53rd AASV Annual Meeting Program

# DEFINING

PREVENTION, CONTROL INJANIANI ILLIAMOLOGY I A

February 26 – March 1, 2022 Indianapolis, Indiana

aasv.org/annmtg

### Message from the Program Chair, Dr. Mike Senn

### Welcome to Indianapolis, and welcome back!

With the significant changes over the past two years, I'm proud of the resilience and focus that the membership has continuously demonstrated. The theme for this year's meeting is "Defining Our Future." As an organization, we continuously look ahead to



see what issues and challenges are on the horizon, and proactively address them in our planning and preparation.

The 2022 Program Planning Committee's preparation to include current, applicable topics delivered by the most relevant speakers was outstanding. The gratitude for the program belongs to them. Please take time to show them your appreciation for their efforts while we are all together at the meeting.

The program begins with excellent pre-conference seminars discussing important topics including influenza, diagnostics, antimicrobial clinical pharmacology, the risk of feed for pathogen introduction, applied field research, nutrition, data-driven decision making, leadership, and a look into what tools may be available to swine veterinarians ten years from now.

Sunday afternoon, be sure to attend the Industrial Partners sessions and support the tremendous efforts of our student members during the Student Seminar session.

Monday morning, Dr. Angela Baysinger will deliver the Howard Dunne Memorial lecture, "Leaping into the future: Sit down, buckle up, and hang on." Dr. Jim Kober will deliver the Alex Hogg Memorial lecture, "Learning for the future" and address the importance of life-long learning, providing a unique perspective of his personal experiences with Dr. Hogg while they were peers during post-graduate education at two distinctly different times in their individual professional careers. As we define our future as an organization within an increasingly diverse

world, it is important that we continue to create a culture that affirms diversity, equity and inclusion. Education plays an important role in the pursuit of a more diverse and inclusive organization. We are privileged to have four AASV members who will share their perspectives and experiences with diversity, equity, and inclusion to begin to provide us with awareness and knowledge to better meet the needs of all members and create a welcoming environment.

The Monday concurrent sessions will provide information on a broad variety of topics including PRRS, animal welfare, sustainability, resiliency, advocacy, and disease prevention, control, and elimination.

The meeting concludes Tuesday morning with a session focused on foreign animal disease preparedness and response. A panel discussion with state veterinarians will provide insights into current preparedness and response plans at the state level and input on the areas for practitioner involvement in the process. The important role of feed ingredients in the potential introduction of pathogens and research on mitigation strategies to reduce that risk will be discussed. Dr. Rodger Main will provide an update on the Swine Health Improvement Plan. The meeting will conclude with Dr. Joseph Yaros providing first-hand, personal experiences with African swine fever.

I greatly appreciate the opportunity to serve as this year's program chair. Without the significant efforts of the program committee, AASV staff, and more than 200 speakers who committed to share their knowledge through a proceedings paper and presentation, this meeting would not be possible. I'm grateful for the commitment that each of you made to make this meeting successful. Thank you!

Sincerely,

Mike Senn

Program chair

### PROGRAM COMMITTEE

### Mike Senn, Program Chair

Jessica Risser

Mary Battrell Christine Mainquist-Whigham

Melissa Billing Meghann Pierdon
Justin Brown Sarah Probst Miller

Scott Dee Cristina Quijano Alvarez

Attila Farkas Chris Rademacher

Jeff Harker Rebecca Robbins

Bill Hollis Marisa Rotolo

Megan Inskeep Brent Sexton
Eva Jablonski Chris Sievers

Jessica Law Jon Van Blarcom Wesley Lyons

### **PROGRAM & PROCEEDINGS**

### **MOBILE APP**

Jordan Gebhardt

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 details, maps of the meeting rooms, and links to proceedings papers. Use it to create your personal schedule and "to do" list. The app will be available for download to iOS and Android devices using the code emailed to conference registrants February 15.

#### **PROCEEDINGS**

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

For more information: aasv.org/annmtg



### **REGISTRATION & FEES**

### Register online at aasv.org/annmtg

### **ON-SITE REGISTRATION**

Registration desk located near escalators in JW Grand Foyer East (3<sup>rd</sup> floor)

Saturday, February 26	7:00 AM – 5:00 PM	
Sunday, February 27	7:00 AM - 5:00 PM	
Monday, February 28	7:00 AM - 5:00 PM	
Tuesday, March 1	7:00 AM - 12:00 PM	

#### **FEES**

AASV member pre-registration by Feb 4	\$415
AASV member registration after Feb 4	\$515
Non-member veterinarians	\$560
Add'l Tech Table representatives (limit 3)	\$560

#### **Veterinary students:**

Register for free if you are a 2021-22 AASV Student Member. Join/register at aasv.org/annmtg

#### **Graduate students:**

Join AASV (½ regular member dues) and register for the meeting at ½ the member rate.

#### Non-veterinarians:

Must meet eligibility criteria to attend. See aasv.org/annmtg/2022/reginfo.php for details.

### **REGISTRATION DUE DATES**

**February 4:** Last day for pre-registration rate **February 18:** Last day to register online

February 19: Registration CLOSED until on-site Feb 26

### **CONFERENCE HOTEL**

JW Marriott Indianapolis 10 S West Street Indianapolis, Indiana aasv.org/annmtg/2022/lodging.php

### **CONTINUING EDUCATION CREDIT**

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

### **TRAVEL ADVISORY**

# International Travelers:

# PRIORITIZE BIOSECURITY



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

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

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

### **HEALTH ADVISORY**

# The health and well-being of all meeting attendees is a top priority

The AASV will follow the most current guidelines available from the Centers for Disease Control and Prevention and state and local health departments at the time of the meeting.

Please visit aasv.org/annmtg for the most up-to-date information.



We are counting on each attendee to be accountable for everyone's health. Please do not attend the annual meeting if you experience signs or symptoms consistent with COVID-19.

If you experience any signs or symptoms consistent with COVID-19 during the annual meeting, please refrain from participating in any sessions or events and notify AASV staff by emailing covid@aasv.org.

# SATURDAY, FEBRUARY 26 Daily Schedule

#### 7:00 AM

**Registration Desk open** 

JW Grand Foyer East (3rd floor)

**AASV Committee Meetings** 

Location: White River Conference Level

1:00 PM

PRE-CONFERENCE SEMINARS (additional fees apply)

#1 Practice Tips: Learn from the Past and Shape Our

Future (page 14)

Location: White River Ballroom AB

#2 Influenza (page 16)

Location: White River Ballroom CD

#3 Diagnostics: Opportunities, Advancements, and

**Implementation** (page 18)

Location: White River Ballroom GH

#4 Antimicrobial Clinical Pharmacology (page 20)

Location: White River Ballroom IJ

**#5 Feed Risk: Transboundary and Domestic (page 21)** 

Location: White River #101-102

#6 Applied Field Research (page 22)

Location: White River #103-104

#### 5:00 PM

#### **OPEN EVENING**

There is no reception scheduled for Saturday evening. Enjoy Indianapolis!

#### 6:00 PM

Veterinary Student Trivia Event (page 57)

Sponsored by: MERCK ANIMAL HEALTH

Location: OP Italian Restaurant (JW Marriott lobby)



# SUNDAY, FEBRUARY 27 Daily Schedule

#### 6:00 AM

Yoga Exercise Class (page 58)

Hosted by: DSM ANIMAL NUTRITION & HEALTH

Location: White River #101-102

#### 6:30 AM

**AASV Student Breakfast** 

Location: Griffin Hall (2<sup>nd</sup> floor)

#### 7:00 AM

Praise Breakfast (page 59)

Sponsored by: **STUART PRODUCTS**Location: JW Grand Ballroom 7-8

Registration Desk open

Location: JW Grand Foyer East (3rd floor)

#### 8:00 AM

PRE-CONFERENCE SEMINARS (additional fees apply)

**#7 Swine Health through Nutrition** (page 24)

Location: White River Ballroom CD

#8 The Swine Vet's Toolbox in 2032 (page 25)

Location: White River Ballroom IJ

**#9 Data-Driven Decision Making** (page 26)

Location: White River Ballroom AB

**#10 Swine Medicine for Students** (page 28)

Location: White River Ballroom GH

#11 Vet CEO 2.0: Leading Living Cultures on Teams

(page 29)

Location: White River #105

**RESEARCH TOPICS** (page 31)

Location: White River Ballroom F

# SUNDAY, FEBRUARY 27 Daily Schedule

#### 12:00 PM

#### **POSTER SESSION OPEN**

Authors in attendance: 12:00 – 1:00 PM Location: JW Grand Ballroom Foyer

**Veterinary Student Posters** (page 42) Sponsored by **ZOETIS** 

Research Topics Posters (page 44)

**Industrial Partners Posters** (page 48)

#### **AASV FOUNDATION LUNCHEON**

(Advance registration required) Location: JW Grand Ballroom 7

#### 1:00 PM

#### **CONCURRENT SESSIONS**

**#1 Student Seminar** (page 33)

Sponsored by **ZOETIS** 

Location: White River Ballroom ABCD

**#2 Industrial Partners** (page 35) Location: White River Ballroom E

**#3 Industrial Partners** (page 38) Location: White River Ballroom F

**#4 Industrial Partners** (page 40) Location: White River Ballroom GHIJ

#### 8:30 PM - 11:00 PM

STUDENT RECEPTION (page 60)

Sponsored by MERCK ANIMAL HEALTH

Location: Griffin Hall (2<sup>nd</sup> floor)

### **Security Message**

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

Do not engage or incite anyone exhibiting disruptive behavior.



