To remain relevant and thrive in the brave new world of IoT in livestock production, veterinarians must become competent and proficient in the use of these emerging technologies and learn how to function effectively within the PLF ecosystems where these technologies are integrated.

- 1:00** Overview of precision livestock farming (PLF)
Daniel Berckmans
- 1:20** Structure and behavior needed to maximize the value of emerging technologies
Dale Polson
- 1:40** Using telemedicine as a practice tool:
A regulator’s perspective
Beth Thompson
- 2:00** Use of surveillance cameras for biosecurity
Jay Miller
- 2:20** Automated visual sensemaking of livestock behavior
Josh Peschel

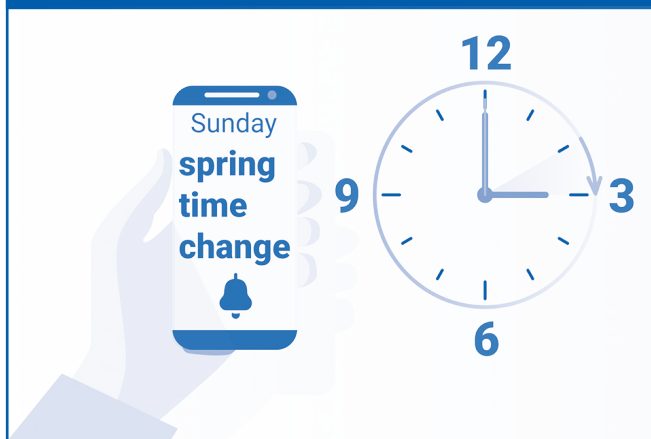
Saturday Seminar 3

Emerging Technologies

- 2:40** REFRESHMENT BREAK
- 3:10** Precision livestock farming (PLF) in injection technology
David Edwards
- 3:30** Cough index monitor experience
Seth Krantz
- 3:50** Humatec: Pigs, people, process: Creating the irresistible place to work
Jonathon Hoek
- 4:10** Tracking technology: People, places, things
Dale Polson
- 4:30** EveryPig: Mobile technology connecting veterinarians to more farms
Chris Bomgaars
- 4:50** Wrap-up; Q&A
Chris Rademacher and Dale Polson
- 5:00** Seminar concludes

REMINDER:

Set your clock ahead 1 hour on Saturday night for Daylight Savings Time.



Saturday Seminar 4

Outbreak Investigations

Conducting Effective Outbreak Investigations: Learning from our mistakes

Date: Saturday, March 9

Time: 1:00 – 5:00 PM

Location: Sabal F

Fee: \$95

Seminar chair: Derald Holtkamp

Want to help producers learn from outbreaks of PRRS, PED, and other diseases? This seminar will introduce participants to concepts and resources to efficiently and comprehensively conduct epidemiological investigations of outbreaks in swine herds for the purpose of identifying where the herd was most vulnerable to the introduction of the pathogen. Even when a “smoking gun” is not found, the knowledge gained from such investigations may be used to influence decisions on where to spend resources to improve biosecurity.

Participants will be introduced to resources (forms, examples, training videos, etc) available online through the Swine Health Information Center’s (SHIC) Rapid Response Program (RRP) for conducting epidemiological investigations of outbreaks. The seminar will provide participants in SHICS’s RRP with additional training to prepare them to conduct investigations in response to a new transboundary or emerging swine disease in the US. All participants will learn how to use the program materials in their practice or production system to conduct more effective epidemiological investigations of endemic disease (e.g. PRRS or PED) outbreaks.

1:00 Preparing for the next transboundary or emerging disease: What the industry needs to do and what it is doing to prepare

Paul Sundberg

1:30 Introduction to the SHIC-funded Rapid Response Program (RRP) for conducting epidemiological investigations of outbreaks

Derald Holtkamp

Saturday Seminar 4

Outbreak Investigations

- 1:40** Conducting efficient and comprehensive epidemiological investigations of outbreaks
Kim Baker
- 2:00** Resources for conducting epidemiological investigations of outbreaks available through the Swine Health Information Center
Rita Neat
- 2:10** Tips for conducting investigations and preparing reports
Derald Holtkamp
- 2:45** REFRESHMENT BREAK
- 3:00** Tips for conducting investigations and preparing reports (continued)
Derald Holtkamp
- 4:05** Investigating feed and feed mill risks
Cassie Jones
- 4:25** Using investigations of PED to motivate improvements in biosecurity: A case study
Jay Miller
- 4:45** Next: Taking the Rapid Response Program online
Chelsea Ruston
- 5:00** Seminar concludes

AASV History Highlight

First AASP Annual Meeting

The first official AASP Annual Meeting took place on June 24, 1970 during the AVMA Convention in Las Vegas. The half-day symposium on swine enteritis was chaired by Dr Tom Keefe and featured presentations on *Escherichia coli*, transmissible gastroenteritis, *Costridium perfringens* type C, and swine dysentery by Drs EM Kohler, EH Bohl, ME Bergeland, and DL (Hank) Harris and RD Glock, respectively.



Saturday Seminar 5

Operation Main Street Training

Operation Main Street Training

Date: Saturday, March 9

Time: 12:00 – 5:15 PM

(Note the early start time; box lunch provided)

Location: Sabal E

Fee: No charge

Limit: 25; US AASV member veterinarians only

Seminar chair: Al Eidson

Co-sponsored by AASV and the National Pork Board

In 2011, AASV and the National Pork Board partnered to train veterinarians as Operation Main Street (OMS) speakers, with a goal to help focus pork industry outreach efforts to professional veterinary associations, schools of veterinary medicine, and veterinary technical colleges.

To date, the program has 132 OMS-trained veterinarians who have presented at 29 of 30 schools of veterinary medicine. Overall, more than 296 OMS speeches have been scheduled, with an audience reach of 12,728.

This training includes updates on what activists are saying about agriculture today, and will provide attendees with the needed tools and presentations to address those concerns in a science-based, proactive manner. Trainees will receive media training and assistance on how to handle hostile audiences.

The objective is to equip veterinarians to speak to veterinary students and professional groups including veterinary associations and nutrition professionals.

Support has been provided by the National Pork Board and the Pork Checkoff. Attendees are encouraged to bring a laptop for note-taking. A box lunch will be provided. Unless otherwise indicated, presentations will be made by Al Eidson.

Saturday Seminar 5

Operation Main Street Training

- 12:00** Welcome, overview, and introductions (box lunch provided)
- 12:15** Overview of the industry structure, trust model & United States Farmers and Ranchers Alliance (USFRA) messages
- 12:45** Animal care and well-being
- 1:30** BREAK and biography photos
- 1:50** Environment
- 2:10** Antibiotics update
- 2:55** REFRESHMENT BREAK and evaluations
- 3:15** Speaker support: Schools of veterinary medicine, food chain customers, nutrition professionals, and nurses
- 3:30** Discussion of presentation experiences/Q&A
- 3:45** Media relations: Best practices for television interviews
- 4:10** Preparation for mock television interview based on a scenario
- 4:30** Video interview of participants (Interviews to be edited and emailed individually)
- 5:15** Seminar concludes/Evaluations

AASV History Highlight

AASP's First Year

The first AASP president was Dr. Vaylord Ladwig, a practitioner from Sac City, Iowa. Dr. James Bailey, an extension veterinarian from Brookings, South Dakota, was named the first Secretary/Treasurer. Membership dues were set at \$15.00 per year. The initial goal was to enroll 200 members to allow representation in the AVMA House of Delegates. AVMA membership was required for membership in the AASP.

Saturday Seminar 6

Leading People

Leading People: Leadership styles training for developing more effective and productive working relationships

Date: Saturday, March 9

Time: 1:00 – 5:00 PM

Location: Sabal G

Fee: \$135 (includes DiSC assessment for registrant)

Limit: 35 (pre-registration by February 15 REQUIRED)

Seminar chair: Emily Byers

Have you ever heard a colleague say, “The pigs are easy; people are the challenge”? Maybe you’ve even made this statement! Do you ever wonder why connecting with some people is more difficult for you than with others? Perhaps you’ve found some clients, colleagues, employees or supervisors easier to motivate and influence than others. If so, then join your AASV peers for the “Leading People” seminar.

