Plan now to attend the 50th AASV Annual Meeting
March 9-12, 2019
Hilton Orlando Buena Vista Palace
LAKE BUENA VISTA, FLORIDA

Thank you!

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

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GLOBAL KNOWLEDGE:
Individual Application

49th AASV Annual Meeting
March 3-6, 2018
San Diego

2020 Atlanta March 7-10
2021 San Francisco March 7-10
Our venue in San Diego, California will be an excellent location for our educational program: “Global Knowledge: Individual Application.” Our organization is approaching 50 years of existence and a lot has changed over time. Against a backdrop of global trade, multinational food production systems and the reality of transboundary disease, we work to implement the knowledge we have gleaned from a multitude of information sources into practices that improve the health, production and well-being of the pigs in our clients’ care.

A lot has remained the same. It is easy to get caught up in everything we can’t control or influence, so we strive daily to focus our efforts on the things we can mold: the health of the pigs in our care, the relationships with our clients, and the communities where we live and work.

Our program committee has brainstormed and worked diligently to put together this year’s program. I can’t thank them enough for their efforts. I strongly believe the meeting will provide tools, knowledge, and motivation attendees can take home and implement immediately. We won’t ignore the things out of our control but will maintain a watchful eye towards disease risk management, changing regulatory environments, evolving social trends and changing export markets balanced with the science of emerging and endemic diseases and control using new and proven interventions.
The Howard Dunne Memorial Lecture will be presented by Dr. Bill DuBois. His title is “How geography, culture, and socioeconomic status affect global animal protein consumption: Applications for swine veterinarians.” I had the pleasure of working with Bill for several years before he and his wife Angie began Christian Veterinary Mission work in Indonesia three years ago. I am eagerly anticipating his introspection and message.

The Alex Hogg Memorial Lecture will be presented by Dr. Rodger Main. His title is “This is our time, the choices are yours.” Rodger has been an excellent example of effective technical leadership for me and I think you will appreciate his challenge to us.

We are also going to have several excellent general session presentations that will provide motivation and share new ways to interpret, utilize and disseminate information. As always, the preconference seminars provide something for everyone. And if you are like me, you will feel torn between some of the concurrent sessions when there are two you would like to hear that are scheduled at the same time!

I do hope you will join us and look forward to seeing all of you in San Diego!

C. Scanlon Daniels, DVM
Program Chair
C. Scanlon Daniels, Chair

Program Committee

Peggy Brinkman
Eric Burrough
Emily Byers
George Charbonneau
Marie Culhane
Attila Farkas
Joseph Fent
Micah Jansen
Brad Leuwerke
Daniel Linhares
Abby Patterson

John Prickett
Alex Ramirez
Caleb Robb
Steve Sornsen
Chase Stahl
Pete Thomas
Lisa Tokach
Jon Van Blarcom
Todd Williams
Nathan Winkelman
Pam Zaabel

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 19. 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 Palm Foyer

Saturday, March 3 7:00 AM – 5:00 PM
Sunday, March 4 7:00 AM – 5:00 PM
Monday, March 5 7:00 AM – 5:00 PM
Tuesday, March 6 7:00 AM – 12:00 PM

Fees

Register online at www.aasv.org/annmtg

Last day for lower pre-registration rate: Friday, February 9
Last day to register online: Monday, February 19
After February 19, all registration is CLOSED until on-site registration opens in San Diego on Saturday, March 3

AASV member pre-registration by February 9 $345
AASV member registration after February 9 $445
Non-member veterinarians $475
Add’l Tech Table representatives (limit 3) $475

Veterinary students: Registration is free for veterinary students who are 2017-18 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.


Meeting Hotel

Manchester Grand Hyatt
1 Market Place
San Diego, California 92101
Tel: 619-232-1234


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) credit hours are available for each of the pre-conference seminars on Saturday.
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Student Delegate
Jordan Gebhardt
4440 Tuttle Creek Blvd #8
Manhattan, KS 66502
USA
| Location: Seaport Foyer and Seaport F  
| Monday: 9:00 AM – 5:00 PM  
| Tuesday: 8:00 AM – 12:00 PM |

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Technical Tables

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Zinpro Corporation
Zoetis
AASV’s Got Talent

Date: Saturday, March 3
Time: 1:00 – 5:20 PM
Location: Seaport A
Fee: $80
Seminar Chair: Jeff Harker

This season of AASV’s Got Talent promises to be one of the best yet. Nearly all of the participants’ names were mentioned in last year’s survey, and from “hands on” to “sociology,” we are sure you will find an interesting presentation. The quality should be excellent as these practitioners are competing for a cash award and recognition as “Most Talented Tipster.” This session should be full of energy as most of the presenters are relatively early in their careers. There are no proceedings papers for this session, so you will need to attend to garner the most benefit. Global Knowledge will be attained from this session’s individual contributors, so don’t miss out!

1:00 When disaster strikes: Considerations for feed-associated legal cases
Scott Radke

1:20 Where’s the myco?
Maria Clavijo

1:40 New graduate experiences
Ryan Strobel

2:00 Utilizing Ag Connect software to resolve a finisher challenge
Maryn Ptaschinski

2:20 Tips and tricks for meningeal swabs
Justin Brown

2:40 The 10 commandments of sow farm production
Joel Sparks

3:00 REFRESHMENT BREAK
STUDENT TRIVIA EVENT
Veterinary students, join us on Saturday, March 3\textsuperscript{rd}, 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 Main Room at the Harbor House Restaurant (831 West Harbor Drive). Meet at the restaurant at 6:45 PM, or meet in the lobby of the Grand Hyatt at 6:30 PM to walk over with a group. Hors d’oeuvres and beverages will be served, thanks to our sponsor Merck Animal Health.
This seminar will focus on processes and principals involved in the succession of a veterinary practice. Three speakers will be lending their expertise and experiences on this topic. The session will provide veterinarians with insight into transition management, practice valuation, and practice financing. Veterinarians interested in purchasing or becoming a partner will be provided with an understanding of practice valuations, cash flow generation, and steps involved in securing financing. Established veterinarians considering a change such as retirement, part time employment, or adding an associate will be provided with recommendations and suggestions developed from prior, successful business transitions.

**Al Bennett**, Principle Lending Consultant and Certified Financial Planner at Compeer Financial, will begin the seminar describing his experiences helping clients with their succession planning. He will provide insight into several key components of transitional planning including: maintaining communication, sustaining core values, and understanding and managing tax implications. In addition, Al’s discussion will describe his work helping clients design and implement unique and complex transition plans that mature over several years.

**Dr. Tom Burkgren**, AASV Executive Director, will provide his experience in valuing veterinary practices. Tom has used his MBA degree for many clients, helping both “buying” and “selling” veterinarians establish a true practice value. Tom’s presentation will focus on the principles he uses when preparing practice valuations.
Dr. Jessica Trichel, Educational Outreach at Live Oak Bank, will provide a unique view on understanding the processes involved with securing financing. Jessica, a recent veterinary graduate, routinely works with young veterinarians to provide a basic understanding of business financials. Her talk will reference several case examples focusing on young veterinarians developing business plans that facilitated practice purchase. Her presentation will be generated from a banker’s perspective.

Speakers will answer questions from the attendees during the panel discussion that concludes the seminar. All speakers are very interested and eager to tackle the audience’s questions.

1:00 Transition concepts to consider
   Al Bennett

2:45 REFRESHMENT BREAK

3:00 Nuts and bolts of veterinary practice valuation
   Tom Burkgren

3:30 The other F-word ... financing
   Jessica Trichel

4:30 Roundtable Q&A
   All speakers

5:00 Seminar concludes
Monitoring and Surveillance 2.0: Newer and simpler methods for you and your clients

Date: Saturday, March 3
Time: 1:00 – 5:00 PM
Location: Seaport C
Fee: $95
Seminar Chair: Daniel Linhares

We will describe and discuss novel tools for practical, fast, affordable, and reliable monitoring and surveilling systems (MOSS) for swine infectious diseases. There are interesting updates for MOSS in breeding herds, growing-finishing pigs, and at the abattoir. Field and “bench top” research will be presented, and practitioners will discuss field applications. We will also discuss guidelines for sample size determination for surveillance purposes. Come and join the discussion!