# MONDAY, FEBRUARY 28 Daily Schedule

#### 7:00 AM

Registration Desk open

Location: JW Grand Foyer East (3rd floor)

8:00 AM - 12:15 PM

**GENERAL SESSION: Defining Our Future** (page 51)

Location: JW Grand Ballroom 6-10

**Howard Dunne Memorial Lecture:** 

Leaping into the future: Sit down, buckle up, and hang on

Dr. Angela Baysinger

**Alex Hogg Memorial Lecture:** 

Learning for the future

**Dr. James Kober** 

9:00 AM - 5:00 PM

**TECHNICAL TABLES EXHIBIT OPEN (pages 64-65)** 

Location: JW Grand Ballroom 1-5

12:15 PM

**LUNCHEON** (page 61)

Sponsored by **BOEHRINGER INGELHEIM** 

Location: White River Ballroom

2:00 PM - 5:30 PM

**CONCURRENT SESSIONS** 

**#1 PRRS RFLP 1-4-4** (page 52)

Location: JW Grand Ballroom 9-10

#2 Sustainability and Animal Welfare (page 53)

Location: JW Grand Ballroom 7-8

#3 Disease Prevention, Control, Elimination (page 54)

Location: JW Grand Ballroom 6

6:30 PM - 8:30 PM

**AASV AWARDS RECEPTION** (page 61)

Sponsored by MERCK ANIMAL HEALTH

Location: White River Ballroom

**AASV FOUNDATION AUCTION** (page 62)

Location: White River Ballroom

# TUESDAY, MARCH 1 Daily Schedule

7:00 AM

**Registration Desk open** 

Location: JW Grand Foyer East (3rd floor)

**BREAKFAST and AASV ANNUAL BUSINESS MEETING** 

Location: White River Ballroom E

8:00 AM

**GENERAL SESSION: Foreign Animal Disease Preparedness and Response** (page 55)

Location: JW Grand Ballroom 6-10

8:00 AM - 12:00 PM

**TECHNICAL TABLES EXHIBIT OPEN (pages 64-65)** 

Location: JW Grand Ballroom 1-5

12:00 PM

MEETING CONCLUDES

### **AASV OFFICERS**

**President** 

Dr. Mary Battrell

**President Elect** 

Dr. Mike Senn

**Vice President** 

Dr. Bill Hollis

**Past President** 

Dr. Jeffrey Harker

### DISTRICT DIRECTORS

**District 1** (Northeast US)

Dr. Melissa Billing

**District 2** (Southeast US)

Dr. Sara Hough

District 3 (AR, KY, MO)

Dr. Gregory Cline

District 4 (IN, MI)

Dr. Megan Inskeep

District 5 (IL, WI)

Dr. Attila Farkas

District 6 (IA)

Dr. Chris Rademacher

District 7 (Western US)

Dr. Megan Potter

District 8 (NE, SD)

Dr. Christine Mainquist-

Whigham

District 9 (MN, ND)

Dr. Chase Stahl

**District 10** (Mexico)

Dr. Cristina Quijano Alvarez

District 11 (Canada)

Dr. Susan Detmer

# SATURDAY MORNING Committee Meetings

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

Date: Saturday, February 26

**Location:** White River Conference Level

(1st floor; accessible only from second floor; see maps on

pages 66-68)

7:15 – 9:45 AM	Meeting room
Early Career	White River Ballroom AB
Influenza	White River #102
Pharmaceutical Issues	White River #101
Pig Welfare	White River Ballroom GH
PRRS Task Force	White River #103
Transboundary/Emerging Diseases	White River Ballroom CD

8:00 – 9:45 AM	Meeting room
Pork Safety	White River #104

10:00 AM - 12:00 PM	Meeting room
Boar Stud	White River #102
Communications	White River #104
Diversity, Equity, and Inclusion	White River #105
Human Health	White River #101
Nutrition	White River #108
Operation Main Street	White River #109
Student Recruitment	White River #103



# SATURDAY SEMINAR 1 Practice Tips

Practice Tips: Learn from the Past and Shape Our Future

**Date:** Saturday, February 26 **Time:** 1:00 – 5:00 PM **Location:** White River AB

**Fee:** \$95

Seminar chair: Melissa Billing

In this 2022 practice tips preconference seminar, AASV members reveal a strategy that has worked for them in the past, covering a wide variety of topics. These veterinarians will help shape the future of our profession by offering practical advice that is useful for both experienced and new practitioners. Prizes, sponsored by AASV, will be awarded to the top three presenters.

1:00 Welcome and introductions **Melissa Billing** 1:05 Look, listen, and learn **Noel Garbes** 1:20 Navigating the tasks of a new graduate and handling a pandemic **Abby Vennekotter** 1:35 Tips and tricks for interpreting PRRS whole genome sequencing in the field Jessica Risser Alternative diagnostic techniques 1:50 **Thomas Petznick** 2:05 I'd tap that! **Gabi Doughan** 2:20 Learning to work with yourself Jeff Harker 2:35 REFRESHMENT BREAK - Sponsored by:

**AURORA PHARMACEUTICAL** 

# SATURDAY SEMINAR 1 Practice Tips

3:05	Spit happens: Update on enteric diagnostics  Jessica Seate
3:20	Ghost piglets Tom Gillespie
3:35	Mycoplasma exposure: Know before you blow <b>Elizabeth Noblett</b>
3:50	Statistics 101 Steve Tousignant
4:05	Managing burnout Emily Byers Taylor
4:20	Don't drink that! Meredith Petersen
4:35	New use for an old device Tom Fangman
4:50	Conclusion Melissa Billing
5:00	Seminar concludes

### STUDENT TRIVIA EVENT



Sponsored by:

### **MERCK ANIMAL HEALTH**

Saturday, February 26 6:00 – 8:00 PM

**OP Italian Restaurant** 

### SATURDAY SEMINAR 2 Influenza

#### Influenza

**Date:** Saturday, February 26 **Time:** 1:00 – 5:00 PM **Location:** White River CD

Fee: \$95

Seminar chair: Daniel Boykin

The goal of this seminar is to provide attendees with the most current information on influenza in swine. The focus will be to highlight surveillance, provide the perspectives of practitioners on control methods, and to recognize the public health implications of this zoonotic pathogen.

Ja 0.10 1.10	
1:00	Target flu surveillance Marie Culhane
1:20	Overview of the USDA surveillance data  Amy Vincent
1:40	Defining nomenclature for influenza A virus status <b>Cameron Schmitt</b>
2:00	Heterologous prime boost vaccination strategies and possible uses in controlling influenza Vic Cortese
2:20	Prime and boost with heterologous killed flu antigens Clayton Johnson
2:40	REFRESHMENT BREAK – Sponsored by: AURORA PHARMACEUTICAL
3:10	Field experience with Phibro's tailor-made flu vaccine Matt Ackerman
3:30	Experiences controlling influenza utilizing custom RNA particle technology in a commercial production system  T'Lee Girard

Influenza A virus field research

**Andrew Bowman** 

3:50

### SATURDAY SEMINAR 2 Influenza

4:05	Case studies of variant influenza in Canada, 2020-2021 Susan Detmer
4:20	Public health aspects of influenza A virus in swine Heather Fowler
4:35	Influenza panel discussion All speakers
E-00	Saminar concludos

### Follow AASV on Facebook, Twitter, and Instagram #AASV2022











@AASwineVets

# SATURDAY SEMINAR 3 Diagnostics

Diagnostics: Opportunities, Advancements, and Implementation

**Date:** Saturday, February 26 **Time:** 1:00 – 5:00 PM **Location:** White River GH

**Fee:** \$95

Seminar chairs: Brent Sexton

This seminar is aimed at providing practitioners and diagnosticians alike with updates and insights on advancements in diagnostics, as well as how these practices can be implemented in the field. Featuring a mix of diagnosticians, consultants, and production system veterinarians, this seminar will have something (or several somethings!) for everyone.