This seminar will focus on enhancing the leadership and communication styles of participants based on the DiSC model. Participants will be provided access to complete an individualized DiSC assessment prior to the seminar. The results will be revealed during the interactive seminar, and participants will learn strategies to create more effective and productive working relationships by enhancing their quality of communication and leadership.

Leadership coach: **Amy Grinley**

Amy Grinley is a Psychology graduate of Central College (Pella, Iowa) with post-graduate Industrial Relations training from Iowa State University. She has more than 20 years’ experience in training and development with companies such as MBS, Inc., Coach House Gifts (Hallmark), and Smithfield Hog Production. She is currently serving as the Talent Development Manager for Smithfield Foods and is responsible for employee and organizational development through programs that enhance and advance key organizational objectives.

Saturday Seminar 6

Leading People

- 1:00** Welcome, overview, and introductions
- 1:15** The DiSC model and individual results interpretation
- 1:45** Understanding the four different DiSC styles to enhance working relationships
- 2:45** REFRESHMENT BREAK
- 3:00** Diagnosing the DiSC communication style preferences of others
- 3:30** DiSC application for leading people: motivation, influence, conflict resolution and change-management
- 4:50** Seminar wrap-up and evaluations
- 5:00** Seminar concludes



**Need to move after sitting
through lectures and dining out?**



“BODY ATTACK” EXERCISE CLASS

Sunday, March 10

6:00 – 6:30 AM

Location: Meyer (3rd floor)

Hosted by DSM Nutritional Products

**Join us for a fun, high-energy,
30 minute-fitness class with moves
suitable for total beginners to
confirmed addicts.**

Ben Pratte, a LES MILLS™ instructor, will lead a BODY ATTACK class that combines athletic movements like running, lunging, and jumping with strength exercises such as push-ups and squats. Accompanied by energizing tunes, Ben will lead you through the workout – challenging your limits and leaving you with a sense of achievement. No equipment is required other than workout clothes and shoes

***Spouses are welcome!
No fees or registration – just come!***

Holy Spirit



Praise Breakfast

Sunday, March 10

7:00 – 8:00 AM

Location: Citron Center

Coordinators:

Mark Brinkman, Dave Baum,
Mitch Christensen, Monte Fuhrman

Sponsored by Stuart Products

For many, Sunday is a day to gather with family and friends for spiritual nourishment and encouragement in faith. Bring your family and join your AASV friends for breakfast, music, and fellowship at the AASV Praise Breakfast!

The opportunity to sing praises to our Lord with the AASV praise team will be followed by a God-directed message from AASV member, Dr. Paul DuBois.

Your free-will offering, along with support from Stuart Products, will defray the cost of the breakfast. The program will conclude by 8:00 AM to allow you to attend the meeting sessions, but feel free to stay and visit.

***All AASV meeting attendees and
their family members are welcome!***

Social Media Center

#AASV2019

AASV Social Media Center

Sponsored by Elanco Animal Health

Location: Citron Foyer



Got questions about social media?

You'll find answers and assistance at the AASV Social Media Center, sponsored by Elanco Animal Health.

Get help creating accounts and navigating popular social media platforms such as Facebook, Twitter, and Instagram.



Pick up tip sheets to help you understand and use social media to promote your business and industry.

Watch the monitors to see what people are posting about the AASV Annual Meeting and to learn which industry issues are currently trending.



Participate in the **#AASV2019** social media challenge to raise money for the AASV Foundation.

AASV History Highlight

AASV Media

The AASV e-Letter began in 2001, under the direction of Drs Morgan Morrow and Sandra Amass of the AASV Communications Committee, relying on programming expertise provided by Webmaster David Brown. Dr. Harry Snelson has edited the AASV e-Letter since 2005. You can follow AASV e-Letter news headlines on Twitter: [@aasvnews](#).



Sunday Seminar 7

Boar Stud Topics

Boar Stud Topics

Date: Sunday, March 10

Time: 8:00 AM – 12:00 PM

Location: Sabal A

Fee: \$95

Seminar chair: Darwin Reicks

Attend this seminar for timely topics and updates regarding important factors affecting boar and semen fertility.

- 8:00** Novel diseases in semen
Darin Madson
- 8:30** Welfare and economics of culling boars
Joseph Fent
- 9:00** Update on heat stress in boars
Kara Stewart
- 9:30** REFRESHMENT BREAK
- 9:45** Mycotoxins and its control in boars
Gary Althouse
- 10:15** What has been learned about toxics in plastics
Raquel Ausejo
- 10:45** Avoiding toxic residues in the boar stud lab
Darwin Reicks
- 11:05** Economics of chromosomal defect screening
Chris Kuster
- 11:25** *Serratia marcescens*, a tough bug to crack
Hanneke Feitsma
- 11:45** Boar Stud Q&A
All speakers
- 12:00** Seminar concludes

Sunday Seminar 8

Swine Nutrition

Swine Nutrition: Setting the Foundation

Date: Sunday, March 10

Time: 8:00 AM – 12:00 PM

Location: Sabal C

Fee: \$95

Seminar chair: Dwain Guggenbiller

Webster's defines "foundation" as a basis (such as a tenet, principle, or axiom) upon which something stands or is supported. As pork producers, our foundation for success is built upon the sow and her litter. This seminar will provide attendees with information about new nutritional and management concepts supporting these foundational cornerstones as well as the applications of innovations within production systems.

The Highly Prolific Sow and Pen-Gestated Sow

- 8:00** Nutritional considerations for highly productive and aging sow farms
Zach Rambo
- 8:20** A re-examination of some mineral needs of sows
Merlin Lindemann
- 8:40** Evidence-based guides for mineral supplements of sow diets
Tommy Crenshaw
- 9:00** Modern sow feeding opportunities: A utopian view in an industry hesitant to change
Hyatt Frobose
- 9:25** Feeding strategies for today's prolific sow
Ashley DeDecker
- 9:45** REFRESHMENT BREAK

Sunday Seminar 8

Swine Nutrition

The Weaned Pig

- 10:00** Nutritional science of the health-challenged pig
Nick Gabler
- 10:25** Nutritional advancements to improve pig health
Jon De Jong
- 10:50** Strategies for starting the weaned pig
Clint Schwab
- 11:15** Audience panel Q&A with all speakers
Audience members
- 12:00** Seminar concludes

AASV History Highlights

Longest Sponsorship

During the 1973 AASP Annual Meeting in Indianapolis, Elanco sponsored a reception and dinner for “AASP members and their wives” (remember, this was 1973). Elanco continued to sponsor the reception through 2017 – a total of 45 years!

First Pre-Conference Seminars

The first Nutrition Workshop was held on Sunday morning prior to the 1990 AASP Annual Meeting in Denver.

Three pre-convention seminars were held in 1992:

- I. Depop-Repop
- II. Nutrition (Lean Gain)
- III. Troubleshooting
Reproductive Failure

One of the first projects of the newly formed AASP Foundation was to produce a video of the Depop-Repop seminar.



Sunday Seminar 9

Diagnostics

Diagnostics

Date: Sunday, March 10

Time: 8:00 AM – 12:00 PM

Location: Sabal B

Fee: \$95

Seminar chair: Fabio Vannucci

This session will discuss current challenges and advances in swine diagnostics. The panel of experts will speak about new technologies and strategies that are currently applied to diagnose endemic and emerging diseases in the swine industry. The attendees will find valuable resources to help them make science-driven decisions through the use of state-of-the-art diagnostic capabilities.