1:00  Introduction  
Daniel Linhares

1:05  Perspectives on current disease monitoring systems  
Mark Schwartz

Application of new tools in the breeding herd

1:20  PRRS negative at processing time (nuts ‘n tails)  
Will López

1:35  Detecting disease at low prevalence in due-to-wean piglets using family oral fluids  
Marcelo Almeida

1:50  Ongoing automated production data screening for disease detection  
Daniel Linhares

2:05  Comparison of aggregate/population samples to detect viruses in suckling pigs  
Montserrat Torremorell

2:20  Application of new tools to declare a herd as PRRSV-negative  
Paul Yeske
2:35 Debate 1 (Q&A)
Schwartz, López, Almeida, Linhares, Torremorell, Yeske

2:50 REFRESHMENT BREAK

Application of new tools in growing-finishing pigs

3:15 Why surveil wean-to-finish pigs?
Kate Dion

3:30 Surveillance of wean-to-finish pigs: Experiences and perspectives
Rebecca Robbins

3:45 Oral fluids-ready diagnostic tests and sample size requirements as compared to serum
Jeff Zimmerman

4:15 Using “Optisample” to determine sample for specific needs
Albert Rovira

4:30 Abattoir-based oral fluids monitoring (PRRS and SVA)
Marcelo Almeida

4:45 Debate 2 (Q&A)
Dion, Robbins, Zimmerman, Rovira, Almeida

5:00 Seminar concludes
The biosecurity seminar features speakers who are on the front line of disease prevention and research regarding pathogen transmission. The program includes practitioners’ experiences limiting the introduction of disease, as well as how they implement biosecurity practices and utilize practical research to reduce the effects of disease and ultimately eliminate diseases from the herds they oversee.

1:00 Developing a culture of disease prevention
Tyler Te Grotenhuis

1:25 Air filtration testing: Understanding filter efficacy and leakage
Montse Torremorell

1:50 Updates on positive-pressure filtration
Pete Thomas

2:15 Biofilms, disinfection, and biosecurity experiences from avian influenza
Travis Schaal

2:45 REFRESHMENT BREAK

3:15 PRRS transmission: On-farm production practices
Will López

3:40 Shortening time to negative: On-farm break response
Levi Johnson

4:05 Secure Pork: FAD biosecurity and response plan
Pam Zaabel

4:30 Biosecurity roundtable Q&A
All speakers

5:00 Seminar concludes
Saturday Seminar 5  
Operation Main Street Training

**Operation Main Street Training**

**Date:** Saturday, March 3  
**Time:** 12:00 – 5:15 PM  
(Note the early start time; box lunch provided)  
**Location:** Seaport G  
**Fee:** No charge  
**Limit:** 25; US AASV member veterinarians only  
**Seminar Chair:** Al Eidson

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**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 121 OMS-trained veterinarians who have presented at 29 of 30 schools of veterinary medicine. Overall, more than 284 OMS speeches have been scheduled, with an audience reach of 15,261.

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. The objective is to equip veterinarians to speak to veterinary students and professional groups including veterinary associations and nutrition professionals. Unless otherwise indicated, presentations will be made by Al Eidson.

A box lunch will be provided. Attendees are encouraged to bring a laptop for note-taking.

12:00  Welcome, overview, and introductions

12:15  Antibiotics update

1:00  A presentation for schools of veterinary medicine

2:15  Overview of the industry structure, trust model, and US Farmers and Ranchers Alliance (USFRA) messages

2:30  REFRESHMENT BREAK/Biography photos

*Continued on next page*
Saturday Seminar 5
Operation Main Street Training

2:45  Animal care and well-being

3:15  Environment

3:30  Speaker support: Schools of veterinary medicine, food chain customers, nutrition professionals, and nurses

3:45  Media relations guidelines; best practices for television interviews

4:15  Preparation for mock television interviews; hand out scenario

4:45  Video-recorded interview for each participant (interviews will be edited and emailed to participant)

5:15  Seminar concludes/evaluations
“BODY ATTACK”
EXERCISE CLASS

Sunday, March 4
6:00 – 6:30 AM
Location: Balboa ABC

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!
Sunday, March 4
7:00 – 8:00 AM
Location: Seaport D

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. Bill 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!_
Antibiotic Alternatives

**Date:** Sunday, March 4  
**Time:** 8:00 AM – 12:00 PM  
**Location:** Seaport A  
**Fee:** $95  
**Seminar chair:** Nathan Winkelman

There is a potential for lower antibiotic use due to recent increased industry regulation. There is also a potential economic advantage for antibiotic-free niche markets. This pre-conference seminar will address the risks, challenges, and potential rewards of reduced antibiotic use in today’s market. We will attempt to determine if there are cost-effective alternatives to antibiotics and which pig-flow systems may have the most potential for success.

Our distinguished panel will address:

- Animal welfare dos and don’ts before attempting antibiotic-free pig flows
- A 16-year review of alternative growth promotants in peer-reviewed, original swine research trials
- How to design and evaluate these trials to sort out “good” and “not so good” science so that we can statistically analyze, interpret, and compare different experiments as a basis for management decisions
- A summary of nutraceutical (egg antibody, zinc, and essential oils) trials in the face of a *Lawsonia intracellularis* disease challenge
- Important feed or water additives for nursery pigs. Are they cost-effective with or without antibiotics?
- Experiences with NAE (no antibiotics ever) in a large system: Challenges and opportunities with disease control, performance, and mortality

**8:00** Considerations on swine welfare and antibiotic stewardship *before* raising pigs without antibiotics  
*John Baker*

**8:40** A literature review of sub-therapeutic antibiotic alternatives for nursery diets  
*Nick Gabler*

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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>9:20</td>
<td>Designing and evaluating studies on non-antibiotic feed additives</td>
<td>John Patience</td>
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<tr>
<td>9:55</td>
<td>Nutraceutical ileitis challenge studies: Potential for success or not</td>
<td>Nate Winkelman</td>
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<tr>
<td>10:15</td>
<td>REFRESHMENT BREAK</td>
<td>Sponsored by NOVUS INTERNATIONAL</td>
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<tr>
<td>10:35</td>
<td>Formulation and feed additive considerations for nursery diets without antibiotics</td>
<td>Mike Tokach</td>
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<tr>
<td>11:20</td>
<td>Sunterra Farms’ first year with NAE: Challenges, results, lessons learned, and still lots of questions</td>
<td>Doug MacDougald</td>
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<tr>
<td>12:00</td>
<td>Seminar concludes</td>
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</tbody>
</table>
Leading People: Leadership styles training for developing more effective and productive working relationships

Date: Sunday, March 4
Time: 8:00 AM – 12:00 PM
Location: Seaport B
Fee: $135 (includes DiSC assessment for registrant)
Limit: 35 (pre-registration by February 9 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.

