

# 2019 USAHA-AAVLD ANNUAL MEETING

October 24 - 30, 2019  
Rhode Island Convention Center



**123rd Annual Meeting  
United States Animal Health Association**

**62nd Annual Conference  
American Association of Veterinary  
Laboratory Diagnosticians**

Program Guide Sponsored by:  
**bioMérieux**



# OFFICERS AND ADMINISTRATIVE STAFF

## 2019 USAHA Officers

President.....	Kristin Haas
President-elect.....	Marty Zaluski
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## 2019 AAVLD Officers

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Vice-President.....	Shuping Zhang
Secretary-Treasurer.....	Kristy Pabilonia
Immediate Past-President.....	Steve Hooser

## USAHA Administrative Staff

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## AAVLD Administrative Staff

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Visalia, CA 93290

### Meeting Services

Taylor Made Event Co., Kaylin Taylor

[kaylin@taylormadeeventco.com](mailto:kaylin@taylormadeeventco.com)

## ANNUAL MEETING APP

Get schedule information, attendee list, announcements and more through the app, available at the App Store or Google Play.

Just search for AAVLD USAHA.

**Welcome to  
USAHA's 123rd Annual Meeting  
and  
AAVLD's 62nd Annual Conference**

**ANNOUNCEMENTS**

**USAHA/AAVLD Headquarters  
Rhode Island Convention Center  
Providence, Rhode Island**

**Registration Fees**

**On-Site Fee Schedule:**

Member Registration.....	\$395.00
Non-Member Registration.....	\$630.00
Life Member Registration.....	\$165.00
One-Day Registration MEMBER.....	\$220.00
One-Day Registration NON-MEMBER.....	\$250.00
Two-Day Registration MEMBER.....	\$280.00
Two-Day Registration NON-MEMBER.....	\$305.00
Resident or Graduate Student Registration.....	\$135.00
Veterinary Student Registration.....	\$ 0.00
Spouse Registration Fee.....	\$100.00
USAHA 2019 Individual Dues.....	\$175.00
USAHA 2020 Individual Dues.....	\$175.00
AAVLD 2019 Annual Dues.....	\$250.00
AAVLD 2020 Annual Dues.....	\$250.00
AAVLD 2019 Graduate Student or Resident Dues .....	\$ 35.00
AAVLD 2020 Graduate Student or Resident Dues .....	\$ 35.00
AAVLD 2019 Associate Dues.....	\$100.00
AAVLD 2020 Associate Dues.....	\$100.00

**You must register and have a badge to attend meetings.**

**Registration Schedule**

Wednesday, October 23, 2019.....	3:00 pm-6:00 pm
<i>Pre-registration only</i>	
Thursday, October 24, 2019.....	7:00 am-6:00 pm
Friday, October 25, 2019.....	7:00 am-6:00 pm
Saturday, October 26, 2019.....	7:00 am-5:00 pm
Sunday, October 27, 2019.....	7:00 am-5:00 pm
Monday, October 28, 2019.....	7:00 am-5:00 pm
Tuesday, October 29, 2019.....	7:30 am-5:00 pm
Wednesday, October 30, 2019.....	7:30 am-10:00 am

# ANNOUNCEMENTS

## **AAVLD Exhibits/Posters**

Exhibits and Posters – Rhode Island Convention Center

### **Posters:**

Saturday, October 26: 9:00 am-6:00 pm  
Authors present: 3:00-4:00 pm

Sunday, October 27: 9:00 am-1:00 pm  
Authors present: 12:00-1:00 pm

### **Exhibits:**

Saturday, October 26: 9:00 am-6:00 pm  
(refreshments 9:00-11:00; 11:30-1:00; 2:00-3:00; 5:00-6:00)

Sunday, October 27: 9:00 am-1:00 pm  
(refreshments 9:00-10:30; 11:30-1:00)

### **Agendas & Announcements**

Agendas and announcements will be located in the registration area. Please check often for last minute changes in the program, times and locations of Committee meetings and other pertinent information. Information and updates can also be viewed in the meeting app.