1:00 Should I submit something? Optimizing diagnostic investigations **Jerry Torrison** 1:30 Applications of next generation sequencing to swine diagnostics **Albert Rovira** 1:50 Molecular testing options to detect wild-type vs vaccine-like PRRSV **Phil Gauger** 2:10 I see blisters; now what? **Kathleen Wood** 2:30 Demystifying diagnostics: When and what to test **Marisa Rotolo** 3:00 REFRESHMENT BREAK - Sponsored by: **AURORA PHARMACEUTICAL** Inside out: Laboratorian to practitioner 3:30 **Darin Madson** 

Slat-level diagnosis: Enhancing the health acumen

of field team members

**Tyler Bauman** 

3:50

### **SATURDAY SEMINAR 3** Diagnostics

Best practices for sample collection, autogenous 4:10 vaccines **Ryan Strobel** 

4:35 Rotavirus: Current experiences and thoughts on "feedback" diagnostics **Jeremy Pittman** 

5:00 Seminar concludes



# SATURDAY SEMINAR 4 Pharmacology

### **Antimicrobial Clinical Pharmacology**

Date: Saturday, February 26

Time: 1:00 – 5:00 PM Location: White River IJ

Fee: \$95

Seminar chair: Justin Brown

This seminar focuses on information resources, critical analysis of data (both client-generated and clinical trials), and an understanding of where other information fits for making therapeutic decisions in swine practice settings. Subjects covered include antimicrobial approaches to infectious disease and antimicrobial resistance with an emphasis on understanding antimicrobial susceptibility testing.

Participants will be asked to submit a minimum of one case or question representing a challenge they face in therapeutic decision making. A focus throughout the seminar is critical analysis of our own clinical observations combined with available evidence. Common threads across all subjects include our responsibilities to animal welfare, client sustainability, food safety, and public health.

Pivot points for antimicrobial decisions in swine

2:00 Making sense of susceptibility: Do you really know what S, I, and R mean?
Mike Apley

2:45 REFRESHMENT BREAK – Sponsored by:
AURORA PHARMACEUTICAL

3:15 Antimicrobial resistance: What are your choices affecting?
Justin Brown

4:00 The regulatory landscape: Changes ahead Locke Karriker

Seminar concludes

5:00

1:00

### SATURDAY SEMINAR 5 Feed Risk

### Feed Risk: Transboundary and Domestic

**Date:** Saturday, February 26 **Time:** 1:00 – 5:00 PM

Location: White River #101-102

Fee: \$95

4:25

4:45

with feed mills Roger Cochrane

All speakers

Feed risk panel discussion

Seminar chair: Jordan Gebhardt

This seminar will focus on the latest information available regarding the risk of pathogen transmission through swine feed. The topic will be addressed from both a transboundary and endemic pathogen perspective.

1:00 Risk of feed for transboundary swine diseases Megan Niederwerder The risk and mitigation of foot-and-mouth disease 1:30 virus infection of pigs through consumption of contaminated feed Jonathan Arzt Detecting pathogens in feed: Challenges and lessons 2:00 learned **Diego Diel** 2:20 Distribution of African swine fever virus (ASFV) during manufacture of swine feed C. Grace Elijah 2:40 Soy product import into the United States **Allison Blomme** 3:00 REFRESHMENT BREAK - Sponsored by: **AURORA PHARMACEUTICAL** 3:30 PEDV field experiences in China **Arkin Wu** 3:50 Feed mill and transport biosecurity Melissa Hensch 4:10 Field case and experimental work with PRRSV in feed Scott Dee

Practical feed biosecurity: How to create a team

# SATURDAY SEMINAR 6 Applied Field Research

### **Applied Field Research**

**Date:** Saturday, February 26 **Time:** 1:00 – 5:00 PM

Introduction

Location: White River #103-104

Fee: \$95

1.00

Seminar co-chairs: Gustavo Silva and Chris Rademacher

The objective of this seminar is to review key concepts on trial design and implementation of applied research under commercial conditions. The speakers will be sharing their field experiences designing and implementing trials, interpreting the results, and the decision process to implement technologies/interventions in their companies.

1.00	Gustavo Silva
1:04	First, what is the question/objective? Lessons learned working with field veterinarians  Derald Holtkamp
1:25	Field research types and examples of application <b>Daniel Linhares</b>
1:46	Data collection in field trials to find meaningful responses  Mike Tokach
2:07	Common issues in field study design and data analyses and how to avoid and address them <b>Deb Amodie</b>
2:35	REFRESHMENT BREAK – Sponsored by: AURORA PHARMACEUTICAL
3:05	Structured process for prioritizing research  Clint Schwab
3:28	Experiences conducting field research trials: Dos

and don'ts

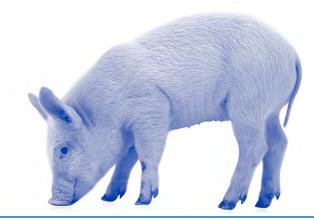
Beau Peterson

# SATURDAY SEMINAR 6 Applied Field Research

- 3:51 Experiences assessing health interventions in sow farms and assessing the success of whole production system implementation

  Caleb Shull
- **4:14** From product development to field implementation **Joel Spencer**
- 4:37 Evaluation of health interventions and how to assess whole system implementation in down stream (wean to finish)

  Marlin Hoogland
- **5:00** Seminar concludes



## SUNDAY SEMINAR 7 Swine Nutrition

### Swine Health through Nutrition: Feeding the Pig in a Changing World

**Date:** Sunday, February 27 **Time:** 8:00 AM – 12:00 PM **Location:** White River CD

Fee: \$95

Seminar chair: Alexander Hintz

Swine veterinarians have long been focused on the health of the pig. In our changing environment, we need to be aware of nontraditional and novel interventions via nutrition to maximize pig health. With that, we also need a good understanding of basic nutrition principles. This seminar will provide the basics on feeding our highly prolific pigs. You'll learn how to analyze data in feed trials as you begin to explore alternative interventions. In addition, you'll hear from experts in multiple industries about the portfolio of nutritional interventions available to improve animal health. Expand your toolbox to improve pig health via nutrition!

- 8:00 A 45-minute "cram session" on the basics of swine nutrition and feed protocol execution

  Trey Kellner
- 8:50 Applied statistical concepts for enhancing between-treatment inferences in swine nursery and grow-finish studies

  Jeff Chewning
- 9:40 REFRESHMENT BREAK Sponsored by:

  AURORA PHARMACEUTICAL
- 10:10 Antibiotic alternatives, challenges, experiences, and lessons from a poultry production perspective Roy Brister
- 11:00 Future-ready nutritional strategies to optimize swine health in an antibiotic-free market

  Casey Bradley
- **11:50** Wrap-up
- **12:00** Seminar concludes

### SUNDAY SEMINAR 8 2032 Swine Vet Toolbox

#### The Swine Vet's Toolbox in 2032

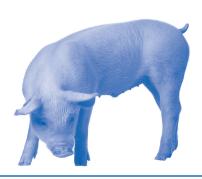
**Date:** Sunday, February 27 **Time:** 8:00 AM – 12:00 PM **Location:** White River IJ

Fee: \$95

Seminar chair: Justin Brown

This seminar will cover topics that will help practitioners prepare for the next decade of caring for and treating swine. Topics include antibiotic-free systems, the anti-infective pipeline, vaccines and immunotherapies, water, and pain mitigation.

- 8:00 Lessons learned and what to expect in an antibiotic-free system
  Pete Schneider
- 8:35 Anti-infective pipeline, a global perspective Mike Apley
- 9:15 Veterinary vaccines: Next generation of technology Mike Roof
- **10:00** REFRESHMENT BREAK Sponsored by: **AURORA PHARMACEUTICAL**
- 10:30 Water: Pathogens, detection, and disinfection Phil Olsen
- 11:15 Future opportunities for pain mitigation on farm Monique Pairis-Garcia
- 12:00 Seminar concludes



## SUNDAY SEMINAR 9 Data-Driven Decisions

### **Data-Driven Decision Making**

**Date:** Sunday, February 27 **Time:** 8:00 AM – 12:00 PM **Location:** White River AB

Fee: \$95

Seminar chair: Daniel Linhares

As the swine industry continues to evolve and adopt new and emerging technologies, there is an accumulation of multiple types of data including health, productivity, environmental conditions, marketing, biosecurity, and beyond. How do veterinarians and producers take full advantage of these, transforming diverse and disperse data points into useful information for informed decision making? This workshop provides examples of tools and concepts being applied in the US swine industry focused on precision swine health and productivity management.

8:00	Daniel Linhares
8:05	PRRSV management decisions  Amy Maschhoff
8:23	System-wide <i>Mycoplasma</i> elimination <b>Melissa Hensch</b>
8:41	Control versus elimination versus depopulation for diseases: How to decide?  Paul Yeske
8:59	How to manage feed supply risk? Pedro Urriola
9:17	Question and answer panel  Maschhoff, Hensch, Yeske, Urriola
9:39	REFRESHMENT BREAK – Sponsored by: AURORA PHARMACEUTICAL
10:09	Building a new sow farm 5 years ago, today, and

10 years from now: What are the commonalities

and the differences?