- 8:00** Practical applications of next generation sequencing (NGS) in swine diagnostics and surveillance
Laura Goodman
- 8:35** Porcine parvovirus type 2: Why it's important, at least from my point of view
Stephanie Rossow
- 9:10** Porcine circoviruses: Are changes occurring?
Darin Madson
- 9:45** REFRESHMENT BREAK
- 10:15** An epidemiologist's perspective on why sows are dying
John Deen
- 10:50** Update on population-based diagnostics
Jeff Zimmerman
- 11:25** Field application of cough monitor technology: A swine practitioner's perspective
Ethan Spronk
- 12:00** Seminar concludes

Sunday Seminar 10

Swine Medicine for Students

Swine Medicine for Students

Date: Sunday, March 10

Time: 8:00 AM – 12:00 PM

Location: Sabal F

Fee: \$95; No charge for veterinary students or 2017 or 2018 DVM graduates

Seminar co-chairs: Jeremy Pittman and Angela Supple

This seminar is designed to supplement veterinary students' education on topics of swine medicine. This year's topics on antibiotics were requested by several of last year's attendees, and are a common area of "opportunity" for new and future veterinarians. The goal of the seminar will be to review the basics of pharmacology and antibiotic selection as they relate to swine medicine in the field. In addition, we will review the current requirements of AMDUCA, veterinary prescriptions, and Veterinary Feed Directives, as well as the veterinarian's role and responsibility in antibiotic stewardship. Following these reviews, students will participate in several interactive cases where they will use their new knowledge to make antibiotic decisions for some real-world cases.

8:00 Swine farm pharmacology: Basics and update
Jeremy Pittman

9:00 AMDUCA, RXs, and VFDs
Angela Supple

10:00 REFRESHMENT BREAK

10:30 Interactive cases
Jeremy Pittman and Angela Supple

12:00 Seminar concludes

STUDENT RECEPTION



Sponsored by:
MERCK ANIMAL HEALTH
Sunday, March 10
8:30 - 11:00 PM
Citron North

Sunday Morning Research Topics

Research Topics

Date: Sunday, March 10

Time: 8:00 AM – 12:00 PM

Location: Sabal D

Session chair: Chris Rademacher

- 8:00** Comparison of different cell lines for improving PRRSV virus isolation from clinical samples
Wannarat Yim-Im
- 8:15** Investigating biosecurity aspects related to PRRSV outbreaks
Gustavo de Sousa e Silva
- 8:30** Comparison of production impact in breeding herds following PRRS clinical outbreaks adopting killed or attenuated PRRS virus vaccination protocols
Gaurav Rawal
- 8:45** Economic and production benefit of 2 PRRS MLV doses compared to a single dose vaccination program on nursery pigs
Cesar Moura
- 9:00** Modeling the dilution effect of PRRSV RNA in processing fluid field samples on the probability of virus detection by qPCR
Will Lopez
- 9:15** Put a CLAMP on it! PCR-based strategy to selectively sequence wild-type PRRSV in vaccinated herds
Karen Harmon
- 9:30** Use of oropharyngeal swabs and udder wipes to monitor porcine reproductive and respiratory syndrome virus in breeding herds
Jorge Garrido Mantilla
- 9:45** Experimental transmission of influenza A virus and porcine reproductive and respiratory syndrome virus from nurse sows to adopted pigs during lactation
Jorge Garrido Mantilla

Sunday Morning Research Topics

- 10:00** REFRESHMENT BREAK
- 10:15** Shedding of a newly commercialized live attenuated influenza vaccine under field conditions
Gustavo Lopez
- 10:30** Identification of metabolite markers for enzootic pneumonia in pigs
Maria Pieters
- 10:45** *Mycoplasma hyosynoviae* diagnostics: What experimental data can tell us about field strains
Nubia Macedo
- 11:00** Oral infectious dose of African swine fever virus when consumed naturally in feed and liquid
Megan Niederwerder
- 11:15** Efficacy of an inactivated Seneca Valley virus vaccine in nursery-aged pigs
Alexandra Buckley
- 11:30** Transmammary delivery of firocoxib from medicated sows to nursing piglets reduces stress and improves average daily gain after castration, tail docking, and teeth clipping
Hans Coetzee
- 11:45** Potential risk factors for pelvic organ prolapses: Survey of 104 US commercial breeding herds
Chris Rademacher
- 12:00** Session concludes

WELCOME RECEPTION



Sponsored by:
ZOETIS

Sunday, March 10
6:30 – 8:30 PM
Sabal ABCD

Sunday Session #1

Student Seminar

Student Seminar

Date: Sunday, March 10

Time: 1:00 – 5:15 PM

Location: Citron North

Session co-chairs: Andrew Bowman and Maria Pieters

Sponsored by ZOETIS

- 1:00** Clinical validation of infrared (IR) thermometers in periparturient sows
Enise DeCaluwe-Tulk, University of Guelph
- 1:15** Opening of a hinged farrowing crate increases the variety of behaviors expressed by a lactating sow
Matthew Herber, University of Pennsylvania
- 1:30** Validation of a modified method of processing fluid collection to mitigate cross-contamination with a porcine reproductive and respiratory syndrome modified live virus vaccine
Daniel Brown, University of Illinois
- 1:45** Methods for achieving a successful and safe gilt inoculation with *Mycoplasma hyopneumoniae*
Marjorie Schleper, University of Minnesota
- 2:00** Evaluation of various ante-mortem sampling techniques for detecting *Mycoplasma hyopneumoniae* following seeder pig exposure
Sophia Leone, Colorado State University
- 2:15** Evaluation of efficacy of ultraviolet germicidal chambers in swine farms
Katelyn Rieland, University of Minnesota
- 2:30** Use of processing fluids to monitor sows for porcine circovirus type 2 and determine parity influence on viral detection
Kayla Castevens, North Carolina State University
- 2:45** REFRESHMENT BREAK

Sunday Session #1

Student Seminar

- 3:15** Evaluation of PCV3 prevalence in placental umbilical cord blood and processing fluids and reproductive outcomes following mass vaccination with an RNA-Particle platform PCV3 vaccine
Abby Vennekotter, University of Illinois
- 3:30** Effects of antibiotic and non-antibiotic interventions applied to swine umbilici within the first 24 hours of life on the incidence of umbilical infection, growth, and mortality
Anne Szczotka, Iowa State University
- 3:45** Effects of perinatal antibiotic administration on fecal microbiota and selection of antimicrobial resistant genes in piglets
Brandi Burton, University of Illinois
- 4:00** Development of a scoring system to determine the prevalence, severity, and associated risk factors of tail-biting and lameness
Sam Baker, Iowa State University
- 4:15** Detecting porcine reproductive and respiratory syndrome virus (PRRSV) via polymerase chain reaction (PCR) by pooling pen-based oral fluid samples
Kimberlee Baker, Iowa State University
- 4:30** Efficacy of a T-cell epitope DNA vaccine, an inactivated vaccine, and use of both in the H1N1 pig challenge model
Joshua Hewitt, Iowa State University
- 4:45** Evaluation of the efficacy of ceftiofur crystalline free acid versus autogenous vaccination for control of *Streptococcus suis* and *Haemophilus parasuis* in a commercial swine production system
Matt Finch, Iowa State University
- 5:00** Impact of orientation on the efficacy of decontamination of supplies with aerosolized chemical disinfectants
Erin Kettelkamp, University of Illinois
- 5:15** Session concludes

Sunday Session #2

Industrial Partners

Industrial Partners

Date: Sunday, March 10

Time: 1:00 – 5:15 PM

Location: Citron Center

Session co-chairs: George Charbonneau and Jessica Seate

- 1:00** Dietary sodium diformate and glycerine monolaurate affects fecal pathogen load in lactating sows
Christian Lueckstaedt
ADDCON
- 1:15** The effect of feeding an alternative protein technology to replace animal plasma on piglet nursery performance
Benjamin Bass
PMI
- 1:30** Early-life administration of Tonistry Px™ isotonic protein drink to pigs improves farrowing livability and growth to end-nursery
Allan Carlson
TONISTRY
- 1:45** The effects of administering Tonistry Px™ isotonic protein drink to piglets on gut microbiota as assessed through 16S rRNA sequencing
Ava Firth
TONISTRY
- 2:00** Benefits of live attenuated influenza vaccination in neonatal commercial pigs, observed after challenge with contemporary IAV-S at 10 and 15 weeks of age
Christa Goodell
BOEHRINGER INGELHEIM ANIMAL HEALTH USA
- 2:15** The impact of vaccination with Ingelvac Provenza™ against IAV-S on mortality in a known PRRS-unstable population
Cara Haden
BOEHRINGER INGELHEIM ANIMAL HEALTH USA
- 2:30** Approaching IAV-S control with a new unique tool
Erin Lowe
BOEHRINGER INGELHEIM ANIMAL HEALTH USA