### **USAHA Display Tables**

Rotunda Foyer

Sunday 2:00 pm - Wednesday 12:00 pm

### **Work Room**

Rotunda

8:00 am-5:00 pm

Thursday, October 24 through Tuesday, October 29

8:00 am-12:00 pm

Wednesday, October 30

### **Press Room and**

### **Committee Report Reading Room**

Rotunda

8:00 am-5:00 pm

Thursday, October 24 through Tuesday, October 29

8:00 am-12:00 pm

Wednesday, October 30

### **USDA-APHIS-VS Work Room**

Providence Room Level 4

Thursday, October 24 through Wednesday, October 30

# POSTER SESSION

Saturday, October 26 – Sunday, October 27

- 109. Low Level exposure to Hydrogen Sulfide increases the pathogenicity of Influenza A Virus in swine # \***  
Cristina Marie Santana Maldonado, Phillip Gauger, Drew Magstadt, Amber Vegter, Denusha Shrestha, Chandrashekhar Charavaryamath, Wilson Kiiza Rumbiha
- 110. A novel online metagenome-based pathogen detection tool # \***  
Sai Aravindh Sankara Narayanan, Andres Espindola, Jerry Malayer, Kitty Cardwell, Akhilesh Ramachandran
- 111. Identification and genomic analysis of inter-serotype reassortant epizootic hemorrhagic disease viruses in the United States**  
Leyi Wang, Saraswathi Lanka, Debbie L. Cassout, Nohra Mateus-Pinilla, Ganwu Li, William C. Wilson, Dongwan Yoo, Paul Shelton, Richard Fredrickson
- 112. Creation and validation of a novel real-time PCR for Cervid Adenovirus**  
Jennifer McKenna, Myrna M. Miller, Marce Vasquez
- 113. Virulent Newcastle disease in backyard exhibition chickens in Utah**  
Jane Kelly, David Frame, Arnaud J. VanWettere, Barry Pittman, Thomas J. Baldwin
- 114. Evaluation of pre-enrichment and pooling for direct detection of *Mycoplasma bovis* in milk samples**  
Gloria Gioia, Laura B. Goodman, Brittany D. Chilson, Renee Anderson, Carlos Santisteban, Paolo Moroni
- 115. Recurrent gastrointestinal foreign bodies with disseminating gastrointestinal mycetoma in a dog**  
Shih-Hsuan Hsiao, Natalie M. Kirk
- 116. Jamestown Canyon virus Isolated from horse swabs in South Dakota**  
Melinda Jenkins-Moore, Katherine Mazingo, Rachel M. Tell, Mary Lea Killian, Leo Koster, Kerrie Franzen, Alicia Janas-Martindale, Todd Tedrow
- 117. A commercially available competitive ELISA for the detection of EDHV antibodies**  
Josh Blase, Mickael Roche, Muriel Malzac, Loic Comtet, Philippe Pourquier
- 118. Molecular mycological detection and phylogenetic analysis of *Mycoleptodiscus indicus* infection in a cat \* † ◇**  
Grazieli Maboni, Paula Krimer, Rodrigo de Paula Baptista, Ana Lorton, Suan Sanchez
- 119. Characterization of multidrug resistant *Histophilus somni* associated with Bovine Respiratory Disease**  
Caitlyn Deal, John Dustin Loy
- 120. ONE HEALTH: Veterinary faculty perceptions in international public health**  
Ronaldo Magtoto

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**Symbols at the end of titles indicate the following designations:**

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|---|--|
| § AAVLD Laboratory Staff Travel Awardee | * Graduate Student Poster Presentation Award Applicant |
| # AAVLD Trainee Travel Awardee          | † Graduate Student Oral Presentation Award Applicant   |
| + AAVLD/ACVP Pathology Award Applicant  |  |
| ◇ USAHA Paper                           |  |