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<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Welcome, overview, and introductions</td>
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<tr>
<td>8:15</td>
<td>The DiSC model and individual results interpretation</td>
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<tr>
<td>8:45</td>
<td>Understanding the four different DiSC styles to enhance working relationships</td>
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<tr>
<td>9:45</td>
<td>REFRESHMENT BREAK&lt;br&gt;Sponsored by NOVUS INTERNATIONAL</td>
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<tr>
<td>10:00</td>
<td>Diagnosing the DiSC communication style preferences of others</td>
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<td>10:30</td>
<td>DiSC application for leading people: Motivation, influence, conflict resolution and change-management</td>
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<tr>
<td>11:50</td>
<td>Seminar wrap-up and evaluations</td>
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<tr>
<td>12:00</td>
<td>Seminar concludes</td>
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</table>
The 4-Dimensional Revolution in Food Animal Health and Production: The synthesis of diagnostics, devices, digital platforms, and data analytics

Date: Sunday, March 4
Time: 8:00 AM – 12:00 PM
Location: Seaport F
Fee: $95
Seminar co-chairs: Marie Culhane and Dale Polson

This seminar contains an overview of the current and fast-coming “terrain” in food animal agriculture (e.g., precision livestock farming, IoT, big data, AI, machine learning, cloud computing, cyber-physical systems), as well as more specific topics related to what’s currently available and imminent in each of the “4 D’s”:

- **Diagnostics** (characterizing the microbiome, metagenomics, nano-diagnostics, point-of-care diagnostics)
- **Devices** (PLF-based detection and monitoring sensor systems, smart-dosing systems, etc)
- **Digital** (apps, cloud, web)
- **Data** (AI, machine learning, *ad infinitum*)

The seminar objectives:
1) Describe the coming wave of technology that will transform how health and production are managed on farms, in systems, across the country, and throughout the world
2) Review and demonstrate several new tools and platforms that will enhance and improve how veterinarians and producers more effectively manage health and performance

8:00  Introduction
      Marie Culhane

8:05  The 4D revolution is here
      Dale Polson

8:30  Cyber-physical systems/precision livestock farming
      Madonna Benjamin and Anna Johnson

8:55  AgConnect
      Maryn Ptaschinski

Continued on next page
Sunday Seminar 8
The 4-Dimensional Revolution

9:30  BioPortal
      Erin Lowe

10:00 REFRESHMENT BREAK
      Sponsored by NOVUS INTERNATIONAL

10:15 Dr. Bob Morrison’s Swine Health Monitoring Project
      Juan Sanhueza

10:40 PigSAVI
      Jerry Torrison

11:05 AHMES & ISUFLUture
      Leticia Linhares and Phil Gauger

11:35 Sound as a diagnostic sample
      Dale Polson

12:00 Seminar concludes
This “Global Knowledge: Individual Application” seminar will cover a variety of topics that include important diagnostic considerations from multiple integrated systems from different regions of the world. The seminar will offer experiences and suggestions on how to work up a variety of challenging cases, and it will share some of the details for the newest resources veterinarians have in their tool box. The seminar is intended to be a resource you can use immediately as well as to provide ideas about how you may use diagnostic capabilities in the near future.

8:00  Diagnostic challenges in a Chinese production system  
Keith Erlandson

8:30  How to work up a swine toxicology case; what our capabilities are  
Steve Ensley and Scott Radke

9:15  Diagnostic testing for challenging cases  
Fabio Vannucci

9:45  REFRESHMENT BREAK  
Sponsored by NOVUS INTERNATIONAL

10:00  Use of direct pathogen detection for swine disease diagnosis  
Rachel Derscheid

10:00  Use of direct pathogen detection for swine disease diagnosis  
Pablo Pineyro

10:50  Next generation sequencing as a tool in disease investigations  
Bailey Arruda

Continued on next page
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>11:15</td>
<td>Don’t break the system … but quit spending so much money</td>
<td>Shamus Brown</td>
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<tr>
<td>11:45</td>
<td>Diagnostics roundtable Q&amp;A</td>
<td>All speakers</td>
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<tr>
<td>12:00</td>
<td>Seminar concludes</td>
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Sunday Seminar 10
Swine Medicine for Students

Date: Sunday, March 4
Time: 8:00 AM – 12:00 PM
Location: Seaport E
Fee: $95; No charge for veterinary students or 2016 or 2017 DVM graduates
Seminar co-chairs: Jeremy Pittman and Angela Supple

The Swine Medicine for Students seminar is organized to provide supplemental information to veterinary students, recent graduates, and even seasoned veterinarians beyond the curriculum they are exposed to in school. We focus on cases and common themes that swine veterinarians experience every day. This year we will focus on generating lists of differentials for common disease presentations in all phases of pig production. In addition, there will be several interactive cases where the attendees will use the information presented to formulate differentials.

8:00  The “need to knows” of enteric disease in swine  
      Laura Carroll

8:40  The “need to knows” of respiratory disease in swine  
      Christine Mainquist-Whigham

9:20  The “need to knows” of reproductive disease in swine  
      Daniel Boykin

10:00  REFRESHMENT BREAK  
      Sponsored by NOVUS INTERNATIONAL

10:30  Interactive cases  
      Angela Supple and Jeremy Pittman

12:00  Seminar concludes

STUDENT RECEPTION

Sponsored by:  
MERCK ANIMAL HEALTH  
Sunday, March 4  
8:30 - 11:00 PM  
Seaport FGH
Sunday Morning
Research Topics

Date: Sunday, March 4
Time: 8:00 AM – 12:00 PM
Location: Seaport H
Session Chair: Chris Rademacher

8:00  Effects of perinatal antibiotic administration in piglets on gut microbiota composition and antibiotic resistance gene prevalence
James Lowe

8:15  Microbial killing capacity of aqueous and gaseous ozone on different surfaces contaminated with manure
James Lowe

8:30  Evaluation of the survival of viral pathogens in contaminated feed ingredients using transboundary shipment models
Scott Dee

8:45  Spatial autocorrelation and what it means for swine surveillance
Marisa Rotolo

9:00  Pathogenesis and transmission of a novel porcine parainfluenza virus type 1 isolate (MN25890NS/2016) in weaned pigs
Michael Welch

9:15  Breeding herd factors associated with influenza in piglets at weaning
Fabian Chamba Pardo

9:30  Is influenza vaccination a key driver of influenza genetic diversity in piglets?
Jayaveeramuthu Nirmala

9:45  Novel approaches for influenza surveillance in swine breeding herds
Jorge Garrido Mantilla

10:00 REFRESHERMENT BREAK
Sponsored by NOVUS INTERNATIONAL
10:15  Case report: Identification of *Mycoplasma hyopneumoniae* infection in a breeding herd through tracheobronchial swab monitoring
Frédéric Vangroenweghe

10:30  Processing fluids for PRRSV monitoring and surveillance systems
Samantha Hau

10:45  *Mycoplasma hyorhinis* associated with conjunctivitis in pigs
Will López

11:00  PRRS outbreak investigation pilot program: Lessons learned
Derald Holtkamp

11:15  Evaluating natural planned exposure protocols on rotavirus shedding patterns in gilts and the impact on their suckling pigs
Amanda Anderson

11:30  Evaluation of the persistence of Senecavirus A during elimination program in a sow farm
Deb Murray

11:45  Shedding and persistence of Senecavirus A in boars: natural exposure and experimental infection with an historical and a contemporary strain
Matthew Sturos

12:00  Session concludes
Student Seminar

Date: Sunday, March 4
Time: 1:00 – 5:15 PM
Location: Seaport E
Session co-chairs: Andrew Bowman and Maria Pieters

Sponsored by ZOETIS

1:00 Developing a useful model to evaluate the judicious use of a ceftiofur crystalline free acid to control umbilical infections and hernias in a commercial production system
Cassandra Fitzgerald, Iowa State University

1:15 The effect of increased feed intake during late gestation on litter characteristics of commercial sows
Katie O’Brien, University of Illinois

1:30 Evaluation of antibiotics at weaning on swine respiratory disease in the early wean-finish phase
Joel Steckelberg, Iowa State University

1:45 Comparison of oral fluids, environmental swabs, and pooled feces for detection of dysentery-associated Brachyspira spp in pigs
Whitney Webb, Iowa State University

2:00 Comparison of biosecurity aspects between swine breeding herds with low and high incidence of porcine reproductive and respiratory syndrome virus
Kimberlee Baker, Iowa State University

2:15 Putting to test a diagnostic protocol for confirmation of Mycoplasma hyopneumoniae elimination in sow farms
Bryant Chapman, Virginia Maryland Regional College of Veterinary Medicine