Mark Schwartz

# SUNDAY SEMINAR 9 Data-Driven Decisions

10:27	Using field data to create bioeconomic models for decision making <b>Gustavo Silva</b>
10:45	How to effectively run a swine production system <b>Noel Williams</b>
11:03	Data-driven management of teams Beau Peterson
11:21	Effective time management: Getting things done Giovani Trevisan
11:39	Question and answer panel Schwartz, Silva, Williams, Peterson, Trevisan
12:00	Seminar concludes



## SUNDAY SEMINAR 10 Swine Medicine for Students

#### Swine Medicine for Students

**Date:** Sunday, February 27 **Time:** 8:00 AM – 12:00 PM **Location:** White River GH

Fee: \$95; No charge for veterinary students or 2020

or 2021 DVM graduates

Seminar co-chairs: Jeremy Pittman and Angie Supple

The Swine Medicine for Students seminar's main goal is to supplement veterinary students and recent graduates with practical knowledge and tools they will need and use in practice. This year's topic will center on the use of water-soluble antibiotics: products, use, common issues, and the dreaded calculations of how to mix water meds! The first portion of the seminar will be teaching and training on water meds, followed by interactive <u>real-world</u> cases after the break, when groups will use their knowledge to select the appropriate antibiotic and calculate the proper mixing/dosage rate for the cases.

8:00 Introduction

**Jeremy Pittman and Angie Supple** 

8:05 Water-soluble medication: Selection and calculations

Jeremy Pittman and Angie Supple

**9:30** REFRESHMENT BREAK – Sponsored by:

**AURORA PHARMACEUTICAL** 

10:00 Interactive cases: Water-soluble medication

selection and calculations

**Jeremy Pittman and Angie Supple** 

12:00 Seminar concludes

### STUDENT RECEPTION



Sponsored by:

### **MERCK ANIMAL HEALTH**

Sunday, February 27 8:30 – 11:00 PM

Griffin Hall

### SUNDAY SEMINAR 11 Vet CEO 2.0

### **Vet CEO 2.0: Leading Living Cultures on Teams**

Date: Sunday, February 27 Time: 8:00 AM – 12:00 PM Location: White River #105

Fee: \$95

Seminar chair: Sarah Probst Miller

Values and behavior drive culture. It is one thing for a veterinary leader to envision a value. It is another to make sure it is living. In this session, veterinary leaders will share their experiences as leaders working to create living cultures on teams in their business, on farm, and/or with fellow veterinarians. Speakers will share what worked, what didn't, and what they would do differently the next time around. From handling challenging situations to reducing polarization to leading a culture of diversity, equity, inclusion, and wellness, learn from the experience of your colleagues to sharpen your ability to lead a living culture.

### Pre-seminar assignment for attendees:

To gain the most from this seminar, watch the following videos prior to the meeting:

- The Choice Point: A Map for a Meaningful Life https://www.youtube.com/watch?v=OV15x8LvwAQ
- The 3 Happiness Myths: https://www.youtube.com/watch?v=93LFNtcR1Ok
- The Values-Focused vs the Goal-Focused Life: https://www.youtube.com/watch?v=eiPxLpYlw4I

Also, take the following online survey, read the results, and complete exercise 1 and 2 prior to the meeting. Bring your results with you to the seminar as guideposts to think about as you listen to the presentations.

https://survey.valuescentre.com/survey. html?id=s1TAEQUStmx-pUIle-ma6Q

- 8:00 Leading through challenging situations
  Tara Donovan
- 8:30 Leading a reduction of polarization
  Seth Krantz
- 9:00 Leading the art of giving and receiving feedback Larry Firkins

Continued on next page

### SUNDAY SEMINAR 11 Vet CEO 2.0

9:30	REFRESHMENT BREAK – Sponsored by: AURORA PHARMACEUTICAL
10:00	Leading a culture of care on the farm  Michelle Sprague
10:30	Leading diversity, equity, and inclusion  Panel: Lucina Galina, Wesley Lyons,  Ignacio Correas, Willie Bidot
11:15	Leading wellness Part 1: Work/life integration: What do you need to be your best as a leader? Part 2: Using power compassionately and effectively Elizabeth Strand
12:00	Seminar concludes



# SUNDAY MORNING Research Topics

### **Research Topics**

Date: Sunday, February 27 Time: 8:00 AM – 12:00 PM Location: White River F

Session chair: Chris Rademacher

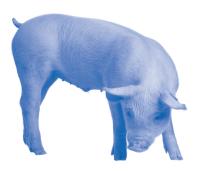
8:00	Breed-to-finish risk factors associated with increased proportion of lightweight pigs marketed <b>Edison Magalhaes</b>
8:15	A novel production model for nursing piglets from birth to the end of nursery phase  Mark Schwartz
8:30	Quantification of decontamination strategies for semitruck cabs  C. Grace Elijah
8:45	Early detection of trade-impacting swine pathogens An epidemiological modeling study <b>Giovani Trevisan</b>
9:00	Comparison of 5 ASF point-of-care assays against a standard OIE-based laboratory PCR using field samples Christa Goodell
9:15	Efficacy of the "tooth extraction" (test and remove protocol in commercial swine farms in Vietnam Christa Goodell
9:30	Practical implications of the impact of pooling family oral fluids on the probability of PRRSV detection by PCR <b>Onyekachukwu Osemeke</b>
9:45	REFRESHMENT BREAK – Sponsored by: AURORA PHARMACEUTICAL
10:15	Detection of <i>Mycoplasma hyorhinis</i> in dams and piglets from birth to weaning age  Cipriano De Abreu
10:30	Characterization of an experimental <i>Mycoplasma hyopneumoniae</i> aerosol infection model in pigs <b>Cipriano De Abreu</b>

# SUNDAY MORNING Research Topics

- 10:45 Detection dynamics of Mycoplasma hyopneumoniae under controlled aerosol exposure for gilt acclimatization
  Alyssa Betlach
- 11:00 Diagnostic performance of a commercial Mycoplasma hyopneumoniae serum antibody ELISA using processing fluids samples from three commercial swine farms Betsy Armenta-Leyva
- 11:15 Prevention and control of *Streptococcus equi* subspecies *zooepidemicus* infection in pigs Samantha Hau
- 11:30 Senecavirus A in the environment of sow slaughter plants

  Alexandra Buckley
- 11:45 First assessment of the time-to-negative processing fluids in breeding herds after a Senecavirus A outbreak

  Guilherme Milanez Preis
- 12:00 Session concludes



# SUNDAY SESSION #1 Student Seminar

#### **Student Seminar**

Date: Sunday, February 27
Time: 1:00 – 5:15 PM

#### **Sponsored by ZOETIS**

<b>Location:</b> White River ABCD <b>Session co-chairs:</b> Andrew Bowman and Perle Zhitnitskiy	
1:00	Microbial analysis of joints in sows euthanized for lameness
	Shelby Haryslak, University of Pennsylvania
1:15	Comparing sample types and testing methods for endemic influenza in growing gilts  Andrea Sisk, North Carolina State University
1:30	Comparison of whitewash vs. Synergize® on production metrics in farrowing rooms Kaci Way, The Ohio State University
1:45	A survey to investigate the implementation methods of rotavirus ice cubes on swine farms

2:00 Evaluating the probability of PRRSV positive oral fluids in due-to-wean piglet litters

Nathan VanKley, Michigan State University

Seth Melson, University of Minnesota

- 2:15 Evaluation of water-based foaming as a mass depopulation method for swine Taylor Williams, The Ohio State University
- 2:30 Assessment of market trailer contamination with porcine coronaviruses and Senecavirus
  Glorianne Vazquez, Iowa State University
- 2:45 REFRESHMENT BREAK
- 3:15 Retrospective investigation of the relationships between sample types, fetal death outcomes, and PCV3 PCR test results

  Amanda Archer, Lincoln Memorial University

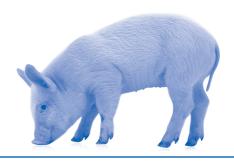
# SUNDAY SESSION #1 Student Seminar

- 3:30 The impact of neonatal PCV3 infection on the development of *Streptococcus suis* disease in late farrowing and nursery age pigs

  Donna Presnell, Lincoln Memorial University
- 3:45 Effect of pre-farrow injectable *Lawsonia intracellularis* vaccination of sows on maternal
  antibodies
  Hunter Everett, North Carolina State University
- 4:00 Evaluation of antibiotic treatment for the control of mortality and growth performance in PRRSV 1-4-4 positive nursery pigs