## POSTER SESSION *continued*

- 121. A universal approach to animal health sample preparation using the MagMAX CORE nucleic acid purification kit for laboratory use including veterinary and environmental uses**  
Quoc Hoang, Lillian Manley, Ivan Leyva Baca, Richard Conrad
- 122. Animal poisoning in the Republic of Korea: 45 years of epidemiological data from the Animal and Plant Quarantine Agency**  
hyunkyong lee, Soon-Seek Yoon, KyungHyun Lee, Eunjin choi, ByungJae So
- 123. Histopathological characterization and tissue distribution of pathogen in canine granulocytic anaplasmosis in the Republic of Korea**  
hyunkyong lee, Seunghee Lee, Jung-Won Park, Soon-Seek Yoon, Hyun-Ji Seo, Jinhyeong Noh, Yun Sang Cho, ByungJae So
- 124. Iba1 Immunohistochemical Evaluation of a Case of Transmissible Venereal Tumor: Further Support Against a Histiocytic Immunophenotype**  
Caitlyn Callaghan, Kristin Varner, Karla Nova, Kenneth Kim
- 125. New Real-time PCR Assays for Detection of Equine Herpesvirus 1 and Equine Herpesvirus 4 and Genotyping of Equine Herpesvirus 1**  
Zhenyu Shen, Michael Zhang, Shuping Zhang
- 126. Effect of mismatch between extraction kit and viral nucleic acid type on PCR testing**  
Jin-Ho Kim, Baoqing Guo, Hanjun Kim, Kyoung-Jin Yoon
- 127. Marked panuveitis in a case of uveal schwannoma of a Blue-eyed dog**  
Kristin Varner, Caitlyn Callaghan, Megan Climans, Gillian C. Shaw, Kenneth Kim, Marcella Ashton
- 128. Unique antimicrobial susceptibility patterns in animal-associated *Acinetobacter spp.* reveal high rate of multidrug resistance \* †**  
Grazieli Maboni, Mauricio Seguel, Ana Lorton, Suan Sanchez
- 129. Development of two multiplex Real-Time qPCR (RT-qPCR) assays for detecting main pathogens associated with bovine respiratory disease complex (BRDC)**  
Christian Savard, Andre Broes
- 130. Atypical porcine pestivirus (APPV) prevalence in the US swine herds**  
Yuan Feng, Fangfeng Yuan, Jianfa Bai, Lalitha Peddireddi
- 131. Pathology of cryptosporidiosis in raccoons (*Procyon lotor*) # + \* †**  
Viviana Gonzalez-Astudillo, Mauricio A. Navarro-Badilla, Matthew F. Sheley, Francisco Uzal
- 132. Prevalence and genotyping of Bovine viral diarrhea virus in cattle across Wisconsin**  
Ailam L. Lim, Kate Palmer, Donald C. Sockett
- 133. Confirmation of *Avibacterium Paragallinarum* by Next Generation Sequencing**  
Yi Candy Zhang, Rebecca Mackey, Martha Pulido-Landinez, JayKay Thornton, Lifang Yan
- 134. Validation of MagMAX CORE nucleic acid purification of Porcine Reproductive and Respiratory Syndrome Virus**  
Tracy Lene Otterson, Phillip Blomberg, Elisabeth Edgerton, Julie Pilot, Lindsey Raymond, Elizabeth Rogers, Jennifer Voison, Michele Leiferman, Stephanie Rossow, Jerry Torrison

## POSTER SESSION *continued*

- 135. Antiviral activity of synthesized IFN- $\lambda$ 3 and PEGylated IFN- $\lambda$ 3 against Bovine viral diarrhea virus in vitro # \***  
Molly J. Carpenter, John Arguello, Matthew Caldemeyer, Kirsten Reed, John W. Wallen, Christie Mayo
- 136. Small ruminant necropsy diagnoses in Wisconsin 2009-2018**  
Lorelei Lynne Clarke, Elizabeth J. Elsmo, Doug Lyman, Kathleen Deering, Jaimie Miller, Phil Bochsler
- 137. Prevalence of *Salmonella* serovars in submitted clinical samples of food and companion animals to Texas A&M Veterinary Medical Diagnostic Laboratory(TVMDL): Year 2014 to 2018  $\diamond$**   
Owais Ahmed Khan, Jessica D. Monday, Russell H. Raleigh, Sonia W. Lingsweiler, Amy K. Swinford
- 138. Phenotypic characterization, antibiogram and risk factors of *Salmonella* isolates from Chicken, Stool, Farm and Market's eggs in Jimma Town, Ethiopia \*  $\diamond$**   
Diriba Taddese Legesse
- 139. Lameness, medication, surgery, and exercise as risk factors for catastrophic musculoskeletal injury in racehorses**  
Peta Lee Hitchens, Ashley E. Hill, Susan Stover
- 140. Equine cytokine and chemokine multiplex assays**  
Cassandra M. Guarino, Alicia Rollins, Heather Freer, Diane Kilts, Bettina Wagner
- 141. Rapid sequence-based diagnostic characterization of African Swine Fever virus using Oxford Nanopore Minion sequence sensing device along with a companion analysis software tool  $\diamond$**   
Vivian K. O'Donnell, Frederic R. Grau, Gregory A. Mayr, Tracy L. Sturgill Samayoa, Kimberly A. Dodd, Roger William Barrette
- 142. Fast and convenient nucleic acid extraction method for mastitis diagnostics**  
Quoc Hoang, Anne Quijada, Emeline Ripoche, Denisse Meza, Robert Sterling Tebbs
- 143. Mastitis diagnosis utilizing a turnkey solution from Thermo Fisher Scientific's Animal Health**  
Quoc Hoang, Robert Sterling Tebbs, Anne Quijada, Emeline Ripoche, Denisse Meza, Richard Conrad
- 144. Influence of technician on PRRSV OF ELISA test results \*  $\dagger$**   
Alexandra Henao-Diaz, Anne Harrenstein, Ju Ji, Luis Gabriel Gimenez-Lirola, Jeff Zimmerman, Dave Baum
- 145. Whole-Genome Sequencing for detecting serotypes and virulence genes in *Haemophilus parasuis* isolates  $\diamond$**   
Nubia Macedo, Rodger Main, Ganwu Li, Orhan Sahin
- 146. Integrated security program considerations for Animal Laboratories**  
Ryan N. Burnette, Bersabeh Tigabu