2:30 Evaluation of washing-disinfectant-TADD conditions required to produce a negative PCR result when monitoring the presence of PRRSV on metal surfaces
Rita Anne Neat, Iowa State University
Sunday Session #1
Student Seminar

2:45  REFRESHERNENT BREAK
Co-sponsored by GLOBALVETLINK

3:15  Litter porcine reproductive and respiratory syndrome (PRRS) status at processing and relationship to PRRS status at weaning using different pools of sampling tissues
Mikalah Smith, Iowa State University

3:30  Vaccination shedding of a porcine reproductive and respiratory syndrome (PRRS) modified live virus in nursery pigs
Evan Koep, Iowa State University

3:45  Evaluation of Senecavirus A transmission in mice under experimental conditions
Elizabeth Houston, Iowa State University

4:00  Utilizing piglet-processing fluids to detect PRRSV by PCR in a low-prevalence population
Jacob Baker, Iowa State University

4:15  Geographic distribution and genetic diversity of porcine circovirus type 3 from clinical samples in the US swine farms
Zhen Yang, University of Minnesota

4:30  Use of a hurricane fogger for Mycoplasma hyopneumoniae inoculation in nursery age gilts
Megan Nickel, Iowa State University

4:45  A comparison of the use of tails versus testicles in the production of processing fluids for detection of porcine reproductive and respiratory syndrome virus
Megan Hood, North Carolina State University

5:00  Evaluating the effects of an isotonic protein solution in nursery pigs
Stephanie Betbeze, Lincoln Memorial University

5:15  Session concludes
Industrial Partners

Date: Sunday, March 4
Time: 1:00 – 5:45 PM
Location: Seaport AB
Session co-chairs: Brett O’Brien and George Charbonneau

1:00  Effect of increasing GleptoForte dosage in newborn pigs on sow and litter performance
      Hayden Williams
      CEVA ANIMAL HEALTH

1:15  Effect of ButiPEARL Z FR level and feed form on nursery pig growth performance for the first
      6 weeks after weaning
      Ana Lucia de Souza
      KEMIN

1:30  Is it possible that an antibiotic may actually reduce antibiotic resistance? Flavomycin review
      David Nolan
      HUVEPHARMA

1:45  Mucosal IgA production in response to a killed, Carbigem™-adjuvanted vaccine administered
      intranasally
      Grant Weaver
      PHIBRO ANIMAL HEALTH

2:00  Evaluation of a killed virus vaccine (MJPRRS®) as part of a PRRS virus mitigation program
      Keith Kinsley
      PHIBRO ANIMAL HEALTH

2:15  Field studies to evaluate the efficacy of Boar Better™, a new pheromone spray for sows
      Michael Kuhn
      ANIMAL BIOTECH

2:30  Impact of sire-specific mortality on commercial swine profitability
      Douglas Newcom
      PURETEK GENETICS

2:45  Effect of Tonisity Px™ administration to sows and their piglets
      Ava Firth
      TONISITY
3:00 Production performance evaluation of Porcilis™ ileitis in a commercial finisher using a 
*Lawsonia intracellularis* seeder pig challenge model

*Brett O’Brien*
MERCK ANIMAL HEALTH

3:15 Efficacy of swine influenza virus replicon particle vaccination, including cellular and humoral 
responses after challenge

*Channing Sebo*
MERCK ANIMAL HEALTH

3:30 Efficacy and field safety of Prime Pac™ PRRS RS, a new tool against porcine reproductive and 
respiratory syndrome virus

*Erin Strait*
MERCK ANIMAL HEALTH

3:45 Swine models: An integrated approach to providing complete nutritional solutions

*Drew Woods*
TROUW NUTRITION

4:00 Trends of mycotoxin contamination in US corn

*Erika Hendel*
BIOMIN AMERICA

4:15 Polymeric formulations are efficient and versatile adjuvants for swine vaccines

*Sophia Bingling Xu*
SEPPIC

4:30 Increasing intestinal mucin production using algae extract

*Cassie Holloway*
OLMIX

4:45 Flies shown PCR+ and VI+ for Seneca Valley virus: What questions does this pose for the industry?

*Gene Spellman*
CENTRAL LIFE SCIENCES

5:00 Use estimates of in-feed antimicrobials in swine production in the United States, 2012

*Eric Bush*
USDA APHIS VETERINARY SERVICES

*Continued on next page*
Sunday Session #2
Industrial Partners

5:15 Development of multiplex PCRs for a full swine respiratory panel
Eric van Esch
BIOCHEK

5:30 How heat placement in farrowing affects nutrient intake and PWM
Brian Strobel
OSBORNE INDUSTRIES

5:45 Session concludes

There is no scheduled refreshment break during this session, but refreshments will be available in Seaport Foyer from 2:45 – 3:15 PM.
Co-sponsored by GLOBALVETLINK
Sunday Session #3
Industrial Partners

**Industrial Partners**

**Date:** Sunday, March 4  
**Time:** 1:00 – 5:45 PM  
**Location:** Seaport D  
**Session co-chairs:** Attila Farkas and Joseph Fent

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1:00  Improving the speed of health-based decision making  
*Erin Lowe*  
GLOBALVETLINK

1:15  The impact of zinc amino acid complex supplementation on the porcine response to subclinical *Lawsonia intracellularis* infection  
*Fernando Leite*  
ZINPRO CORPORATION

1:30  Kavault (avilomysin) reduces diarrhea thus improves performance in the presence of *E. coli*  
*Dana Beckler*  
ELANCO

1:45  Use of tilmicosin (Pulmotil AC®) water medication for *Mycoplasma hyopneumoniae* elimination  
*Paul Yeske*  
ELANCO

2:00  Controlling bacterial pathogens in the growing pig: New technology  
*Keith Wilson*  
NEWPORT LABORATORIES

2:15  *Streptococcus suis*: Research overview and field experiences  
*Paul Lawrence*  
NEWPORT LABORATORIES

2:30  Molecules produced by probiotics prevent enteric colibacillosis in pigs  
*Jonathon Roepke*  
MICROSINTESIS

*Continued on next page*
2:45  Genetic selection for health and welfare using meat inspection data
      John Eggert
      TOPIGS NORSVIN USA

3:00  Comparison of IPMA and commercial blocking ELISA for *Lawsonia intracellularis*
      Erika Vasquez
      GUT BUGS

3:15  Comparison of DLI® controlled immunity vs two commercial ileitis vaccines (Porcilis® and Enterisol®) vs controls in grower pigs challenged with *Lawsonia intracellularis* mucosal homogenate
      Nathan Winkelman
      SWINE SERVICES UNLIMITED INC

3:30  Fat-soluble vitamins: Beyond nutritional needs
      Rob Stuart
      STUARTPRODUCTS

3:45  Vaccination and challenge study for a swine influenza recombinant DNA vaccine
      Timothy Miller
      AGRILABS

4:00  Fast Genetics: The use of technology to increase stability and profitability in the swine production chain
      Richard Leach
      FAST GENETICS

4:15  *Lactobacillus acidophilus* fermentation product as an alternative to therapeutic zinc oxide in weaned pigs diets on performance and response to *E coli* challenge
      Karen Lehe
      DIAMOND V

4:30  Use of statistical quality control and metrics in PRRS control programs
      Jose Angulo
      ZOETIS
4:45 Evaluation of a novel PCV + *Mycoplasma hyopneumoniae* vaccine in swine challenged with PCV2d and *M hyponeumoniae* under commercial conditions
Lucina Galina
ZOETIS

5:00 Safety comparative study of two reproductive vaccines administered during lactation
Isaac Rodriguez-Ballara
HIPRA

5:15 The use of LucraFit® feed and OutPace® feed additive to support the reduction of antibiotics and animal protein in young pig diets
Dan McManus
PURINA ANIMAL NUTRITION

5:30 Management considerations and tactics to maximize feed intake in lactating sows
Juan Carlos Pinilla
PIC