  Kyle Nisley, Iowa State University
- 4:15 Evaluating the efficacy of exposing pigs to Mycoplasma hyopneumoniae via fogging using pooled tracheal samples Madison Durflinger, Iowa State University
- 4:30 Fine-tuning the preparation of lung homogenate for optimal *Mycoplasma hyopneumoniae* exposure Megan McMahon, University of Minnesota
- 4:45 Evaluation of a backpack sprayer inoculation method compared to intratracheal inoculation for the exposure of *Mycoplasma hyopneumoniae*Katyann Graham, lowa State University
- 5:00 Porcine epidemic diarrhea virus survivability and infectivity in hog earthen manure storages

  Don Banks, North Carolina State University
- 5:15 Session concludes



## SUNDAY SESSION #2 Industrial Partners

#### **Industrial Partners**

**Date:** Sunday, February 27 **Time:** 1:00 – 5:30 PM **Location:** White River E

Session co-chairs: Mary Battrell and Jessica Risser

1:00 A whole inactived vaccine for IAV-S was shown to provide protection in the presence and absence of maternal antibodies

Peter Winter

Peter Winter
Phibro Animal Health Corporation

1:15 Pursuing American Board of Veterinary Practitioners certification in Swine Health Management

Jeff Husa

American Board of Veterinary Practitioners

1:30 Heritability of sow uterine prolapse in a commercial

mother line
Jenelle Dunkelberger
Topigs Norsvin

1:45 Skin recovery and care with activated plant phenolic solutions

Deb Murray

Precision Health Technologies

Safety evaluation of transitioning a previously modified-live PRRS vaccinated-positive stable sow

herd to Prevacent® PRRS and effects on downstream nursery performance

Matthew Ackerman Elanco Animal Health

2:00

2:15 Performance and diagnostic evaluation of a lineage 1 (1-8-4) PRRS vaccine in five sow herds at various times post-vaccination

Tom Petznick
Elanco Animal Health

2:30 Review of detergent and disinfectant chemical exposure risks for swine veterinarians and farm production personnel: Impact of chemical choice

Jose Ramirez
Clipper Distributing

Continued on next page

# SUNDAY SESSION #2 Industrial Partners

2:45	REFRESHMENT BREAK
3:15	PK/PD relationships of Tylovet® (tylosin) oral administration for the treatment of <i>Clostridium perfringens</i> in pigs Ulrich Klein Huvepharma
3:30	Production of maternal antibody titers, against a homologous and a heterologous virus, measured in piglets from sows vaccinated with two autogenous vaccines  David Nolan  Huvepharma
3:45	Mycotoxin contamination in United States corn and corn byproduct from 2021 harvest Lan Zheng DSM Animal Nutrition & Health
4:00	The successful use of pure benzoic acid (VevoVitall) in swine feeds, alone or in combination with nature-identical flavorings (VVC), for diet acidification, improved gastrointestinal functionality, and sustainable pig performance  Sara Hough  DSM Animal Nutrition & Health
4:15	The relationship of ruptures between a high-health and low-health environment  John Sonderman  DNA Genetics
4:30	TransRite Sow Ultra: An innovative product to decrease farrowing stress Andrew Bents Alltech - Hubbard Feeds
4:45	Precision ag "lessons learned" when implementing LeeO Tom Petznick PrairiE Systems

# **SUNDAY SESSION #2 Industrial Partners**

5:00 Distribution of injected fat-soluble vitamins in plasma and tissues of nursery pigs
Young Dal Jang
Stuart Products

5:15 Presentation withdrawn

A review of the use of immune nutrition to improve herd resilience

Fredrik Sandberg Furst McNess

5:15 Session concludes



# SUNDAY SESSION #3 Industrial Partners

#### **Industrial Partners**

Date: Sunday, February 27 Time: 1:00 – 5:30 PM Location: White River F

Session co-chairs: Attila Farkas and Jeff Harker

1:00	A new prescription platform to manage emerging and diverse pathogens Ashley Petersen Medgene Labs
1:15	Evaluation of pigs vaccinated with PRRSGard® or Prevacent® under a natural challenge model Brandi Burton Pharmgate Animal Health
1:30	How GlobalVetLink assists swine veterinarians with health and movement documentation management Aaron Lower GlobalVetLink
1:45	Efficacy of an adjuvanted porcine parvovirus (PPV vaccine in a reproductive heterologous PPV challenge model Rex Smiley Boehringer Ingelheim Animal Health USA
2:00	Efficacy of Enterisol® Salmonella T/C in protecting against monophasic <i>Salmonella</i> I 4,[5],12:i:- Fernando Leite Boehringer Ingelheim Animal Health USA
2:15	Exploring the efficacy of a PCV2d-based vaccine under current severe PCVAD conditions Eduardo Fano Boehringer Ingelheim Animal Health USA
2:30	What to do with all this data? Tom Stein Maximus Systems
2:45	REFRESHMENT BREAK
3:15	Effect of tulathromycin on growth and mortality

in PRRS-positive weaned pigs

Jason Hocker Zoetis

# SUNDAY SESSION #3 Industrial Partners

3:30	A bivalent PCV2 vaccine (PCV2a and PCV2b) offers biologically superior protection compared to monovalent PCV2 vaccines  Meggan Bandrick Zoetis
3:45	Reproductive impact of deviations in semen dose sperm quantity and quality Brad Belstra MB Swine Reproduction
4:00	The next level of detectability: Shifting the paradigm Greg Hastings Neogen
4:15	Efficacy of Vigilex® in diets contaminated with porcine epidemic diarrhea virus (PEDV) via a modified ice-block challenge model Ryan Strobel Cargill Animal Nutrition & Health
4:30	Discovery of a key biomarker for inflammation and associated performance economics in growing pigs Brandi Burton NutriQuest
4:45	The effects of core antigen bacterin with an immunostimulant on piglet health and performance outcomes when challenged with enteric and respiratory pathogens  Charley Cull  Endovac Animal Health
5:00	Detecting variation in mycotoxins within single loads of feed ingredients  Adrienne Woodward  United Animal Health
5:15	Using ProVent® ECL to help solve an enteric health challenge within a sow unit Brigitte Mason United Animal Health

5:30 Session concludes

## SUNDAY SESSION #4 Industrial Partners

#### **Industrial Partners**

**Date:** Sunday, February 27 **Time:** 1:00 – 5:30 PM **Location:** White River GHIJ

Session co-chairs: Rebecca Robbins and Megan Inskeep

1:00 Fighting enteropathogenic *E coli* with algal polysaccharides

Marie Gallissot

Olmix

1:15 Validation of AndroVision® eFlow: A novel, reusable counting chamber for CASA concentration measurement of boar sperm
Rudolf Grossfeld
Minitube USA

1:30 The impact of dietary diformates in zinc oxidereduced piglet diets: An overview Christian Lückstädt Apiam Solutions

1:45 Strain matters: Understanding how modes of action impact probiotic performance

Keith Kinsley

Chr Hansen

2:00 The design, development, commercialization, and licensure of real-time PCR tests for FMDV and ASFV Johnny Callahan Tetracore

2:15 Using compentency-based educational technologies to develop carcass management competencies and prepare farm labor for potential depopulation catastrophes

Sarah Probst Miller

AgCreate Solutions

2:30 PigFlow workforce management platform

Matthew Rooda SwineTech

2:45 REFRESHMENT BREAK

# **SUNDAY SESSION #4 Industrial Partners**

3:15	PCV2 challenges and management plans within a US production system Amy Maschhoff Merck Animal Health
3:30	Porcine sapovirus: Field experiences with a potentially emerging pathogen Brad Thacker Merck Animal Health
3:45	Experiences with two commercial ileitis vaccines during the grow-finish period for same-sourced pigs Daniel Boykin Merck Animal Health
4:00	Next generation sequencing analysis on flies shows potential to introduce influenza A virus into a finisher Gene Spellman Central Life Sciences
4:15	ATP biosecurity verification  David Pyburn  BioChek
4:30	PRRS: An outsider's viewpoint  Jeff Odle  LANXESS Corporation
4:45	Trace mineral programs for performance optimization when pharmacological zinc is no longer an option Bradley Lawrence NOVUS International
5:00	Development of an updated porcine reproductive and respiratory syndrome virus product Mazen Ismail Thermo Fisher Scientific Animal Health
5:15	Proprietary monoglyceride blend prevents PEDV transmission from feed to piglets Farrah Phillips Kemin Animal Nutrition & Health
5:30	Session concludes

# **SUNDAY - MONDAY Veterinary Student Posters**

#### Veterinary Student Posters (#1 - #21)

#### Sponsored by ZOETIS

Zoetis and AASV provide a \$250 award to each student poster presenter.