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| # AAVLD Trainee Travel Awardee          |  |
| + AAVLD/ACVP Pathology Award Applicant  | $\dagger$ Graduate Student Oral Presentation Award Applicant |
| $\diamond$ USAHA Paper                  |  |

## POSTER SESSION *continued*

**147. Genotypic and phenotypic antimicrobial susceptibility assessment of *Campylobacter jejuni* isolates associated with small ruminant abortions**

Kris A. Clothier, Heather Fritz

**148. Epidemiology and pathological characterization of Infectious Bronchitis Virus infection in California backyard chickens + \* †**

Omar antonio gonzales viera, Francisco R. Carvallo, Emily R. Blair, Rodrigo Gallardo, Beate Crossley, Asli Mete

**149. Implementation of automated procedures for whole genome sequencing**

Melanie Prarat, Katherine Shiplett, Yan Zhang

**150. Respiratory viruses identified in Western Canadian beef cattle by high throughput sequencing and their association with bovine respiratory disease # † ◇**

Maodong Zhang, Janet E. Hill, Yanyun Huang

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+ AAVLD/ACVP Pathology Award Applicant

◇ USAHA Paper

\* Graduate Student Poster

Presentation Award Applicant

† Graduate Student Oral

Presentation Award Applicant



# THURSDAY, OCTOBER 24, 2019

**Registration: 7:00 am-6:00 pm**

## **Daily Events**

7:15 am-8:00 am	<b>Accreditation and Quality Assurance Symposium Breakfast</b> Ballroom D
7:30 am-11:30 am	<b>Getting Started with NGS (Next Generation Sequencing)</b> – Morning Session 552 ( <i>Registration/addt'l fee required</i> )
8:00 am-12:00 pm	<b>Accreditation and Quality Assurance Symposium</b> Ballroom D ( <i>Registration/addt'l fee required</i> )
8:00 am-12:00 pm	<b>USA LIMS User Group</b> 551 ( <i>Registration Required</i> )
12:30 pm-4:30 pm	<b>Getting Started with NGS (Next Generation Sequencing)</b> – Afternoon Session 552 ( <i>Registration/addt'l fee required</i> )
1:00 pm-3:00 pm	<b>Fundamental Requirements for an FDA Regulatory Laboratory Data Packet</b> 550 ( <i>Registration Required</i> )
1:00 pm-5:00 pm	<b>AAVLD/NAHLN IT Meeting</b> Ballroom D
1:00 pm-5:00 pm	<b>AAVLD Accreditation Committee - COMMITTEE ONLY</b> Ballroom E
2:00 pm-4:00 pm	<b>Best Practices for Submitting, Reviewing, and Publishing Manuscripts in JVDI</b> 553 ( <i>Registration Required</i> )
4:30 pm-5:00 pm	<b>Open Q&amp;A Session: Ask your Fellow Diagnosticians</b> 552 ( <i>Registration Required</i> )
4:30 pm-6:00 pm	<b>Q-Pulse User Group (Users Only)</b> 551
5:30 pm-6:00 pm	<b>New Member Orientation</b> Ballroom C
6:00 pm-7:00 pm	<b>Networking Reception with New Members</b> Ballroom C