5:45 Session concludes

There is no scheduled refreshment break during this session, but refreshments will be available in Seaport Foyer from 2:45 – 3:15 PM.
Co-sponsored by GLOBALVETLINK
Sunday Session #4  
Industrial Partners

**Industrial Partners**

**Date:** Sunday, March 4  
**Time:** 1:00 – 5:45 PM  
**Location:** Seaport FG  
**Session co-chairs:** Abby Patterson and Peggy Brinkman

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1:00  The chemistry of biosecurity  
**Jeffrey Odle**  
**LANXESS CORPORATION**

1:15  Efficacy of Circo/MycoGard to reduce clinical disease related to *Mycoplasma hyponeumoniae* and porcine circovirus type 2  
**Dan Rosener**  
**PHARMGATE ANIMAL HEALTH**

1:30  Efficacy of tylvalosin (Aivlosin WSG®) to treat pigs with SRD  
**Ron Kaptur**  
**PHARMGATE ANIMAL HEALTH**

1:45  New approaches to sow farm data collection and reporting using Maximus software and mobile data entry  
**Tom Stein**  
**MAXIMUS SYSTEMS**

2:00  Development of Ingelvac Provenza™: A new tool against IAV-S  
**Marc Eichmeyer**  
**BOEHRINGER INGELHEIM ANIMAL HEALTH**

2:15  Laboratory efficacy evaluation of intranasal vaccination with Ingelvac Provenza™ in newborn piglets  
**Rex Smiley**  
**BOEHRINGER INGELHEIM ANIMAL HEALTH**

2:30  The effect of intranasal vaccination with Ingelvac Provenza™ in newborn piglets on IAV-S shedding in nasal swabs  
**Marika Genzow**  
**BOEHRINGER INGELHEIM VETMEDICA GmbH**
Sunday Session #4
Industrial Partners

2:45  Understanding factors influencing pig quality measured using pig weaning weight
      John Sonderman
      DNA GENETICS

3:00  eYeGrow: Is weighing pigs online the holy grail?
      Guido Klement
      FANCOM

3:15  Use of the swine bioassay test to evaluate the infectivity of UV-irradiated commercial liquid porcine plasma
      Joaquim Segales
      APC

3:30  High quality semen program
      Pedro Ivo de Quadros Filho
      MB SWINE REPRODUCTION

3:45  Cleaning and disinfecting critical surfaces:
      Farrowing crates
      Ricardo Munoz
      NEOGEN

4:00  Protecting animal health and profitability; air filtration solutions: Your front-line defense against PRRSV, PEDV, and influenza
      Jerry McGuire
      AAF FLANDERS

4:15  Field safety study of a vaginal mucosal vaccination for porcine reproductive and respiratory syndrome virus (PRRSV) in sows
      Glen Almond
      APTIMMUNE BIOLOGICS

4:30  The effect of Defusion® on the performance of nursery pigs fed diets contaminated with vomitoxin
      Kari Saddoris-Clemons
      PROVIMI NORTH AMERICA

Continued on next page
4:45 The effects of an antioxidant support technology on sows and piglet livability
Kathryn Price
PROVIMI NORTH AMERICA

5:00 Impact of two training implementation plans on pre- and post-knowledge and impact on behavior choices of on-farm personnel
Sarah Probst Miller
AGCREATE SOLUTIONS

5:15 The impact of Swine Awake, a new, non-antimicrobial protein, in natural disease conditions in newly weaned pigs
Ben Hause
NUTRIQUEST

5:30 Next generation sequencing for veterinary diagnostics and vaccinology
Steve Wotton
CAMBRIDGE TECHNOLOGIES

5:45 Session concludes

There is no scheduled refreshment break during this session, but refreshments will be available in Seaport Foyer from 2:45 – 3:15 PM.
Co-sponsored by GLOBALVETLINK
Veterinary Student Posters (#1 - #40)

**Location:** Palm Foyer

**Sunday, March 4**
12:00 – 5:00 PM  
Authors present from 12:00 – 1:00 PM

**Monday, March 5**
8:00 AM – 5:00 PM

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**Sponsored by ZOETIS**

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

1. Pooling sensitivity of oropharyngeal swabs when sampling for influenza A and porcine reproductive and respiratory syndrome viruses  
   **Rachel Schulte, Iowa State University**

2. Medium chain fatty acids improve growth and alter fecal microbial populations in nursery pigs  
   **Jordan Gebhardt, Kansas State University**

3. An assessment of hemoglobin concentrations in relation to reproductive stage and parity in sows  
   **Kayla Casteven, North Carolina State University**

4. Pre-challenge microbiome composition is associated with improved weight gain in pigs after vaccination with a porcine reproductive and respiratory syndrome (PRRS) modified live virus (MLV) vaccine followed by challenge with PRRSV and porcine circovirus type 2 (PCV2b)  
   **Laura Constance, Kansas State University**

5. Investigations of prevalence and causes of lameness in various age groups of gilts  
   **Shelby Perkins, University of Missouri**

6. The cost of porcine reproductive and respiratory syndrome virus and porcine epidemic diarrhea virus in finishing pigs  
   **Kayla Henness, University of Illinois**

*Continued on next page*
7. Immuno-modulatory influence of antibiotic therapy on the humoral immune response to vaccination of weaned pigs
   Jenna Scott, North Carolina State University

8. Comparison of serological responses in traditional and parity segregated flows for *Mycoplasma hyopneumoniae* and *Lawsonia intracellularis*
   Elizabeth Noblett, North Carolina State University

9. Utilizing serum antibody levels in post vaccinated piglets to evaluate maternal antibody interference and vaccination compliance
   Jonathan Tubbs, Auburn University

10. Assessment of the association between respiratory pathogen burden and the productivity of growing pigs
    Rachel Stika, Iowa State University

11. A novel approach to water medication calculations
    Brent Sexton, Iowa State University

12. Comparison of individual oral fluids, pooled oral fluid samples and Swiffer™ environmental samples of drinkers for the detection of IAV-S and PRRSV by PCR
    Taylor Homann, University of Minnesota

13. Evaluation of serological responses to Circumvent PCV-M G2 in sows vaccinated pre-farrowing and in pigs with maternally-derived antibodies at time of first vaccination
    Jamie Madigan, North Carolina State University

14. Validation of a urine dipstick as a tool to assess the potential impact of urinary tract health on reproductive performance and sow mortality
    Jewell Bremer, North Carolina State University

15. Evaluation of antibody titer of the weaned pig following vaccination with a killed influenza A virus vaccine in the presence of maternal antibodies both pre- and post-heterologous influenza A virus challenge
    Abigail Ruane, Iowa State University
16. Characterization of skin variations that may influence transdermal absorption of topical drugs
   Samantha Anthony, Oklahoma State University

17. Monitoring mature sows for Mycoplasma hyopneumoniae (Mhp) pre-and post-Mhp inoculated gilt entry
   Megan Bloemer, University of Illinois

18. Testing of the efficacy of various methods of urine collection for detection of flunixin meglumine (Banamine) in gilts and barrows
   Clare Brooks, Texas A&M University

19. Effects of Improvest® a gonadotropin releasing factor analog-diphtheria toxoid conjugate on boar behavior during trailer transport
   Alexandria Bufford, Tuskegee University

20. Assessing the impact of perinatal antibiotics on performance and antibiotic resistant bacteria in pre-weaned pigs
   Brandi Burton, University of Illinois

21. The impact of observer experience and training methods on behavioral scores in piglets
   Enise DeCaluwe-Tulk, University of Guelph

22. Validation and application of accelerometers to sow behavior and management
   Mary Jane Drake, University of Pennsylvania

23. Multiplexed phylogenetic comparison of PRRSV sequences using MinION Nanopore Sequencer
   Taylor Engle, Virginia Maryland Regional CVM

24. Evaluation of the impact of iron dosage on post-weaning weight gain and mortality
   Lindsay Fredericks, Iowa State University