**Location:** JW Grand Ballroom Foyer

**Sunday, February 27** 12:00 – 5:00 PM **Monday, February 28** 8:00 AM – 5:00 PM

Authors present Sunday 12:00 – 1:00

**STUDENT POSTER COMPETITION**: Posters #1-15 (\*) have been selected for judging in the Student Poster Competition, sponsored by **UNITED ANIMAL HEALTH.** 

- \*1. Use of historical PRRS outbreak information to identify high and low risk areas in a region

  Kathryn Lenker, University of Pennsylvania
- \*2. Field evaluation of vaccine timing regimen and genetic identity of pre-farrow SEQUIVITY® rotavirus vaccine on suckling pig performance using a challenge model McKenna Brinning, Iowa State University
- \*3. Use of digital thermography to identify scrotal and inguinal hernias in piglets at processing

  Adam Tatnall, University of Illinois
- \*4. Non-catalytic converter gasoline engine exhaust euthanasia
  - **Evan Schwarz, University of Illinois**
- \*5. Evaluation of nursery mortality and production performance using controlled and natural *Glaesserella* parasuis exposure
  - **Katie Parker, Iowa State University**
- \*6. Evaluating castration techniques and effects of scrotal hernia prevalence
  - Rachel Kanefsky, Tufts University
- \*7. An investigative analysis of a biosecurity program identifying critical control points and improving the efficiency and efficacy of measuring compliance Isaac Goldner, University of Illinois
- \*8. Development of national resources for the practical implementation of swine depopulation Kamryn Gitchell, University of Tennessee
- \*9. The effect of zinc and copper supplementation during late gestation on subsequent farrowing house performance of commercial sows

  Justin Moeller, The Ohio State University

# **SUNDAY - MONDAY Veterinary Student Posters**

- \*10. Evaluating water quality and water availability parameters within a pork production system Kaylee Robinson, University of Missouri
- \*11. Differentiation of H3N2 and H1N2 IAV-S antigenic sites by RT-qPCR
   Courtney Wangler, University of Illinois
- \*12. Nitrogen gas delivered by highly expanded foam for the depopulation of swine

  Lindsay Miller, University of Minnesota
- \*13. Evaluating the ability of disinfectants to control coccidia in farrowing crates

  Austin Janssen, lowa State University
- \*14. Caretaker movements impact on the spread of porcine coronaviruses and porcine reproductive and respiratory syndrome virus in growing pigs

  Alexis Berte, Iowa State University
- \*15. Comparison of nebulization protocols for gilt exposure to *Mycoplasma hyopneumoniae*Sydney Simmons, North Carolina State University
- 16. Identifying pathways of entry of African swine fever virus into sows farms and potential improvement in biosecurity to prevent viral entry Random Bolda, Kansas State University
- Development of antigen-based diagnostic ELISA for Mycoplasma hyopneumoniae Rachel Bradley, University of Minnesota
- Evaluation of enteric disease on hemoglobin concentrations, complete blood cell counts and growth in piglets
   Claire Bublitz, North Carolina State University
- Use antibiotic treatments to validate Mycoplasma hyorhinis and Mycoplasma hyosynoviae titers Lucas Buehler, The Ohio State University
- 20. Comparing the diagnostic sensitivity of various samples for the detection of *Mycoplasma hyopneumoniae* in recently exposed nursery-aged piglets Megan Kellen, Iowa State University
- 21. Identification and characterization of postweaning Escherichia coli and Salmonella spp in a large production system Hannah Lathom, North Carolina State University

#### Research Topics Posters (#22 - #55)

Location: JW Grand Ballroom Fover

Sunday, February 27 12:00 - 5:00 PM Monday, February 28 8:00 AM - 5:00 PM Authors present Sunday 12:00 - 1:00

**22.** Investigation of vesicular lesions in pigs with unknown causative agents **Ethan Aljets** 

Longitudinal evaluation of Mycoplasma hyopneumoniae detection in processing fluids **Albert Canturri** 

In vivo tracheal fluid collection for Mycoplasma hyopneumoniae gilt exposure Fabian Chamba Pardo

25. Mycoplasma hyopneumoniae aerosol challenge evaluation in finishing pigs Fabian Chamba Pardo

**26.** Detection and investigation of atypical porcine pestivirus within a farrow-to-finish farm and off-site nursery and finisher locations

C. Grace Elijah

27. Evaluating the impact of organic matter and sample processing technique on RNA detection using environmental samples

C. Grace Elijah

Evaluation of the diagnostic performance of a porcine deltacoronavirus indirect ELISA and dynamic of the antibody response in growing pigs Luis Gimenez-Lirola

29. Colostrum fostering: Under practical conditions, is it useful to analyze colostrum with a Brix refractometer in the fostering protocols of hyperproliferative swine genetics?

Laszlo Gombos

30. Timing of euthanasia: Is it an economic or animal welfare issue? Laszlo Gombos

- **31.** Distribution and characterization of *Streptococcus suis* strains of clinical importance within the US swine herd **Jessica Goncalves dos Santos**
- **32.** Diagnostic monitoring using oral fluids and sound: Complementing detection technologies **Christa Goodell**
- **33.** Pathogen monitoring for early disease detection using oral fluid and air samples

  Christa Goodell
- **34.** Inoculation of weaned pigs by feed, water, and airborne transmission of *Salmonella* enterica serotype 4,[5],12:i:
  Olivia Harrison
- 35. Evaluation of one versus two doses of an inactivated Seneca Valley virus vaccine in weaned pigs Kyle Hoffman
- 36. Measuring the effectiveness of mitigants against PRRSV 1-4-4 in a simulation of an emergency feed outage Megan Hood
- 37. Occurrence of wild type and vaccine-like porcine reproductive and respiratory syndrome virus 2 (PRRSV-2) strains in the United States Mariana Kikuti
- **38.** Shedding patterns and virus diversification of primary and secondary influenza infections in pigs infected with two distinct subtypes **Chong Li**
- **39.** Evaluation of internal biosecurity practices combined with sow vaccination to wean influenza-negative piglets **Gustavo Lopez Moreno**
- 40. Characterizing boar stud practices in the United States to assess African swine fever infection and transmission pathways
  Miranda Medrano
- **41.** *Mycoplasma hyorhinis* in finisher pigs with neurological signs **Maria Merodio**

**42.** Retrospective analysis of *Mycoplasma hyorhinis* pulmonary and systemic infection in diagnostic cases with correlation of qPCR Ct values and detection by RNAscope®

**Maria Merodio** 

- **43.** Detection of influenza A virus in US swine populations during 2010-2021: Implications for epidemiological investigations and control programs **Daniel Moraes**
- **44.** Factors associated with sort loss in pork production **Daniel Moraes**
- 45. Use of an endogenous reference control in a PRRSV RT-qPCR Berenice Munguia-Ramirez
- 46. Changes in productivity parameters as breeding herds targeting stability changed PRRSV status over time Onyekachukwu Osemeke
- 47. Detection and correlation of PCV2 by PCR and IHC in tissues in a PCV2d/PRRSV challenge model in the new paradigm of PCV2d infection Pablo Pineyro
- **48.** Cough associated with *Mycoplasma hyopneumoniae*DNA detection in deep tracheal swabs and pen-based oral fluids

Ana Paula Poeta Silva

- **49.** Proving competency-based learning educational strategies to create measurable carcass management competencies in farm labor **Sarah Probst Miller**
- Investigating differences in the source of Serratia and other bacteria in boar semen
   Darwin Reicks
- **51.** Oral delivery of a maize-produced PEDV vaccine candidate to sow/gilts provides protection to nursing pigs

**Rick Sibbel** 

52. False positive or early detection? Standard process control charting improves ELISA Mycoplasma hyopneumoniae interpretation Edgar Tapia

- 53. Improved piglet performance and reduced mortality and antimicrobial use following oral vaccination with a live nonpathogenic Escherichia coli f4/f18 vaccine against postweaning diarrhea Frederic Vangroenweghe
- 54. Evaluation of air filters in swine farms as a surveillance method to assess the spread of porcine reproductive and respiratory syndrome and influenza A viruses Lan Wang
- 55. Development and validation of a swine enteric coronavirus multiplex reverse transcription real-time PCR and investigation of virus detection frequency in US swine Jinhui Zhu



### SUNDAY - MONDAY Industrial Partners Posters

#### **Industrial Partners Posters (#56 - #74)**

**Location:** JW Grand Ballroom Foyer

**Sunday, February 27** 12:00 – 5:00 PM **Monday, February 28** 8:00 AM – 5:00 PM

Authors present Sunday 12:00 – 1:00

- 56. Comparison of benzoic acid and potassium diformate on the performance of post-weaning piglets: A review Christian Lueckstaedt Apiam Solutions
- **57.** Oral vaccination against *Lawsonia intracellularis* improves feed efficiency in experimentally challenged pigs