# FRIDAY, OCTOBER 25, 2019

**Registration: 7:00 am-6:00 pm**

## Daily Events

7:00 am-8:00 am	<b>AAVLD Financial Advisory Committee</b> 556A
7:30 am-12:30 pm	<b>AAVLD Bacteriology Mini-Symposium: AST – The Devil's in the Details</b> Ballroom B ( <i>Registration/addt'l fee required</i> )
8:00 am-9:00 am	<b>AAVLD Membership Committee</b> 556A
8:00 am-11:00 am	<b>AAVLD Parasitology Committee</b> 550
8:00 am-12:00 pm	<b>AAVLD Accreditation Committee - COMMITTEE ONLY</b> 554
8:00 am-5:00 pm	<b>AAVLD Informatics Committee</b> 551
8:00 am-5:50 pm	<b>19th CL Davis/SW Thompson Diagnostic Pathology Symposium: Diagnostic Pathology of Lymphoid Organs</b> 557 ( <i>Separate Reg. &amp; Addt'l Fee Required</i> )
9:00 am-5:30 pm	<b>Meet and Greet Tabling Session</b> Rotunda Foyer
9:00 am-10:00 am	<b>AAVLD Publications Committee</b> 556B
9:15 am-12:00 pm	<b>USAHA Executive Committee Lunch</b> 556A
10:00 am-12:00 pm	<b>AAVLD Editorial Board of Journal of Veterinary Diagnostic Investigation (JVDI)</b> 556B
10:00 am-12:00 pm	<b>AAVLD &amp; NAHLN Laboratory Emergency Management Committee</b> 552
10:00 am-12:00 pm	<b>AAVLD Epidemiology Committee</b> 553
10:00 am-5:00 pm	<b>AAVLD Exhibits &amp; Poster Board Set Up Begins</b> Ballroom A
12:30 pm-1:30 pm	<b>AAVLD Subcommittee on Bacteriology and Mycology</b> Ballroom B
1:00 pm-2:00 pm	<b>ABVT Annual Meeting</b> 553
1:00 pm-3:00 pm	<b>AAVLD Virology Committee</b> 555
1:00 pm-5:00 pm	<b>AAVLD Executive Board – COMMITTEE ONLY</b> 554
1:00 pm-5:00 pm	<b>AAVLD Quality Assurance Committee</b> 552
1:00 pm-6:00pm	<b>National Assembly of State Animal Health Officials – Open Meeting</b> Ballroom D
1:30 pm-2:15 pm	<b>AAVLD Subcommittee on Antimicrobial Susceptibility Testing Business Meeting</b> Ballroom B
2:00 pm-6:00 pm	<b>AAVLD/AAVCT Business Meeting &amp; Case Presentations</b> 553
2:30 pm-4:30 pm	<b>AAVLD Diagnostic Bacteriology Case Reports</b> Ballroom B
3:00 pm-5:00 pm	<b>AAVLD Laboratory Technology Committee</b> 555
5:00 pm-6:00 pm	<b>Vet-LIRN Meeting</b> Ballroom B
5:00 pm-6:00 pm	<b>AAVLD Constitution, Bylaws and Resolutions Committee</b> 556A
6:00 pm-9:00 pm	<b>AAVLD Reception and Foundation Auction</b> Exhibit Hall A