Sunday Session #2

Industrial Partners

- 2:45** Determining optimum application length of organic acids in drinking water of nursery pigs
Drew Woods
TROUW NUTRITION
- 3:00** REFRESHMENT BREAK
- 3:15** Evaluation of Pulmotil AC (tilmicosin aqueous concentrate) use in lactating sows to improve herd health and productivity in herds with swine respiratory disease
Emily Byers
ELANCO
- 3:30** Use of spray-dried plasma in feed for grow-finish pigs to reduce reliance on growth-promoting antibiotics
Gustavo Lima
APC
- 3:45** Virus neutralizing antibodies produced after vaccination with a killed PRRS virus vaccine
Ben Hause
CAMBRIDGE TECHNOLOGIES
- 4:00** Fate of injected fat-soluble vitamins in pigs, gilts, and sows
Rob Stuart
STUART PRODUCTS
- 4:15** Heavy metal impurities in injectable iron products for swine
Steve Ensley
PHARMACOSMOS
- 4:30** Experience and success factors used to eliminate iron deficiency anemia and achieve peak performance
Tom Gillespie
PHARMACOSMOS
- 4:45** Integrated fly control at an eastern Corn Belt swine finishing unit
Tom Gillespie
PIEDMONT ANIMAL HEALTH
- 5:00** Field experiences with an adjuvanted autogenous hard-to-grow PRRSV vaccine
Mark Wagner
HUVEPHARMA
- 5:15** Session concludes

Sunday Session #3

Industrial Partners

Industrial Partners

Date: Sunday, March 10

Time: 1:00 – 5:15 PM

Location: Citron East-West

Session co-chairs: Peggy Anne Hawkins and Brent Pepin

- 1:00** Efficacy of prime-boost vaccination protocols in pigs challenged with influenza A viruses: A pilot study
Marie Culhane
ZOETIS
- 1:15** Comparison of growth performance and mortality of pigs vaccinated with Foster Gold PCV MH and Circumvent[®] PCV-M G2 in a commercial Iowa production system
Noel Garbes
ZOETIS
- 1:30** Safety and efficacy of a unique MLV PRRSV vaccine: PRRSGard[®]
Fabian Chamba
PHARMGATE ANIMAL HEALTH
- 1:45** Anti-inflammatory properties of Aivlosin[®] (tylvalosin) and its implications for swine respiratory disease treatment
Alexander Hintz
PHARMGATE ANIMAL HEALTH
- 2:00** Trends of mycotoxin contamination in US corn
Erika Hendel
BIOMIN AMERICA
- 2:15** AirWorks heat exchanger effect on operation cost and health in pig barns
John Baker
PURETEK GENETICS
- 2:30** Epidemiological survey of *Streptococcus suis* in the US swine population, based on whole genome sequencing
Paul Lawrence
NEWPORT LABORATORIES
- 2:45** Use of whole genome sequencing for identification and selection of isolates for infection chain control
Keith Wilson
NEWPORT LABORATORIES

Sunday Session #3

Industrial Partners

- 3:00** REFRESHMENT BREAK
- 3:15** Inspiring a verified culture of care post-identification of abuse on an undercover video using a baseline assessment of expressed competencies compared to post-training measurement of expressed competencies
Sarah Probst Miller
AGCREATE SOLUTIONS
- 3:30** The effect of various levels of an antioxidant support technology on the performance of health-challenged nursery pigs
Sarah Ebarb
PROVIMI NORTH AMERICA
- 3:45** The effects of PROMOTE® Defusion® Prime on the performance of nursery pigs fed quality-challenged diets: A combined analysis
Kari Saddoris-Clemons
PROVIMI NORTH AMERICA
- 4:00** Meta-analysis of enteric pathogen genes identified in 122 swine flows across the United States
Kyle Leistikow
UNITED ANIMAL HEALTH
- 4:15** Genomic and metabolomic approaches to improving behavior of pigs
Jenelle Dunkelberger
TOPIGS NORSVIN USA
- 4:30** A computer vision system for real-time group and individual pig behavior tracking
Jacquelin Labrecque
RO-MAIN
- 4:45** Tetracore Inc, 20 years of leadership in animal health laboratory technology
Johnny Callahan
TETRACORE
- 5:00** The relationship between early weight measures and gilt reproductive performance
John Sonderman
DNA GENETICS
- 5:15** Session concludes

Sunday Session #4

Industrial Partners

Industrial Partners

Date: Sunday, March 10

Time: 1:00 – 5:00 PM

Location: Sabal D

Session co-chairs: Melissa Hensch and Amy Maschhoff

- 1:00** PEDV-positive bioassay provides evidence houseflies (*Musca domestica*) can transmit infectious PEDV to pigs
Gene Spellman
CENTRAL LIFE SCIENCES
- 1:15** Impact of sow vaccination during lactation on piglet performance
Francesc Tribo
LABORATORIOS HIPRA
- 1:30** Legends and lies: The truth about disinfectant claims
Jeffrey Odle
LANXESS CORPORATION
- 1:45** Impact of NutriQuest Swine Awake™ on survivability in PRRSV-positive weaned pigs
Keith Bretey
NUTRIQUEST
- 2:00** Tracking sow mortality
Tom Gillespie
PIGCHAMP
- 2:15** Pursuing American Board of Veterinary Practitioners (ABVP) certification in Swine Health Management
Jeff Husa
AMERICAN BOARD OF VETERINARY PRACTITIONERS
- 2:30** Veterinarian oversight of prescriptions and treatment plans
Chris Rademacher
GLOBALVETLINK

Sunday Session #4

Industrial Partners

- 2:45** Impact of No Antibiotics Ever/Raised Without Antibiotics production on animal welfare
Jennifer Wishnie
NATIONAL PORK BOARD
- 3:00** REFRESHMENT BREAK
- 3:15** Field evaluation: Vaccinating PRRS-infected pigs with Endovac-Porci
Keith Bretey
ENDOVAC ANIMAL HEALTH
- 3:30** What swine producers want from their veterinarian: A market research study
Russ Siakel
CF GRASS CONSULTING
- 3:45** Feeding Diamond V Original XPC™ to sows during gestation and lactation improves weaning performance
Karen Lehe
DIAMOND V
- 4:00** Smart systems in pig production
Tom Stein
MAXIMUM AG TECHNOLOGIES
- 4:15** Influenza A vaccination using the Sequivity™ technology
Channing Sebo
MERCK ANIMAL HEALTH
- 4:30** Porcine circovirus type 3: Field experiences with a potentially emerging pathogen
Brad Thacker
MERCK ANIMAL HEALTH
- 4:45** Impact of vaccination timing on the efficacy of Porcilis™ Ileitis against experimental *Lawsonia intracellularis* challenge
Brad Thacker
MERCK ANIMAL HEALTH
- 5:00** Session concludes

Poster Session

Veterinary Students

Veterinary Student Posters (#1 - #28)

Location: Palm Event Center

Sunday, March 10

12:00 – 5:00 PM

Authors present from 12:00 – 1:00 PM

Monday, March 11

8:00 AM – 5:00 PM

Sponsored by ZOETIS

Posters #1-15 have been selected for judging in the Student Poster Competition, with scholarship awards sponsored by **NEWPORT LABORATORIES**