25. Assessment of intra- and interrater agreement of pain behavior scores
   Hannah Golightly, University of Guelph
26. *In vitro* culture of porcine B cells  
   **Kevin Gustafson, University of Minnesota**

27. Understanding the impact of farrowing induction on pigs born alive  
   **Olivia Hardebeck, University of Illinois**

28. Physical and behavioral indicators of animal welfare on farms using electronic sow feeders  
   **John Hurst, University of Pennsylvania**

29. Efficacy of a novel interferon inducing PRRSV vaccine candidate against heterologous challenge with atypical pathogenic strain MN184  
   **Ryan Kass, Iowa State University**

30. Determining the necessity of peri-processing antimicrobial use in piglets  
   **Kacey Klemesrud, Iowa State University**

31. Dynamics of porcine parainfluenza virus shedding in sows and their piglets  
   **Allison Knox, University of Illinois**

32. Comparison of pathogenic *Salmonella* spp detection from porcine oral fluids, over-the-shoe booties, and fecal samples  
   **Samantha Naberhaus, Iowa State University**

33. Examination and comparison of worker satisfaction and animal empathy on swine farms  
   **Ashley Palmieri, University of Pennsylvania**

34. Evaluation of analgesics for castration and tail docking in 3-5 day old piglets  
   **Andrea Patterson, University of Guelph**

35. Using estrone sulfate urine test to determine pregnancy in sows and gilts  
   **Meagan Rennie, Texas A&M University**

36. Evaluation of BoarBetter® pheromone in optimizing swine reproductive efficiencies in two commercial breeding farms  
   **Michael Rohde, Iowa State University**
37. Evaluation of farrowing stall sanitation protocols with ATP bioluminescence
   Marjorie Schleper, University of Minnesota

38. Effects of mechanical lead system on boar behavior and saliva androstenone levels during heat checking
   Nicole Sugai, University of Illinois

39. Comparison of oral fluids versus tonsil swabs to diagnose *Mycoplasma hyosynoviae* infection prior to onset of clinical signs
   Grzegorz Tarasiuk, University Center of Veterinary Medicine UJ-UR in Cracow, Poland

40. Medicated starter feed in weaned piglets and ensuing effects on overall health
   Bex Weaver, University of Florida
Research Topics Posters (#41 - #73)

Location: Palm Foyer
Sunday, March 4
12:00 – 5:00 PM
Authors present from 12:00 – 1:00 PM
Monday, March 5
8:00 AM – 5:00 PM

41. Comparative evaluation of family oral fluids and piglet sera to detect PRRSV RNA by PCR
   Marcelo Almeida

42. Assessment of slaughter surveillance based on oral fluid samples
   Marcelo Almeida

43. Human-like H3N2 and H3N1 swine influenza A viruses are resistant to neutralization due to antigenic variation
   Srivishnupriya Anbalagan

44. Minimal *Mycoplasma hyopneumoniae* genetic variability within production flows
   Alyssa Anderson

45. New duplex real time RT-PCR to detect porcine teschovirus and sapelovirus
   Maria Barrera

46. Potential use of outer membrane proteins as subunit vaccines against *Streptococcus suis* and *Haemophilus parasuis*
   Susan Brockmeier

47. Comparison of historic and contemporary strains of Senecavirus A
   Alexandra Buckley

48. Serological evaluation of non-vaccinated replacement gilts on twelve farms in the United States for influenza A virus
   James Carlson
49. Evaluation of chlorine dioxide virucidal efficacy against porcine epidemic diarrhea virus, porcine reproductive and respiratory syndrome virus, Senecavirus A and influenza A virus
Qi Chen

50. Identification and genetic characterization of a novel deltacoronavirus
Qi Chen

51. Effect of chemical clarification for oral fluid on the detection of PRRSV IgG
Yuly Henao-Díaz

52. Novel behavioral analysis of piglets treated with Metacam® thirty minutes before and at time of castration
Jessica Law

53. Porcine parvovirus type 2 associated with lymphocytic perivascular lesions in nursery and finishing pigs
Lacey Marshall Lund

54. Age susceptibility of pigs to Mycoplasma hyorhinis challenge
Brian Martinson

55. Fecal microbiota transplantation improves outcome in pigs following co-infection with porcine reproductive and respiratory syndrome virus and porcine circovirus type 2d
Megan Niederwerder

56. Increased microbiome diversity at the time of challenge is associated with improved growth rates of pigs after co-infection with porcine reproductive and respiratory syndrome virus (PRRSV) and porcine circovirus type 2 (PCV2)
Rebecca Ober

57. Short summary on the low incidence of PCV2 in pigs at birth
Luis Ochoa

Continued on next page
58. Effects of PCV2-viremia level of piglets at birth on the efficacy of PCV2 vaccine (CircoFLEX®) against exposure to PCV2-b determined by viremia levels and growth rate of pigs
Luis Ochoa

59. Measuring air filter efficiencies in the discrete PRRS virus range
Michael Osborne

60. Analysis of the importation of feed ingredients, live animals and genetic material into the United States to reduce the risk of foreign swine disease and health hazard introduction
Gilbert Patterson

61. Oral fluid specimens can be clarified (“cleaned up”) without affecting porcine epidemic diarrhea virus (PEDV) isotype-specific (IgG, IgA) ELISA responses
Korakrit Poonsuk

62. Work in progress: development of an ELISA for the detection of FMDV 3ABC antibody in swine oral fluid specimens
Korakrit Poonsuk

63. General trends of Mycoplasma hyopneumoniae detection by PCR in cases submitted to the Iowa State University Veterinary Diagnostic Laboratory from 2004-2016
Guarav Rawal

64. Co-detection of PCV2 and PCV3 in pig samples
Talita Resende

65. Factors that impact PRRS time to stability
Juan Manuel Sanhueza

66. Phenotypic relationship and hypervariability of the VP7 gene in porcine rotavirus B and C
Frances Shepherd

67. Benchmarking pen-side sequencing for infectious disease diagnosis
Shaoyuan Tan
68. Correlation between PRRS farm status and productive parameters in Spanish sow farms
   Daniel Torrents Gil

69. Live virus immunization (LVI) with a recent 1-7-4 PRRSV isolate elicits broad protection against PRRSV challenge in finishing age swine
   Albert van Geelen

70. Good Vaccination Practice: It all starts with good vaccine storage temperature
   Frédéric Vangroenweghe

71. Cup waterer:pig ratio on growth performance of growing and finishing pigs
   Carine Vier

72. Model to estimate PRRSV introduction in filtered farms with negative pressure
   Carles Vilalta

73. Use of tyldalosin (Aivlosin®) water medication for Mycoplasma hyopneumoniae elimination
   Paul Yeske
Industrial Partners Posters (#74 - #89)

Location: Palm Foyer

Sunday, March 4
12:00 – 5:00 PM
Authors present from 12:00 – 1:00 PM

Monday, March 5
8:00 AM – 5:00 PM

74. Preventing PRRS outbreaks in swine environments: Monitoring air filtration for airborne diseases
   Nicholas Woolard
   AAF FLANDERS

75. Pursuing American Board of Veterinary Practitioner (ABVP) certification in Swine Health Management
   Jeff Husa
   AMERICAN BOARD OF VETERINARY PRACTITIONERS

76. Identification of the complete swine reproductive pheromone
   John McGlone
   ANIMAL BIOTECH

77. Exploring profitability differences when average wean-finish production metrics show minor numerical differences between groups
   Dennis DiPietre
   BOEHRINGER INGELHEIM ANIMAL HEALTH

78. Flies found PCR+ for PED, PRRS, and Seneca Valley virus. What now?
   Gene Spellman
   CENTRAL LIFE SCIENCES

79. A Brachyspira challenge study to evaluate medication options
   Chris Puls
   ELANCO

80. Key VFD learnings from 2017
   Brenda Cowan
   GLOBALVETLINK
81. Efficacy of Porcilis® Ileitis against *Lawsonia intracellularis* challenge and post-vaccination seroresponse kinetics  
Brad Thacker  
MERCK ANIMAL HEALTH