  Emma Helm

**Boehringer Ingelheim Animal Health USA** 

- 58. Evaluation of a Streptococcus suis strain that confers cross protection to serotype 1 and ½
   Emily Collin
   Cambridge Technologies
- 59. Bacteriological cultures show flies and gnats harbor live Salmonella in nursery exhibiting enteric disease Allison Knox Central Life Sciences
- 60. An update of Mycoplasma hyopneumoniae prevalence at weaning age in Spain Lorena Perez Esteruelas Elanco Animal Health
- 61. Poster withdrawn
  Use of Furst Protect to improve health and performance of wean piglets
  Fredrik Sandberg
  Furst McNess Company
- **62.** Monitoring PRRSV infection in vaccinated pigs Alvaro Hidalgo IDEXX
- 63. Evaluate the impact of beta-1,3 glucans (Aleta™) on immune response and production/health indicators in development gilts post-vaccination during the isolation period
  Clauter Johnson

**Clayton Johnson** 

**Kemin Animal Nutrition & Health** 

### SUNDAY - MONDAY Industrial Partners Posters

Retrospective study of interval between semen collections in boar stud in the south of Brazil
 Jorgea Pradiee
 MB Swine Reproduction

65. Bioinformatics as a tool in prescription platform vaccine developmentAshley PetersenMedgene Labs

66. Stability of three commercial Salmonella vaccines in the presence of common drinking water additives Robyn Fleck Merck Animal Health

67. Two-year commercial demonstration of methionine hydroxy-analogue chelated zinc, copper, and manganese (MINTREX®) on sow reproductive and production performance in a highly prolific sow farm Alexander Hintz

NOVUS International

68. Using sow technologies to drive sow and subsequent pig performance associated with inflammation Ran Song NutriQuest

69. Improving young piglets' immunity in nursery with an algae extractMarie GallissotOlmix

70. The power of LeeO individual pig data in commercial production
 Tyler Holck
 PrairiE Systems

71. Effect of Grazix, a phytobiotics-based product, on the lactate-producing and -utilizing gut bacterial populations of nursery pigs
Anlly Fresno-Rueda
Precision Health Technologies

# SUNDAY - MONDAY Industrial Partners Posters

**72.** Investigation of pathogen and host genome variation influencing host reponse to *Streptococcus suis* infection

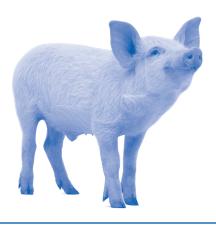
Jenelle Dunkelberger Topigs Norsvin

**73.** DFM Pak®, a novel combination of *Bacillus strains*, reduces environmental *E coli* bioburden, manure buildup, and odor compounds in the swine housing environment

Jake Lee United Animal Health

74. Retrospective analysis of serological responses to a 2-dose PCV2 vaccination regimen initiated at 3 days or 3 weeks of age, and relationship to post-challenge viremia

Lucina Galina Zoetis



### **MONDAY GENERAL SESSION Defining Our Future**

#### **Defining Our Future**

Date: Monday, February 28 Time: 8:00 AM - 12:15 PM

Location: JW Grand Ballroom 6-10

Session chair: Mike Senn

Howard Dunne Memorial Lecture: Leaping into 8:00 the future: Sit down, buckle up, and hang on

**Angela Baysinger** 

9:00 **Alex Hogg Memorial Lecture:** 

Learning for the future

Jim Kober

10:00 REFRESHMENT BREAK - Co-sponsored by: **HOGSLAT** and **CAMBRIDGE TECHNOLOGIES** 

10:30 Diversity, equity, and inclusion in veterinary medicine

**Fred Gingrich** 

11:10 Diversity, equity, and inclusion: Academia perspective

**Alex Ramirez** 

11:30 Diversity, equity, and inclusion: Student perspective

**Kelly Hewitt** 

11:45 Diversity, equity, and inclusion: Business

perspective Lisa Tokach

12:15 LUNCHEON - Sponsored by:

**BOEHRINGER INGELHEIM** 

#### **AASV LUNCHEON**

Sponsored by:

#### **BOFHRINGER INGFI HFIM**

Monday, February 28 12:15 - 2:00 PM

White River Ballroom



#### MONDAY SESSION #1 PRRSV RFLP 1-4-4

### PRRSV RFLP 1-4-4: How are practitioners dealing with it and are the strains really different?

**Date:** Monday, February 28 **Time:** 2:00 – 5:30 PM

Location: JW Grand Ballroom 9-10

Session chair: Chris Sievers

2:00 Practitioner's perspective of PRRSV in sow herds:
What's worked, what's failed and what we still
have to learn
Paul Yeske

2:35 Mitigating the downstream effects of PRRSV and secondary infections

Dyneah Classen

3:05 Managing PRRSV testing and immunity for gilt development

Kate Dion

**3:25** REFRESHMENT BREAK

3:55 Trading places: Valued learnings from both Darin Madson

4:30 Understanding the emergence of a new PRRSV variant (L1C 1-4-4) through implementation of epidemiological tools
Cesar Corzo

5:00 Breaking down PRRSV next-generation sequencing into a user-friendly formatGiovani Trevisan

**5:30** Session concludes

#### **AASV AWARDS RECEPTION**



Sponsored by:

**MERCK ANIMAL HEALTH** 

Monday, February 28 6:30 – 8:30 PM

White River Ballroom

# MONDAY SESSION #2 Sustainability & Animal Welfare

#### **Sustainability and Animal Welfare**

**Date:** Monday, February 28 **Time:** 2:00 – 5:30 PM

**Location:** JW Grand Ballroom 7-8 **Session chair:** Meghann Pierdon

- 2:00 Responding to animal disease outbreaks and natural disasters with a One Health approach Gary Flory
- 2:25 Resiliency debrief for triage and care: A proposed plan of action

  Elizabeth Strand
- 2:50 Best management practices for pen gestation: Opening Pandora's box Tom Parsons
- 3:15 California Proposition 12: The slat-level experience Hyatt Frobose
- 3:40 REFRESHMENT BREAK
- 4:10 The use of animal welfare as a tool to sustain public support for the use of animals in biomedical research: Lessons for the swine industry

  James Marx
- 4:35 Statehouses and more: Proposals impacting animal agriculture

  Elizabeth Rumley
- 5:00 Opportunities for technology to improve animal well-being

  John Kolb
- **5:30** Session concludes

#### **AASV FOUNDATION AUCTION**

Monday, February 28
White River Ballroom

**Silent Auction:**Use ClickBid to bid anytime, anywhere!

Live Auction: Immediately following the AASV Awards Reception

# MONDAY SESSION #3 Disease Control

#### **Disease Prevention, Control, Elimination**

**Date:** Monday, February 28 **Time:** 2:00 – 5:30 PM

**Location:** JW Grand Ballroom 6 **Session chair:** Marisa Rotolo

2:00 Utilizing vaccine to reduce the duration and impact of sow farm porcine epidemic diarrhea (PED) outbreaks

outbreaks

Brent Sexton

- 2:30 The next frontier in disease elimination: Tackling the endemics Actinobacillus suis, Mycoplasma hyorhinis, and Mycoplasma hyosynoviae

  Maria Jose Clavijo
- 3:00 Rotavirus: Current experiences and thoughts with prevention and control Jeremy Pittman
- 3:30 REFRESHMENT BREAK
- 4:00 Sow herd influenza A virus-swine (IAV-S) classification system

  Cameron Schmitt
- 4:15 School of hard knocks: Disease prevention, control, and elimination

  Paul Yeske
- 4:45 Dealing with dysentery: *Brachyspira hampsonii* within a production system

  Elizabeth Noblett
- 5:00 A cheat sheet for Mycoplasma hyopneumoniae surveillance

  Ana Paula Poeta Silva
- 5:30 Session concludes



# TUESDAY GENERAL SESSION Foreign Animal Disease

### Foreign Animal Disease Preparedness and Response

Date: Tuesday, March 1
Time: 8:00 AM - 12:00 PM

Location: JW Grand Ballroom 6-10

Session co-chairs: Scott Dee and Mike Senn

8:00 State animal health officials (SAHOs) panel discussion: Animal disease preparedness and response Jeff Kaisand, Bret Marsh, Beth Thompson Global feed security response 9:00 **Egan Brockhoff** 9:30 US feed security response **Cassie Jones** 10:00 REFRESHMENT BREAK 10:30 Swine Health Improvement Plan update **Rodger Main** Validation of extended storage protocols 11:00 **Scott Dee** 11:15 Responsible feed ingredient import program **Apoorva Shah** 11:30 African swine fever: A practitioner's perspective **Joseph Yaros** 

#### **AASV BUSINESS BREAKFAST**

Session and meeting conclude



12:00

Tuesday, March 1 7:00 – 8:00 AM

White River Ballroom E

### AASV WELL-BEING CENTER

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

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

Location: JW Grand Foyer East



# Mother's room

Need a quiet, private place to nurse or pump?



AASV has set aside a room for this purpose on the 3<sup>rd</sup> floor.