1. Evaluation of semen production in boars given an IAV-S vaccine
Jonathan Tubbs, Auburn University
2. Validation of the post-mortem deep bronchial swab as an appropriate sample type for influenza A virus detection in swine
Andrew Noel, Iowa State University
3. The cost and cause of lameness in loose-housed sows
Justin Schumacher, University of Pennsylvania
4. Dietary algae-derived protein as antibiotic alternative for weaned pigs infected with enterotoxigenic *Escherichia coli*
Brooke Smith, University of Illinois
5. Relationship of *Mycoplasma hyopneumoniae* and *Mycoplasma hyorhinis* detection in processing fluids with growing pig prevalence
Rachel Stika, Iowa State University
6. Impact of shoulder lesions on sow behavior and welfare
Emily Nogay, University of Pennsylvania
7. The influence of a porcine reproductive and respiratory syndrome virus infection on vitamin and mineral levels in serum, liver, and bone of recently weaned pigs
Jacob Baker, Iowa State University

Poster Session

Veterinary Students

8. Evaluating the correlation of *Mycoplasma hyorhinis* and *Mycoplasma hyosynoviae* detection in oral fluids and lameness scores
David Pillman, University of Minnesota
9. Assessing the presence of infectious influenza A virus in swine in oral fluid and nasal swab samples to determine replacement gilt flow status
Gabrielle Fry, Purdue University
10. How neonatal factors affect reproductive performance of swine replacement breeding stock
Jordan Buchan, University of Guelph
11. Comparison of processing fluids and placental umbilical cord serum to detect porcine circovirus type 2 in sow farms
Shelby Perkins, University of Missouri
12. Case study evaluating diagnostic tools for *Mycoplasma hyorhinis* field diagnosis
Katie Kehl, Kansas State University
13. Understanding bacterial resistance from clinical isolates
Taylor Homann, University of Minnesota
14. Hemoglobin concentration in sows: Correlation with stillborn
Elizabeth Noblett, North Carolina State University
15. The effect of vaccination of gilts with a pre-farrow rotavirus RNA particle vaccine following pre-breeding natural planned exposure on piglet growth and viral shedding
Amanda Anderson, Iowa State University
16. Evaluation of detergent use to improve cleaning of swine transport vehicles as measured by ATP bioluminescence
Megan Bloemer, University of Illinois
17. Fecal microbiota transplantation shifts microbiome composition and reduces morbidity and mortality associated with PCVAD
Laura Constance, Kansas State University

Continued on next page

Poster Session

Veterinary Students

18. Implications of operating conditions in UV light decontamination chambers on their effectiveness in reducing pathogen introduction into swine farms
Jessica Kordas, University of Illinois
19. Evaluation of PCV2/Mhp/PRRSV vaccination regimens on growing pig performance under natural exposure
Jamie Madigan, North Carolina State University
20. Novel tools to control old pathogens: Molecular characterization of *Haemophilus parasuis* field isolates by serotyping PCR (sPCR) and virulence-associated autotransporters PCR (vtaA-PCR)
Thaire Marostica, Universidade Federal de Minas Gerais
21. Detection of patterns in pig death during the wean-to-finish period and their differing impacts on profitability
Samantha Mehling, Iowa State University
22. Urine concentrations limits of Predef®-2X and Banamine®-S in swine
Savannah Miller, Kansas State University
23. Use of highly palatable feed reward to enhance gilt training to electronic sow feeders
Haley Nelson, University of Pennsylvania
24. *Mycoplasma hyopneumoniae* serological testing challenges in a negative breeding herd
Caitlin Peterson, Iowa State University
25. Measure and compare the pharmacokinetics of intramuscular (IM), oral (O), and topical (T) administration of flunixin meglumine in pre-wean piglets
Brette Ratliff, University of Tennessee
26. Prevalence of porcine circovirus type 3 based on PCR in processing fluids or piglet serum collected from Midwest sow farms
Alexia Riley, University of Minnesota
27. Effects of farm and harvest plant geographical locations on movement of cull sows in the United States
Zack Talbert, University of Illinois
28. Evaluation of the immunological response of previously exposed and vaccinated pregnant sows to a killed autogenous PRRS 1-7-4 RFLP vaccine
Zoe Wolfe, North Carolina State University

Poster Session

Research Topics

Research Topics Posters (#29 - #53)

Location: Palm Event Center

Sunday, March 10

12:00 – 5:00 PM

Authors present from 12:00 – 1:00 PM

Monday, March 11

8:00 AM – 5:00 PM

29. A new approach for benchmarking feed conversion across different swine growing system types
Carmen Alonso
30. Assessment of internal biosecurity in US swine farms using innovative technology
Andreia Arruda
31. PCV3, a newly discovered swine pathogen: Clinical experience, diagnostic cases, and experimental infection
Bailey Arruda
32. *Mycoplasma hyopneumoniae* cell-mediated immune responses after vaccination at weaning
Fabian Chamba
33. Effect of plant polyphenols as antioxidant alternatives to vitamin E in diets offered to pigs
Nienke de Groot
34. Efficacy of a PEDV intramammary vaccine delivery system to decrease pre-weaning mortality and enhance colostrum immunity
Franco Matias Ferreyra
35. Using T-cell epitopes to match the optimal vaccine for PCV2 field strains
Vitelio Utrera
36. Genotypic and phenotypic characterization of *Streptococcus suis* strains isolated from healthy and diseased pigs
Jessica Goncalves dos Santos
37. Does lameness etiology affect animal-human interaction and animal movement?
Anna Forseth (Locke Karriker)

Continued on next page

Poster Session

Research Topics

38. Understanding the impact of subclinical *Lawsonia intracellularis* infection on intestinal function
Fernando Leite
39. Dynamics of wild-type PRRSV infection on vaccinated growing pigs raised in areas of high risk of natural PRRSV infection
Cesar Moura
40. Assessment of the protective effect of influenza vaccination on morbidity and mortality in nursery pigs
Eliana Paladino
41. Influence of piglet gut microbiota on severity to *Mycoplasma hyopneumoniae* infection
Maria Pieters
42. Effect of an isotonic protein drink on intestinal microbe population
CallaBria Putrino
43. Development of a novel multiplex real-time PCR for the detection and differentiation of SARS-CoV, an emerging swine coronavirus
Rolf Rauh
44. Porcine astrovirus type 3, an emerging cause of atypical neurologic disease: Diagnostic cases and infection dynamics on affected flows
Gaurav Rawal
45. Diagnostic specificity of ASFV, CSFV and FMDV real-time PCR assays for swine pen-based oral fluid samples
Marisa Rotolo
46. Application of spatially balanced sampling to regional surveillance
Marisa Rotolo
47. Effect of breeding herd PRRS status on productivity
Daniel Torrents

Poster Session Research Topics

48. Use of aggregated veterinary diagnostic laboratory PCR results to monitor the activity of pathogens in the US swine industry
Giovani Trevisan
49. Testing wild-type and mutant PEDV in neonatal piglets. The potential of mutant PEDV as a vaccine vector
Albert van Geelen
50. Use of a GnRH agonist for estrus synchronization in post-weaning sows
Sara Williams
51. Study of the protective action of lutein in porcine semen
Sara Williams
52. PRRSV oral fluid ELISA performance comparison among three commercial kits
Alexandra Henao-Diaz (Jeff Zimmerman)
53. Role of collared peccary (*Pecari tajacu*) in the ecology of PRRSV
Alexandra Henao-Diaz (Jeff Zimmerman)

AASV History Highlight

First Student Seminar



AASP provided \$250 each to six veterinary students selected to make oral presentations during the 1993 annual meeting. The students selected to participate were: Janet Alsop, Sandy Amass, Mary Battrell, Luis Fernandez, Martin Mohr, and Mark Thompson.