82. *Streptococcus suis*: Research overview  
Paul Lawrence  
NEWPORT LABORATORIES

83. Mineral source matters conception to market  
Bradley Lawrence  
NOVUS INTERNATIONAL

84. How accurate and precise are current options for testing deoxynivalenol?  
Sarah Weiland  
NUTRIQUEST

85. Comparing the immunogenicity of Circo/MycoGard® with other combination vaccines used in the field  
Alex Hintz  
PHARMGATE ANIMAL HEALTH

86. The effects of Defusion® on performance of pigs fed diets contaminated with vomitoxin  
Colleen Fowler  
PROVIMI NORTH AMERICA

87. Effect of diet and sex on feed efficiency and the fecal microbiome at slaughter weight  
Jenelle Dunkelberger  
TOPIGS NORSVIN USA

88. Organic acids modes of action and the impact on intestinal microbiota and performance in piglets  
Juan Antonio Mesonero Escuredo  
TROUW NUTRITION (NUTRECO)

89. A dose confirmation study evaluating 100g/ton of LINCOMIX® (lincomycin hydrochloride) for the reduction of the severity of effects of respiratory disease associated with *Mycoplasma hyopneumoniae*  
Mike Senn  
ZOETIS
Spouse Hospitality Suite

The AASV is pleased to host the spouse hospitality suite at the Manchester Grand Hyatt

Monday, March 5
7:00 – 9:00 AM
Location: Gaslamp CD

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.
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 5
9:00 AM – 5:00 PM

Tuesday, March 6
8:00 AM – 12:00 PM

LOCATION
Seaport Foyer AND Seaport F

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!
The AASV Foundation Auction Committee is counting on AASV members’ shared sense of purpose to “SEAL the Deal” for another successful fundraising auction. The annual auction proceeds are a major source of revenue to support ongoing foundation programs, including 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 Grand Foyer on auction day, Monday, March 5, but you can bid early and often from your phone using our ClickBid site. Sign up for your bidding number, bookmark the bidding site on your phone or tablet, and start bidding! You can sit back and merely follow items that you’re interested in, or “rock the boat” by entering your “max” bid. ClickBid will bid incrementally for you, without revealing your limit to others. You’ll receive notifications to let you know if you’re winning or losing your coveted items.

The “deal will be sealed” when the silent auction closes at 7:00 PM Pacific Standard Time on Monday, March 5.

**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
Monday General Session
Global Knowledge: Individual Application

Global Knowledge: Individual Application

Date: Monday, March 5
Time: 8:00 AM – 12:15 PM
Location: Seaport ABCD
Program chair: C. Scanlon Daniels

8:00  Howard Dunne Memorial Lecture
      How geography, culture, and socioeconomic status affect global animal protein consumption:
      Applications for swine veterinarians
      Bill DuBois

9:00  Alex Hogg Memorial Lecture
      This is our time, the choices are yours
      Rodger Main

10:00 REFRESHMENT BREAK
      Co-sponsored by HOG SLAT and AGRILABS

10:30 Evaluating data: What do we really know?
      Eric Burrough

11:00 Portraying the industry in a positive light
      Erin Churan Brenneman

11:30 Agriculture 2025: Global, local, and high tech
      Lowell Catlett

12:15 LUNCHEON

AASV LUNCHEON
Sponsored by:
BOEHRINGER INGELHEIM
VETMEDICA, INC
Monday, March 5
12:15 – 2:00 PM
Grand CD (Lobby Level)
Monday Session #1  
Not Your Father’s Sow Farm

Not Your Father’s Sow Farm: Advances in Technology and Management Practices

**Date:** Monday, March 5  
**Time:** 2:00 – 5:30 PM  
**Location:** Seaport D  
**Session chair:** Steve Sornsen

- **2:00**  
  Experiences with new sow farm technologies  
  Noel Williams

- **2:30**  
  Developing and maintaining highly prolific sows  
  Deborah Murray

- **3:00**  
  Leading change to improve piglet survivability  
  Larry Coleman

- **3:30**  
  REFRESHMENT BREAK  
  Sponsored by CEVA ANIMAL HEALTH

- **4:00**  
  Update on feeding strategies for the highly prolific sow  
  Mariana Boscato Menegat and Steve Dritz

- **4:30**  
  Sow mortality: Impact on performance and root causes  
  Clayton Johnson

- **5:00**  
  Roundtable Q&A

- **5:30**  
  Session concludes

**AASV AWARDS RECEPTION**  
Sponsored by:  
**MERCK ANIMAL HEALTH**  
Monday, March 5  
6:30 – 8:30 PM  
Grand CD (Lobby Level)
Monday Session #2
Emerging Diseases

**Emerging Diseases**

**Date:** Monday, March 5  
**Time:** 2:00 – 5:30 PM  
**Location:** Seaport GH  
**Session chair:** Pete Thomas

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**2:00**  
Next generation sequencing/metagenomics: Interpretation for the practitioner  
**Doug Marthaler**

**2:30**  
Porcine circovirus type 3 (PCV3)  
**Emily Byers**, practitioner perspective  
**Susan Detmer**, pathologist/research perspective

**3:00**  
Porcine parainfluenza virus  
**Aaron Lower**, practitioner perspective  
**Phil Gauger**, pathologist/research perspective

**3:30**  
REFRESHMENT BREAK  
Sponsored by CEVA ANIMAL HEALTH

**3:45**  
Porcine sapelovirus  
**Brian Payne**, practitioner perspective  
**Bailey Arruda**, pathologist/research perspective

**4:15**  
Porcine deltacoronavirus  
**Katie Wedel**, practitioner perspective  
**Dick Hesse**, pathologist/research perspective

**4:45**  
Senecavirus A  
**Laura Bruner**, practitioner perspective  
**Fabio Vannucci**, pathologist/research perspective

**5:15**  
Wrap-up

**5:30**  
Session concludes
Managing Endemic Disease

Date: Monday, March 5
Time: 2:00 – 5:30 PM
Location: Seaport ABC
Session chair: Caleb Robb

2:00 Regional IAV-S vaccination strategies for breeding herds
Clayton Johnson

2:25 Systems approach to PRRSV management
Hans Rotto

2:50 Perennial herd closure
Ethan Spronk

3:15 Tech tools for disease management
Maryn Ptaschinski

3:40 REFRESHMENT BREAK
Sponsored by CEVA ANIMAL HEALTH

4:10 Mycoplasma hyopneumoniae: Lateral transmission and gilt exposure methods
Paul Yeske

4:35 Experiences managing wean-to-finish PEDV in a production system
Lynn Pavlovic

5:00 Subclinical ileitis: Diagnostic monitoring, R², and economics
Nathan Winkelman

5:30 Session concludes

AASV FOUNDATION AUCTION

Monday, March 5
Grand Foyer and Grand CD

Silent Auction: Items on display at noon; Use ClickBid to bid anytime!
Live Auction: Immediately following the AASV Awards Reception
Tuesday General Session
Antibiotics

Date: Tuesday, March 6
Time: 8:00 AM – 12:00 PM
Location: Seaport ABCD
Session chair: C. Scanlon Daniels

8:00
Crucial to criminal: The range of perspectives on antimicrobial use in pork production
Locke Karriker

8:45
Antimicrobial use: Current EU perspective
Mark E C White

9:30
What to expect when you’re not expecting: A veterinarian, producer, and feed mill perspective of an educational FDA audit
Pete Schneider

10:00
REFRESHMENT BREAK
Co-sponsored by QUALITY TECHNOLOGY INTERNATIONAL

10:30
Measuring antibiotic use in pork production: Why, how, and for whom?
Peter Davies

11:00
The challenges of antibiotic use monitoring programs in beef and dairy production systems
Mike Apley