# SATURDAY, OCTOBER 26, 2019

Registration: 7:00 am-5:00 pm

## Daily Events

7:00 am-8:00 am	<b>AAVLD Foundation Committee</b> 558
8:00 am-11:30 am	<b>AAVLD Plenary Session – Advances in Diagnostics and Impact on One Health</b> Exhibit Hall A
8:00 am-12:00 pm	<b>National Assembly of State Animal Health Officials Meeting – Closed Meeting</b> Narragansett A&B - OMNI
9:00 am-6:00 pm	<b>AAVLD Exhibits</b> Ballroom A Beverages 11:30 am-1:00 pm; Food and Bev. 9:00 am & 2:00 pm; Wine/Cheese 5:00 pm
9:00 am-6:00 pm	<b>AAVLD Poster Session</b> Ballroom A Presenters 3:00 pm-4:00 pm
9:30 am-11:30 am	<b>Spouses Brunch</b> 550
11:30 am-12:15 pm	<b>AAVLD House of Delegates and General Membership</b> Exhibit Hall A
12:00 pm-1:30 pm	<b>Veterinary Student Luncheon</b> 550
1:00 pm-3:00 pm	<b>AAVLD Scientific Session Pathology I</b> 557
1:00 pm	<b>Moderators:</b> Grant N. Burcham and Maria Spinato Cytologic morphology of subcutaneous <i>Mycleptodiscus indicus</i> infection in an immunocompetent cat + Paula M. Krimer, Grazieli Maboni, Rodrigo de Paula Baptista, Ana Lorton, Christina Anderson, Suan Sanchez
1:15 pm	Chronic wasting disease in Mississippi white-tailed deer Heidi Huffman Rose, Brittany S. Baughman, Alejandro Banda, William T. McKinley, Tina Hay Eichelberger, Rebecca Mackey
1:30 pm	Histopathological diagnosis of selected Equine and Canine viral diseases by in situ hybridization of Formalin-fixed paraffin-embedded tissues Gerald E. Duhamel, Andrew D. Miller, Randall Renshaw, Edward J. Dubovi
1:45 pm	Cervical pole necrosis of the equine allantochorion Alan T. Loynachan
2:00 pm	Multiple cases of chondrodysplasia in beef calves in Iowa Drew Magstadt, Scott Louis Radke, Vickie Cooper, Kent J. Schwartz
2:15 pm	Comparison of urine cytokines from Dogs with urinary carcinoma and UTI Stephen Cole
2:30 pm	Characterization of an RNA ISH probe for the diagnosis of feline infectious peritonitis virus and comparison with the current gold standard § Nicole M. Andre, Arjun Sweet, Gary R. Whittaker, Andrew D. Miller
2:45 pm	Pathological findings associated with Eastern equine encephalitis virus and West Nile virus infections in wild ruffed grouse ( <i>Bonasa umbellus</i> ) from Wisconsin in 2018-2019 Elizabeth J. Elsmo, Phil Bochsler, Lorelei Lynne Clarke, Kathleen Deering, Ailam L. Lim, Jaimie Miller, Nancy Businga, Lindsey Long
1:00 pm-3:00 pm	<b>AAVLD Scientific Session Bacteriology I</b> 554 <b>Moderators:</b> Durda Slavic and John D. Loy

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+ AAVLD/ACVP Pathology Award Applicant	† Graduate Student Oral
◇ USAHA Paper	† Presentation Award Applicant