Poster Session

Industrial Partners

Industrial Partners Posters (#54 - #67)

Location: Palm Event Center

Sunday, March 10

12:00 – 5:00 PM

Authors present from 12:00 – 1:00 PM

Monday, March 11

8:00 AM – 5:00 PM

- 54.** Effects of a blend of sodium diformate and glycerine monolaurate in sow feed during late gestation and lactation on piglet performance until weaning
Christian Lueckstaedt
ADDCON
- 55.** Investigating the transmission dynamics of *Lawsonia intracellularis*
Fernando Leite
BOEHRINGER INGELHEIM ANIMAL HEALTH USA
- 56.** Question: PEDV “re-breaks,” is the enemy from within?
Gene Spellman
CENTRAL LIFE SCIENCES
- 57.** Prevalent PRRS: A new tool for porcine reproductive and respiratory syndrome virus control
Mark Hammer
ELANCO
- 58.** Simplifying veterinary prescriptions with software
Joel Stave
GLOBALVETLINK
- 59.** Use of KEM SAN to mitigate post-weaning mortality due to PEDV infection in a nursery
Grant Allison
KEMIN INDUSTRIES
- 60.** Evaluation of shedding and serological profiles of pigs following vaccination with Prime Pac PRRS RR
Brett O’Brien
MERCK ANIMAL HEALTH

Poster Session

Industrial Partners

61. ELISA to monitor anti-*Mycoplasma hyorhinis* IgG in serum from pigs immunized with inactivated *M. hyorhinis* vaccines
Paul Lawrence
NEWPORT LABORATORIES
62. Impact of a novel nutritional technology for increasing litter size in multiparity sows
J Tyler Holck
NUTRIQUEST
63. The 65-million dollar hidden impact of iron deficiency anemia
Chris Olsen
PHARMACOSMOS
64. Elimination of *Mycoplasma hyopneumoniae* from a multisite production farm in Peru
Jenny Tonassi
PIC
65. Genetic analysis of tail bite scores of piglets at weaning
John Eggert
TOPIGS NORSVIN USA
66. Pathogen virulence factors present in sow represent potential health threats to piglet
Kyle Leistikow
UNITED ANIMAL HEALTH
67. Evaluation of interference of Foster[®] Gold PCV MetaStim combined with Foster[®] PRRS
Jose Angulo
ZOETIS

AASV History Highlight



First Exhibit

The first Tech Tables Exhibit was held during the 1988 Annual Meeting in Saint Louis. The following year, 26 companies participated in the exhibit in Des Moines.

Technical Tables

Industry partners
for professional success



Visit the Technical Tables Exhibit

The Technical Tables Exhibit offers the perfect opportunity to learn about new products and services available to you and your clients from more than 90 companies and organizations (see pages 8-9).

EXHIBITS OPEN
Monday & Tuesday

Monday, March 11
9:00 AM – 5:00 PM

Tuesday, March 12
8:00 AM – 12:00 PM

LOCATION
Palm Event Center

All refreshment breaks on Monday and Tuesday take place in and around the exhibit tables. Spend some time visiting with our exhibitors, and be sure to thank them for supporting the AASV Annual Meeting!

Spouse Hospitality Suite



*The AASV is
pleased to host the
spouse hospitality suite
at the Hilton Orlando
Buena Vista Palace*

Monday, March 11

7:00 – 9:00 AM

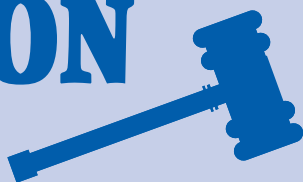
Location: 27 South (27th floor)

Spouses of meeting attendees
are invited to enjoy complimentary
breakfast pastries, juice,
and coffee.

*Make new acquaintances,
visit with old friends,
and plan the rest of your day
with other AASV spouses
and family members.*

AASV Foundation

AUCTION



Go for the gold!

Monday, March 11

Location: Sabal Ballroom

As AASV prepares to celebrate its 50th – golden – anniversary, the AASV Foundation Auction Committee is “going for the gold” in the effort to achieve another record-setting auction fundraiser.

The auction proceeds are a major source of revenue to support foundation programs that include scholarships, swine research grants, travel stipends for veterinary students, swine externship grants, tuition grants at the Swine Medicine Education Center, ACAW board certification efforts, and more.

Silent Auction

Check out the items up for bid at www.aasv.org/foundation. They will be on display in the Sabal Ballroom on auction day: Monday, March 11, but you can bid anytime from anywhere on your phone using ClickBid. Sign up for your bidding number, bookmark the bidding site on your phone, and start bidding!

It will be “all-in, all-done” for the silent auction at 7:00 PM Eastern Daylight Time.

Live Auction

The Live Auction will be held at the conclusion of the AASV Awards Reception Monday evening. Don't miss it!

**Thank you for supporting
the AASV Foundation!**
aasv.org/foundation



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 \$60,000 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.

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 Student Poster Competition, and to students who demonstrate promise and interest in pursuing a career in swine medicine. The scholarships are supported by contributions from Elanco Animal Health, Merck Animal Health, Newport Laboratories, and Zoetis.

Swine Externship Grants

Veterinary students who will complete a 2-week or longer externship in a swine practice or mixed-animal practice with a considerable swine component can apply to receive up to \$500 to defray expenses.

Travel Stipends

In partnership with Newport Laboratories, the foundation provides a \$200 travel stipend to veterinary students who attend the AASV Annual Meeting.

Monday General Session

Built to Last

Built to Last: Celebrating 50 Years of Progress

Date: Monday, March 11

Time: 8:00 AM – 12:15 PM

Location: Citron North-Center

Program chair: Nathan Winkelman

- 8:00** **Howard Dunne Memorial Lecture**
Built to last: 50 years of AASV
John Waddell
- 9:00** **Alex Hogg Memorial Lecture**
Today's swine veterinarian: Challenges and
opportunities for the future
Deborah Murray
- 10:00** REFRESHMENT BREAK
Co-sponsored by HOG SLAT
- 10:30** AASV Golden Anniversary Video
- 10:45** US pork production: Your Pork Checkoff dollars
at work
Bill Even
- 11:15** International pork markets and the influence of
global megatrends
Brett Stuart
- 12:15** LUNCHEON

AASV LUNCHEON



Sponsored by:
**BOEHRINGER INGELHEIM
ANIMAL HEALTH USA**

Monday, March 11
12:15 – 2:00 PM

Sabal Ballroom

Monday Session #1

Disease Control and Elimination

Disease Control and Elimination

Date: Monday, March 11

Time: 2:00 – 5:30 PM

Location: Citron North

Session chair: Bill Hollis

Part 1: Porcine Reproductive and Respiratory Syndrome

- 2:00** Elimination failures and LVI experiences
Jay Miller
- 2:15** Economic models of PRRS control
Dale Polson
- 2:30** Evolution of PRRSV monitoring: Three decades of advances and improvements
Will Lopez
- 2:45** Applied population-based sampling for PRRS
Giovani Trevisan
- 3:00** PRRS control and elimination Q&A
Miller, Polson, Lopez, Trevisan
- 3:15** REFRESHMENT BREAK
Sponsored by CEVA ANIMAL HEALTH

Part 2: *Mycoplasma*

- 3:45** Diagnostic methods for effective *Mycoplasma hyopneumoniae* control and elimination
Maria Pieters
- 4:00** *Mycoplasma* isolation and elimination experiences
Bob Thompson and Maria Jose Clavijo

Continued on next page

AASV AWARDS RECEPTION



Sponsored by:
MERCK ANIMAL HEALTH

Monday, March 11

6:30 – 8:30 PM

Sabal Ballroom

Monday Session #1

Disease Control and Elimination

- 4:15** What if a naïve herd breaks?
Dyneah Classen
- 4:30** *Mycoplasma* Q&A
Pieters, Thompson, Clavijo, Classen

Part 3: Porcine Epidemic Diarrhea Virus

- 4:45** PEDV: People during breaks
Mary Battrell
- 5:00** Persistence, control, and elimination of PEDV
Laura Batista
- 5:15** PEDV Q&A
Battrell, Batista
- 5:30** Session concludes

AASV FOUNDATION AUCTION



Monday, March 11
Sabal Ballroom

Silent Auction: Items on display at noon; Use ClickBid to bid anytime!