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

# SATURDAY, FEBRUARY 26 Social Activities

### STUDENT TRIVIA EVENT



Sponsored by:

#### **MERCK ANIMAL HEALTH**

**Time:** 6:00 – 8:00 PM

**Location:** OP Italian Restaurant (off JW Marriott lobby)

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

# Follow AASV on Facebook, Twitter, and Instagram

**#AASV2022** 



@AASwineVets



0

@AASwineVets

@AASWineVets @AASVNews

## SUNDAY, FEBRUARY 27 Social Activities



Sponsored by

### DSM ANIMAL NUTRITION & HEALTH

**Time:** 6:00 – 7:00 AM

Location: White River #101-102

Coach: Ben Pratte

**NEW!** Join us for an hour of fun and interaction in this yoga class offering mind, body, and spirit workout based on YogaFit. Options will be provided for all levels from the beginner (first timer) to advanced yoga enthusiast. You will feel physically charged and mentally ready to go into sessions for the remainder of the day!



Ben Pratte has taught yoga since 2002 and is a certified YogaFit instructor as well as an instructor for a number of other group fitness programs & classes.

Mats will be provided - or bring your own.

Everyone is welcome, but please sign up by February 4 at www.eventbrite.com/e/yoga-class-at-aasv-tickets-214310517527.

## SUNDAY, FEBRUARY 27 Social Activities

# Praise Breakfast

### Sponsored by STUART PRODUCTS

**Time:** 7:00 – 8:00 AM

Location: JW Grand Ballroom 7-8

Coordinators: Dave Baum, Sarah Probst Miller, Monte Fuhrman, Tyler Holck,

**Rexanne Struve** 

Join your AASV friends for breakfast, music, and fellowship at the AASV Praise Breakfast on Sunday morning!

The opportunity to sing praises to the Lord with the AASV Praise Team will be followed by a devotional message by Dr. John Waddell.



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

All AASV meeting attendees and their family members are welcome!

# SUNDAY, FEBRUARY 27 Social Activities

### **Student Reception**

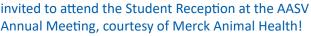
Sponsored by

#### MERCK ANIMAL HEALTH

Time: 8:30 – 11:00 PM Location: Griffin Hall

#### **Everyone is invited!**

Whether you are a veterinarian or veterinary student, you are



This evening of magical entertainment, desserts, and liquid refreshment provides the perfect opportunity for current and future swine veterinarians to interact and discuss employment and externship possibilities.

Students, turn in your "Vet Hunt" entries and stick around for the prize drawing!



**Monday, February 28** 9:00 AM - 5:00 PM

**Tuesday, March 1** 8:00 AM — 12:00 PM

LOCATION: JW Grand Ballroom 1-5

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

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

### **AASV Luncheon**

Sponsored by

#### BOEHRINGER INGELHEIM ANIMAL HEALTH

Time: 12:15 – 2:00 PM **Location:** White River Ballroom



Refuel after the morning's motivational presentations with a meal of delicious pork, courtesy of Boehringer Ingelheim. Your nametag is your luncheon ticket (sorry, additional tickets

are not available). Stick around for the exciting announcement of the veterinary student oral and poster competition winners and student scholarship recipients!

# AASV Awards Reception



Sponsored by

#### **MERCK ANIMAL HEALTH**

Time: 6:30 - 8:30 PM

Location: White River Ballroom

Come enjoy a casual atmosphere and an inviting food and beverage buffet, thanks to support from Merck Animal Health. Watch the AASV slide presentation while you dine. The highlight of the evening is the presentation of the prestigious AASV awards, followed by the exciting AASV Foundation Live Auction.

Tickets are provided to all meeting registrants in their nametag holder. Additional tickets are \$25.00 for adults; free for children under twelve. Bring your tickets - you'll need them to obtain beverages.

# MONDAY, FEBRUARY 28 AASV Foundation Auction

### **Defining Our Future**



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

#### **SILENT AUCTION**

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

Bid here: aasyf.cbo.io

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

#### **LIVE AUCTION**

Location: White River Ballroom

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



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

#### **Hogg Scholarship**

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

#### **Student Debt Relief**

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

#### **ACAW Scholarship**

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

#### **Veterinary Student Scholarships**

Numerous scholarships are available to veterinary students who participate in the AASV Student Seminar and 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, United Animal Health, Zoetis, and the Dr. David Schoneweis Family.

#### **Swine Externship Grants**

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

#### **Travel Stipends**

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

#### **And More!**

#### **TECHNICAL TABLES EXHIBITORS**

Location: JW Grand Ballroom 1-5 Monday: 9:00 AM – 5:00 PM Tuesday: 8:00 AM – 12:00 PM

#### **EXHIBITORS**

AAF Flanders ABVP

**ADM Animal Nutrition** 

AgCreate Solutions/Pork Avenue Training Portal

Allflex Livestock Intelligence

Alltech – Hubbard Feeds

**Animal Health International** 

APC

**Apiam Solutions** 

**ARKO Laboratories** 

Arm & Hammer Animal and Food Production

**Artemis AG-Solutions** 

Art's Way Scientific

**Aurora Pharmaceutical** 

**Automated Production** 

**AVMA Trust** 

Bimeda

**BioChek** 

BioSec

**Bock Industries** 

Boehringer Ingelheim

Cambridge Technologies

Cargill Animal Nutrition and Health

Central Life Sciences

Ceva Animal Health

Chr Hansen

**Christian Veterinary Mission** 

**CID LINES** 

Clipper Distributing

**DNA Genetics** 

DSM Animal Nutrition & Health

Elanco

**Endovac Animal Health** 

**Essential Ag Solutions** 

**Fast Genetics** 

**Furst-McNess Company** 

Genesus Genetics

GlobalVetLink

**Hog Slat** 

Huvepharma

#### **TECHNICAL TABLES EXHIBITORS**

**IDEXX** 

Innovative Heating Technologies
Insight Wealth Group

Kemin Animal Nutrition & Health

**LANXESS Corporation** 

MAI Animal Health

**Maximus Systems** 

MB Swine Reproduction

Medgene Labs

Merck Animal Health

Minitube USA

National Pork Board

**National Pork Producers Council** 

**Natural Biologics** 

Neogen

**Newport Laboratories** 

Norbrook

**NOVUS International** 

NutriQuest

Olmix

**Pharmacosmos** 

Pharmgate Animal Health

Phibro Animal Health Corporation

PIC

**PigCHAMP** 

**PigKnows** 

PMI

PrairiE Systems

**Precision Health Technologies** 

Ralco

RTI

**Stuart Products** 

Swine Health Information Center

SwineTech

**TechMix** 

**Tetracore** 

Thermo Fisher Scientific Animal Health

**Tonisity** 

**Topics Norsvin USA** 

United Animal Health

**USDA APHIS Veterinary Services** 

**Veterinary Pharmaceutical Solutions** 

Wilson's Prairie View Farm

Zinpro

Zoetis

### Plan now to attend!

### 54<sup>th</sup> AASV Annual Meeting

March 4-7, 2023

Gaylord Rockies Resort and Convention Center Aurora, Colorado



### **Future AASV Meetings:**

2024 Nashville Feb 24-27 2025 San Francisco March 1-4 We extend our sincere appreciation to the following sponsors of AASV annual meeting activities:

#### **AURORA PHARMACEUTICAL**

Refreshment Break Sponsor

### **BOEHRINGER INGELHEIM ANIMAL HEALTH**

AASV Luncheon

#### **CAMBRIDGE TECHNOLOGIES**

Refreshment Break Co-sponsor

#### **DSM ANIMAL NUTRITION & HEALTH**

Yoga Class

#### **ELANCO ANIMAL HEALTH**

AASV Foundation Veterinary Student Scholarships

#### **HOG SLAT**

Refreshment Break Co-sponsor

#### **HUVEPHARMA**

Student Podcaster Award

#### **MERCK ANIMAL HEALTH**

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

#### **NEWPORT LABORATORIES**

Veterinary Student Travel Stipends

#### **STUART PRODUCTS**

Praise Breakfast

#### **UNITED ANIMAL HEALTH**

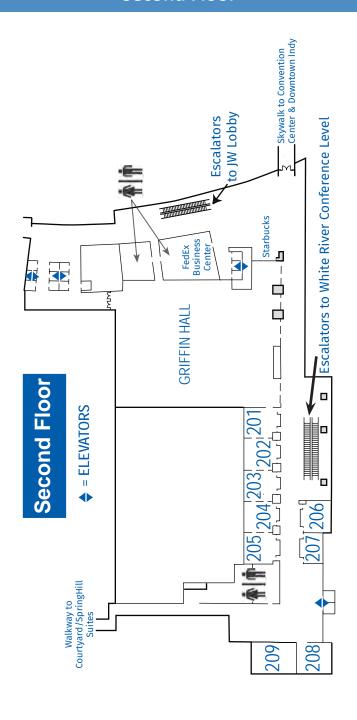
Veterinary Student Poster Awards

#### **ZOETIS**

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

Thank you!

# JW MARRIOTT INDIANAPOLIS Second Floor



### **JW Marriott Indianapolis**