# SATURDAY, OCTOBER 26, 2019

## Daily Events *Continued*

- 1:00 pm Utility of different semisolid media for isolation of *Mycoplasma* spp. from canine lower respiratory specimens  
Joshua B. Daniels, Thomas Peppard
- 1:15 pm Whole Genome Sequencing investigation of a Carbapenem-Resistant *E. coli* Isolate from a Dog  
Stephen Cole, Shelley C. Rankin
- 1:30 pm Evidence for increasing and widespread antimicrobial resistance in *Salmonella* Dublin isolates associated with disease in cattle in California over the study period 1991-2018  
Heather Fritz, Richard Pereira, Kathy Toohey-Kurth, Kris A. Clothier
- 1:45 pm Joint FDA and USDA report on antimicrobial resistance pilot projects for 2018  
Beth Harris, Jennifer Rodriguez, Olgica Ceric, Greg Tyson, Renate Reimschuessel
- 2:00 pm Genomic analysis and virulent factors of *Klebsiella pneumoniae* isolated from mastitis cows in the United States \* †  
Zhiyi Zheng, Nicholas John Backes, Phillips Gregory, Gordon Patrick, Xiaoqin Xia, Ying Zheng, Ganwu Li
- 2:15 pm An outbreak of *Mycoplasma bovis* in free-ranging Wyoming pronghorn (*Antilocapra americana*)  
Jennifer Malmberg, Terry Creekmore, Erika Peckham, Marguerite Johnson, Halcyon Killion, Madison Vance, Daniel Bradway, Noah C. Hull, Donal O'Toole, Kerry Sondgeroth
- 2:30 pm Isolation and characterization of invasive *Streptococcus pneumoniae* from an infant rhesus monkey (*Macaca mulatta*) died of fulminant meningitis  
Sung Guk Kim, Christine Summage-West, Lillie Sims, Leah Rowe, Kelly Davis
- 2:45 pm Whole-Genome Sequencing for predicting toxinotypes and antimicrobial resistance in *Clostridium perfringens*  
Orhan Sahin, Lei Dai, Curt Thompson, Zuowei Wu, Nubia Macedo, Ganwu Li, Rodger Main
- 1:00 pm-3:00 pm **AAVLD Scientific Session Epidemiology I** 555  
**Moderators:** Orhan Sahin and Ashley E. Hill
- 1:00 pm Congenital abnormalities in neonatal or near-term aborted bovine and ovine clones  
David J. Wilson, Thomas J. Baldwin, Chelsea W. Barker
- 1:15 pm Which route of exposure is best for *Mycoplasma hyopneumoniae* gilt acclimation? \* †  
Ana Paula Poeta Silva, Aric McDaniel, Bailey Lauren Arruda, Daniel C. L. Linhares, Luis Gabriel Gimenez-Lirola, Carmen Alonso, Rachel Derscheid, Locke Karricker, Paul Yeske, Jeff Zimmerman, Maria Clavijo
- 1:30 pm Comparative genomics identifies methicillin-resistant *Staphylococcus pseudintermedius* ST71 as highly clonal across different geographical locations, irrespective of isolation sources  
Narayan C. Paul, Lisa Page Jones, Margaret Alison Davis, Vincent Perreten, J Scott Weese, Joshua B. Daniels, Paul S. Morley, Rowland Cobbold, Devendra H. Shah
- 1:45 pm Retrospective survey of parasites identified in feces of 7,408 client-owned dogs at Oklahoma State University from 2007 through 2018  
Yoko Nagamori, Mark Payton, Emily Looper, Hadley Apple, Katherine Herrick, Eileen Johnson
- 2:00 pm Retrospective survey of parasites identified in feces of 2,586 client-owned cats at Oklahoma State University from 2007 through 2018  
Yoko Nagamori, Mark Payton, Emily Looper, Hadley Apple, Katherine Herrick, Eileen Johnson

# SATURDAY, OCTOBER 26, 2019

## Daily Events *Continued*

- 2:15 pm An epizootic of Canine Distemper in Michigan wild carnivores: 2014-2018  
Scott D. Fitzgerald, Amber R. Olson, Julie R. Melotti, Thomas M. Cooley, Daniel J. O'Brien, Roger K. Maes
- 2:30 pm Catastrophic tibial fractures in racehorses # + †  
Monika Aleksandra Samol, Susan Stover, Francisco Uzal, Rick Arthur
- 2:45 pm PRRSV-specific antibody detection in fecal samples - a pilot study \* †  
Alexandra Henao-Diaz, Gang Wang, Ju Ji, Luis Gabriel Gimenez-Lirola, Jeff Zimmerman
- 1:00 pm-3:00 pm **AAVLD Scientific Session Virology 556**  
**Moderators:** Suresh V. Kuchipudi and Ailam L. Lim
- 1:00 pm Detection of Deer adenovirus A in vaginal samples from mule deer (*Odocoileus hemionus*) and Rocky Mountain elk (*Cervus elaphus nelsoni*) and potential transmission to offspring  
Kayla Kauffman, Todd Cornish, Brant Andrew Schumaker, Kevin Monteith, Mathew Hayes, Tayler Lasharr, Katey Huggler, Myrna M. Miller
- 1:15 pm Generation and characterization of heterohybridoma clones stably producing porcine immunoglobulin monoclonal antibodies to Foot-and-Mouth Disease Virus Serotype O1 Manisa  
Chungwon Joseph Chung, Erica Martel, Jacob Rutherford, Jose Barrera, Michael Puckette, William Hurtle, John Neilan
- 1:30 pm First isolation and in vivo characterization of porcine circovirus 3 # †  
Juan Carlos Mora-Diaz, Pablo E. Pineyro, Huigang Shen, Ganwu Li, Kent J. Schwartz, Bailey Lauren Arruda, Luis Gabriel Gimenez-Lirola
- 1:45 pm A novel astrovirus from a pig with non-suppurative poliоencephalitis, Australia  
Mark Hawes, Honglei Chen, Som Walker, Gemma Harvey, Brenda Van der Heide, David T. Williams, Debbie Eagles, Jianning Wang
- 2:00 pm What was old is new again: viral culture and nanopore sequencing for identification and characterization of novel viral pathogens  
Kevin Lahmers, James Evermann, James B. Stanton, S Michelle Todd, Alexander Bradshaw, Caitlin Mason, Tanya LeRoith, Jessica Shiflett, Lorraine Tanaka
- 2:15 pm Application and comparison of iSeq100 and MinION sequencing in identifying Avian Infectious Bronchitis Virus  
Lifang Yan, Rebecca Mackey, Yi Candy Zhang, Alejandro Banda, Scott Baughman, Lanny Pace
- 2:30 pm Development and validation of a new real-time PCR for African Swine Fever  
Elodie Pautet, Sandrine Moine, Richard Conrad
- 2:45 pm Detection and genetic characterization of porcine sapovirus from pigs with diarrhea in the U.S.  
Huigang Shen, Leyi Wang, Ying Zheng, Anping Wang, Phillip Gauger, Jianqiang Zhang, Eric Burrough, Thomas Petznick, Ganwu Li