Live Auction: Immediately following the AASV Awards Reception

Monday Session #2

Vaccinology and Immunology

Practical Vaccinology and Immunology for the Swine Veterinarian

Date: Monday, March 11

Time: 2:00 – 5:30 PM

Location: Citron Center

Session chair: Marie Culhane and Emily Byers

Part 1: General Immunology, Gastrointestinal Immunology, and Vaccinology

- 2:00** General immunology: Concepts and key points for swine veterinarians
Brian Aldridge
- 2:25** Gut immunology
Adam Moeser
- 2:50** Impact of vaccination on transmission of *Lawsonia intracellularis*
Fabio Vannucci
- 3:10** Farm application of ileitis vaccines
Nate Winkelman
- 3:25** REFRESHMENT BREAK
Sponsored by CEVA ANIMAL HEALTH

Part 2: Respiratory Immunology and Vaccinology with a Flu Focus

- 3:55** Respiratory immunology
Amy Vincent
- 4:20** Universal influenza vaccines
Daniela Rajao
- 4:45** Herd immunity and transmission
Montse Torremorell
- 5:00** Influenza vaccinations: Live vs killed
Chong Li
- 5:15** Vaccinations in antibiotic-free farms
Marlin Hoogland
- 5:30** Session concludes

Monday Session #3

Production Innovations

Production Innovations

Date: Monday, March 11

Time: 2:00 – 5:30 PM

Location: Citron East-West

Session chair: Deborah Murray

- 2:00** Sow mortality: The Danish perspective
Michael Agerley
- 2:15** Low sow mortality: What's the secret?
Ron Ketchem
- 2:30** Production drivers of sow mortality
Pedro Mosqueira
- 2:55** Training, motivation, and a culture of safety
Tia Landry
- 3:10** Production Innovations Q&A
Agerley, Ketchem, Mosqueira, Landry
- 3:30** REFRESHMENT BREAK
Sponsored by CEVA ANIMAL HEALTH
- 4:00** Comparative lameness: What are we learning in other species?
Jan Shearer
- 4:35** Structural and pathological changes in growing pig lameness compared to sow lameness
Stephanie Rossow
- 4:55** Antibiotic use measurement: Where are we at?
Peter Davies
- 5:10** The politics of antibiotic use in food-producing animals
Liz Wagstrom
- 5:30** Session concludes

Tuesday General Session

Transboundary Disease Threats

Transboundary Disease Threats and Outbreak Preparedness

Date: Tuesday, March 12

Time: 8:00 AM – 12:00 PM

Location: Citron North-Center

Session chair: Nathan Winkelman

- 8:00** African swine fever: A global threat
Klaus Depner
- 8:45** A China perspective: Diseases, diagnostics, and biosecurity
Keith Erlandson
- 9:10** The foreign animal disease risk of feed
Scott Dee
- 9:40** Industry and AASV response to foreign animal disease risk
Paul Sundberg
- 10:00** REFRESHMENT BREAK
Sponsored by QUALITY TECHNOLOGY INTERNATIONAL
- 10:30** Fifty-plus years of US swine disease eradication
Joe Connor
- 11:00** What's next for disease elimination: *Mycoplasma hyopneumoniae*, PRRS, PED, or ileitis?
Paul Yeske
- 11:30** When "IT" hits the fan: Will we be prepared?
Patrick Webb
- 12:00** Session and meeting conclude



AASV BUSINESS BREAKFAST

Tuesday, March 12

7:00 – 8:00 AM

Sabal ABC

Daily Schedule

Saturday, March 9

7:00 AM

Registration Desk open

Location: Citron Foyer

AASV Committee Meetings

Palm Event Center

8:00 AM

ABVP Entrance Examination

Location: Pindo A

ABVP Oral Examination

Location: Pindo B

1:00 PM

SEMINARS

#1 AASV's Got Talent (page 11)

Location: Sabal B

#2 Swine Welfare and Behavior (page 13)

Location: Sabal A

#3 Emerging Technologies for the Swine Industry (page 14)

Location: Sabal C

#4 Conducting Effective Outbreak Investigations (page 16)

Location: Sabal F

#5 Operation Main Street Training (page 18)

Note early start time: 12:00 noon

Location: Sabal E

#6 Leading People (page 20)

Location: Sabal G

5:00 PM

OPEN EVENING

There is no reception scheduled for Saturday evening.

Enjoy Orlando!

7:00 PM

VETERINARY STUDENT TRIVIA EVENT (page 12)

Sponsored by: **MERCK ANIMAL HEALTH**

Location: Blue Bar

Daily Schedule

Sunday, March 10

6:00 AM

“Body Attack” Exercise Class (page 22)

Location: Meyer (3rd floor)

6:30 AM

AASV Student Breakfast

Location: Citron East-West

7:00 AM

Praise Breakfast (page 23)

Sponsored by: **STUART PRODUCTS**

Location: Citron Center

Registration Desk open

Location: Citron Foyer

8:00 AM

Canadian Association of Swine Veterinarians

Location: Meyer (3rd floor)

SEMINARS

#7 Boar Stud Topics (page 25)

Location: Sabal A

#8 Swine Nutrition: Setting the Foundation (page 26)

Location: Sabal C

#9 Diagnostics (page 28)

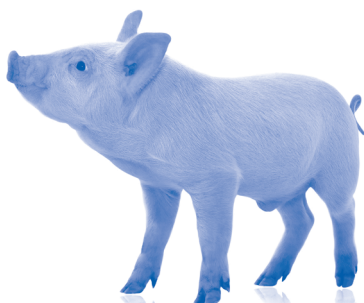
Location: Sabal B

#10 Swine Medicine for Students (page 29)

Location: Sabal F

RESEARCH TOPICS (page 30)

Location: Sabal D



Daily Schedule

Sunday, March 10

12:00 PM

POSTER SESSION OPEN

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

Location: Palm Event Center

Veterinary Student Posters (page 40)

Sponsored by: **ZOETIS**

Research Topics Posters (page 43)

Industrial Partners Posters (page 46)

AASV FOUNDATION LUNCHEON

(Advance registration required)

Location: Sabal G

1:00 PM

CONCURRENT SESSIONS

#1 Student Seminar (page 32)

Sponsored by: **ZOETIS**

Location: Citron North

#2 Industrial Partners (page 34)

Location: Citron Center

#3 Industrial Partners (page 36)

Location: Citron East/West

#4 Industrial Partners (page 38)

Location: Sabal D

6:30 PM – 8:30 PM

WELCOME RECEPTION

Sponsored by: **ZOETIS**

Location: Sabal ABCD

8:30 PM – 11:00 PM

STUDENT RECEPTION

Sponsored by: **MERCK ANIMAL HEALTH**

Location: Citron North



Daily Schedule

Monday, March 11

7:00 AM

Registration Desk open

Location: Citron Foyer

Spouse Hospitality Suite open (page 49)

Location: 27 South (27th floor)

8:00 AM – 12:30 PM

GENERAL SESSION: Built to Last: Celebrating 50 Years of Progress (page 52)

Location: Citron North-Center

Howard Dunne Memorial Lecture: Dr. John Waddell
Built to last: 50 years of AASV

Alex Hogg Memorial Lecture: Dr. Deborah Murray
Today's swine veterinarian: Challenges and opportunities for the future

9:00 AM – 5:00 PM

COMMERCIAL TECHNICAL TABLES (page 8)

Location: Palm Event Center

12:15 PM

LUNCHEON

Sponsored by: **BOEHRINGER INGELHEIM ANIMAL HEALTH USA**

Location: Sabal Ballroom

2:00 PM – 5:30 PM

CONCURRENT SESSIONS

#1 Disease Control and Elimination (page 53)

Location: Citron North

#2 Practical Vaccinology and Immunology (page 55)

Location: Citron Center

#3 Production Innovations (page 56)

Location: Citron East-West

6:30 PM – 8:30 PM

AASV AWARDS RECEPTION

Sponsored by: **MERCK ANIMAL HEALTH**

Location: Sabal Ballroom

AASV FOUNDATION AUCTION (page 54)

Location: Sabal Ballroom

Daily Schedule

Tuesday, March 12

7:00 AM

Registration Desk open

Location: Citron Foyer

BREAKFAST and AASV ANNUAL BUSINESS MEETING

Location: Sabal ABC

8:00 AM

GENERAL SESSION: Transboundary Disease Threats and Outbreak Preparedness (page 57)

Location: Citron North-Center

8:00 AM – 12:00 PM

COMMERCIAL TECHNICAL TABLES (page 8)

Location: Palm Event Center

12:00 PM

MEETING CONCLUDES

Thank you!