11:30
Monitoring – preparing - responding: SHIC’s quickly moving on industry needs
Paul Sundberg

12:00
Session and meeting conclude

AASV BUSINESS BREAKFAST
Tuesday, March 6
7:00 – 8:00 AM
Seaport GH

AASV B
USINESS
BREAKFA ST
Tuesday, March 6
7:00 – 8:00 AM
Seaport GH
Saturday, March 3

7:00 AM
Registration Desk open
Location: Palm Foyer
AASV Committee Meetings

8:00 AM
ABVP Entrance Examination
Location: Gaslamp C

ABVP Oral Examination
Location: Gaslamp D

1:00 PM (except as noted)
SEMINARS

#1 AASV’s Got Talent (page 10)
Location: Seaport A

#2 Veterinary Practice Succession (page 12)
Location: Seaport B

#3 Monitoring and Surveillance 2.0 (page 14)
Location: Seaport C

#4 Biosecurity (page 16)
Location: Seaport F

#5 Operation Main Street Training (page 17)
Note early start time: 12:00 noon
Location: Seaport G

5:00 PM
OPEN EVENING
There is no reception scheduled for Saturday evening.
Enjoy San Diego!

7:00 PM
VETERINARY STUDENT TRIVIA EVENT (page 11)
Sponsored by: MERCK ANIMAL HEALTH
Location: Harbor House Restaurant, Main Room
(meet in Hyatt lobby at 6:30 PM to walk with a group)
Sunday, March 4

6:00 AM
“Body Attack” Exercise Class (page 19)
Location: Balboa ABC

6:30 AM
AASV Student Breakfast
Location: Seaport C

7:00 AM
Praise Breakfast (page 20)
Sponsored by: STUART PRODUCTS
Location: Seaport D

Registration Desk open
Location: Palm Foyer

8:00 AM
Canadian Association of Swine Veterinarians
Location: Gaslamp AB

SEMINARS

#6 Antibiotic Alternatives (page 21)
Location: Seaport A

#7 Leading People (page 23)
Location: Seaport B

#8 The 4-Dimensional Revolution (page 25)
Location: Seaport F

#9 Diagnostics (page 27)
Location: Seaport G

#10 Swine Medicine for Students (page 29)
Location: Seaport E

RESEARCH TOPICS (page 30)
Location: Seaport H
12:00 PM
POSTER SESSION OPEN
Authors in attendance: 12:00 – 1:00 PM
Location: Palm Foyer

Veterinary Student Posters (page 43)
Sponsored by: ZOETIS

Research Topics Posters (page 48)

Industrial Partners Posters (page 52)

AASV FOUNDATION LUNCHEON
(Advance registration required)
Location: Seaport C

1:00 PM
CONCURRENT SESSIONS

#1 Student Seminar (page 32)
Sponsored by: ZOETIS
Location: Seaport E

#2 Industrial Partners (page 34)
Location: Seaport AB

#3 Industrial Partners (page 37)
Location: Seaport D

#4 Industrial Partners (page 40)
Location: Seaport FG

6:30 PM – 8:30 PM
WELCOME RECEPTION
Sponsored by: ZOETIS
Location: Grand CD (Lobby Level)

8:30 PM – 11:00 PM
STUDENT RECEPTION
Sponsored by: MERCK ANIMAL HEALTH
Location: Seaport FGH
Monday, March 5

7:00 AM
Registration Desk open
Location: Palm Foyer

Spouse Hospitality Suite open (page 54)
Location: Gaslamp CD

8:00 AM – 12:30 PM
GENERAL SESSION: Global Knowledge:
Individual Application (page 57)
Location: Seaport ABCD

Howard Dunne Memorial Lecture: Dr. Bill DuBois
How geography, culture, and socioeconomic status affect global animal protein consumption: Applications for swine veterinarians

Alex Hogg Memorial Lecture: Dr. Rodger Main
This is our time, the choices are yours

9:00 AM – 5:00 PM
COMMERCIAL TECHNICAL TABLES (page 8)
Location: Seaport Foyer & Seaport F

12:15 PM
LUNCHEON
Sponsored by: BOEHRINGER INGELHEIM VETMEDICA INC.
Location: Grand CD (Lobby Level)

2:00 PM – 5:30 PM
CONCURRENT SESSIONS

#1 Not Your Father’s Sow Farm (page 58)
Location: Seaport D

#2 Emerging Diseases (page 59)
Location: Seaport GH

#3 Managing Endemic Disease (page 60)
Location: Seaport ABC

6:30 PM – 8:30 PM
AASV AWARDS RECEPTION
Sponsored by: MERCK ANIMAL HEALTH
Location: Grand CD (Lobby Level)

AASV FOUNDATION AUCTION (page 56)
Location: Grand Foyer (Lobby Level)
Tuesday, March 6

7:00 AM
Registration Desk open
Location: Palm Foyer

BREAKFAST and AASV ANNUAL BUSINESS MEETING
Location: Seaport GH

8:00 AM
GENERAL SESSION: Antibiotics (page 61)
Location: Seaport ABCD

8:00 AM – 12:00 PM
COMMERCIAL TECHNICAL TABLES (page 8)
Location: Seaport Foyer & Seaport F

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 50th AASV Annual Meeting
March 9-12, 2019
Hilton Orlando Buena Vista Palace
LAKE BUENA VISTA, FLORIDA

Thank you!

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

- AGRILABS
  Refreshment Break Co-sponsor
- BOEHRINGER INGELHEIM VETMEDICA, INC
  AASV Luncheon
- CEVA ANIMAL HEALTH
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- DSM NUTRITIONAL PRODUCTS
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- ELANCO ANIMAL HEALTH
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  AASV Awards Reception
  Student Trivia Event
  Student Reception
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- NEWPORT LABORATORIES
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  Veterinary Student Poster Awards
- NOVUS INTERNATIONAL
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- STUART PRODUCTS
  Praise Breakfast
- ZOETIS
  Welcome Reception
  AASV Student Seminar and Student Poster Session
  AASV Foundation Veterinary Student Scholarships

GLOBAL KNOWLEDGE:

Individual Application

49th AASV Annual Meeting

March 3-6, 2018
San Diego
Plan now to attend the 50th AASV Annual Meeting
March 9-12, 2019
Hilton Orlando Buena Vista Palace
LAKE BUENA VISTA, FLORIDA

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Refreshment Break Co-sponsor

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

NEWPORT LABORATORIES
Veterinary Student Travel Stipends
Veterinary Student Poster Awards

NOVUS INTERNATIONAL
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Refreshment Break Co-sponsor

STUART PRODUCTS
Praise Breakfast

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

GLOBAL KNOWLEDGE:
Individual Application

49th AASV Annual Meeting
March 3-6, 2018
San Diego
Our venue in San Diego, California will be an excellent location for our educational program: “Global Knowledge: Individual Application.” Our organization is approaching 50 years of existence and a lot has changed over time. Against a backdrop of global trade, multinational food production systems and the reality of transboundary disease, we work to implement the knowledge we have gleaned from a multitude of information sources into practices that improve the health, production and well-being of the pigs in our clients’ care.

A lot has remained the same. It is easy to get caught up in everything we can’t control or influence, so we strive daily to focus our efforts on the things we can mold: the health of the pigs in our care, the relationships with our clients, and the communities where we live and work.

Our program committee has brainstormed and worked diligently to put together this year’s program. I can’t thank them enough for their efforts. I strongly believe the meeting will provide tools, knowledge, and motivation attendees can take home and implement immediately. We won’t ignore the things out of our control but will maintain a watchful eye towards disease risk management, changing regulatory environments, evolving social trends and changing export markets balanced with the science of emerging and endemic diseases and control using new and proven interventions.

**Message from the Program Chair, Dr. C. Scanlon Daniels**

*Welcome to the 2018 American Association of Swine Veterinarians Annual Meeting!*