Thank you to ALL of the companies, organizations, and members who support the AASV in so many ways throughout the year!

The contributions of time, money, and resources are vital to the AASV's efforts to provide high quality educational programming at a reasonable cost to AASV members.

Plan now to
attend the

51st AASV Annual Meeting

March 7-10, 2020

Hyatt Regency Atlanta
ATLANTA, GEORGIA



2021	San Francisco	Feb 27-March 2
2022	Indianapolis	Feb 26-March 1
2023	Denver	March 4-7
2024	Nashville	Feb 24-27

Thank you!

We extend our sincere appreciation to the following sponsors of AASV annual meeting activities:

BOEHRINGER INGELHEIM ANIMAL HEALTH
AASV Luncheon

CEVA ANIMAL HEALTH
Refreshment Break Sponsor

DSM NUTRITIONAL PRODUCTS
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Refreshment Break Co-sponsor

MERCK ANIMAL HEALTH
AASV Awards Reception
Student Trivia Event
Student Reception
AASV Foundation Veterinary Student Scholarships

NEWPORT LABORATORIES
Veterinary Student Travel Stipends
Veterinary Student Poster Awards

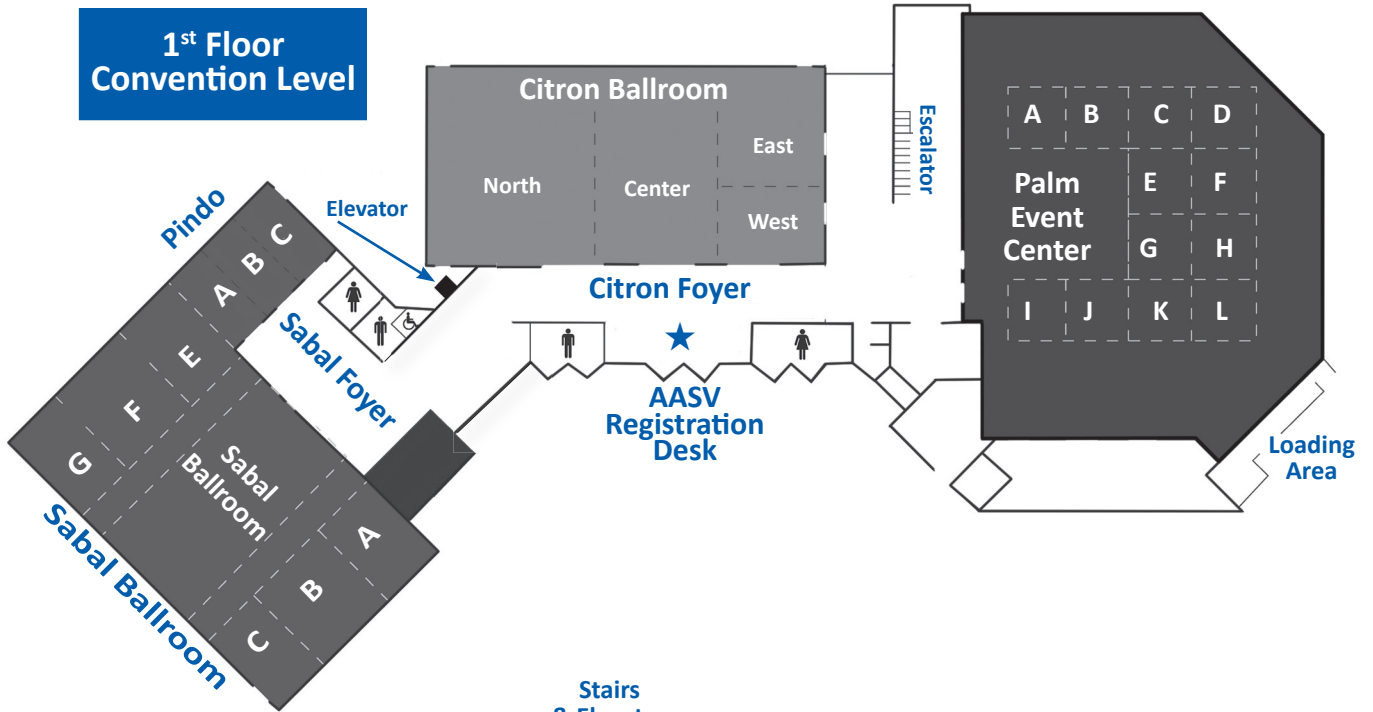
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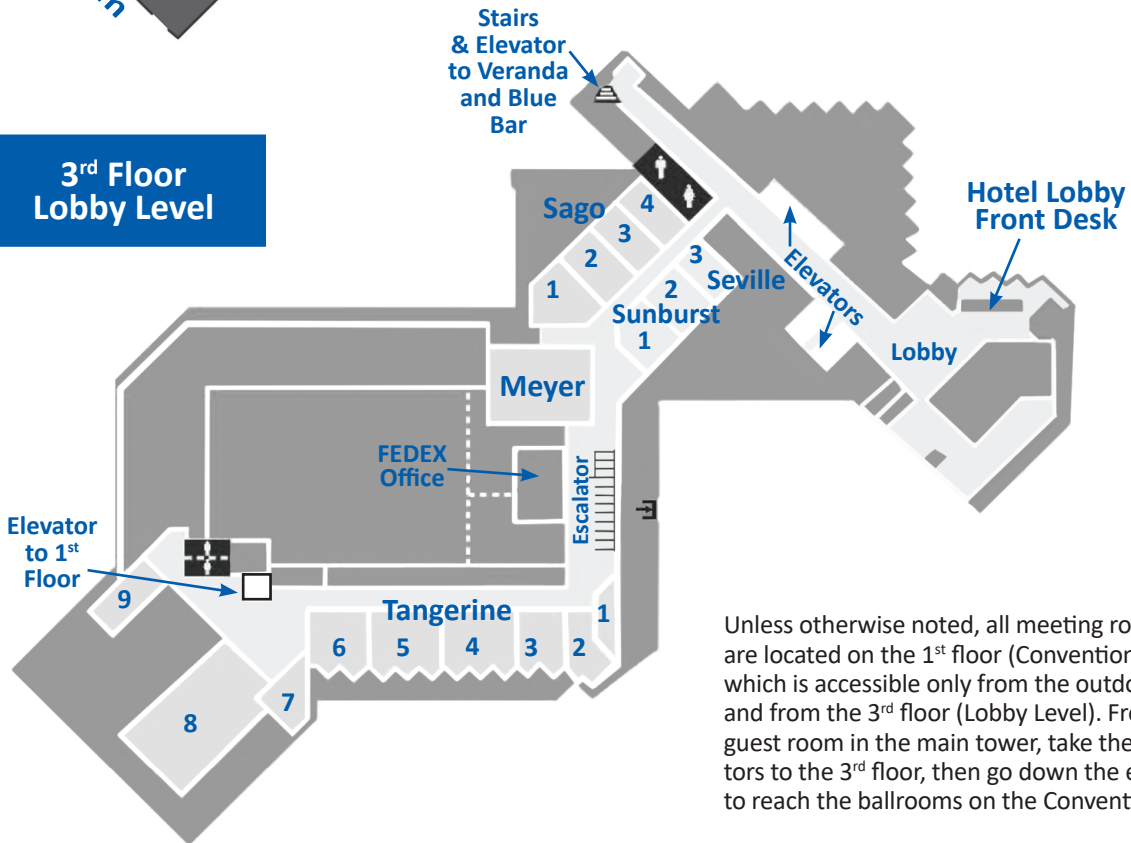
ZOETIS
Welcome Reception
AASV Student Seminar and Student Poster Session
AASV Foundation Veterinary Student Scholarship

Hilton Orlando Buena Vista Palace

1st Floor Convention Level



3rd Floor Lobby Level



Unless otherwise noted, all meeting rooms are located on the 1st floor (Convention Level), which is accessible only from the outdoors and from the 3rd floor (Lobby Level). From your guest room in the main tower, take the elevators to the 3rd floor, then go down the escalator to reach the ballrooms on the Convention Level.