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| + AAVLD/ACVP Pathology Award Applicant  | † Graduate Student Oral        |
| ◇ USAHA Paper                           | † Presentation Award Applicant |

# SATURDAY, OCTOBER 26, 2019

## Daily Events *Continued*

- 1:00 pm-3:00 pm **AAVLD Scientific Session Serology** Ballroom C  
**Moderators:** Pamela J. Ferro and Devi P. Patnayak
- 1:00 pm A new indirect ELISA to improve accuracy and consistency of Mycoplasma bovis diagnostics  
Josh Blase, Alix Carpentier, Kevin Martin, Loic Comtet, Philippe Pourquier
- 1:15 pm Trouble-shooting and improving assay performance at the benchtop level  
Jamica Fonseca, Suzy Block, Sheila Heinen, Jeff Zimmerman, Luis Gabriel Gimenez-Lirola, Dave Baum
- 1:30 pm Performant competitive and indirect ELISAs for the diagnosis of African Swine Fever on domestic swine and wild boar  
Josh Blase, Loic Comtet, Mickael Roche, Fabien Donnet, Philippe Pourquier
- 1:45 pm Heat-inactivation of cell culture fetal bovine serum and diagnostic test serum samples – is it necessary?  
Jillian Fishburn, Jeremiah T. Saliki
- 2:00 pm A bead-based assay for the detection of risk of infection and protective immunity against EHV-1 infection in horses and other equids  
Cassandra M. Guarino, Alicia Rollins, Bettina Wagner
- 2:15 pm Applying the Deming Plan-Do-Study-Act (P-D-S-A) cycle of continuous improvement to reduce variation in the IDEXX Mycoplasma hyopneumoniae ELISA  
Qiaoling Gong, Mingxi Guo, Sheila Norris, Suzy Block, Jeff Zimmerman, Luis Gabriel Gimenez-Lirola, Dave Baum
- 2:30 pm Development of an Bartonella henselae specific ELISA  
Andreas Latz, Markus Jost, Volkhard Kempf
- 2:45 pm Use of chimeric Eastern Equine Encephalitis virus in an IgM antibody capture enzyme-linked immunosorbent assay for diagnosis of EEE Infection in Horses  
Karthik Kumar K. Shanmuganatham, Randy G. Atchison, Sue M. Klein, Ashley R. Nagel, Joshua H. Thompson, Albert Van Geelen, Sabrina L. Swenson
- 1:00 pm-3:00 pm **AAVLD Scientific Session Molecular Diagnostics and Bioinformatics 1** Ballroom E  
**Moderators:** Rebecca P. Wilkes and Yan Zhang
- 1:00 pm High-Throughput tick specimen processing for nucleic acid extraction §  
Zachary C. Forbes, Renee Anderson, John S. Beeby, Amy Glaser, Laura B. Goodman
- 1:15 pm Senecavirus A detection from piglets using processing fluid samples  
Tracy Lene Otterson, Phillip Blomberg, Albert Rovira
- 1:30 pm Sequencing of pilin locus in Moraxella bovis reveals deletions and truncated proteins  
Joshua Elston, Jessica Peterson
- 1:45 pm Repeatability of open reading frame 5 sequencing for Porcine Reproductive and Respiratory Syndrome Virus at different concentrations \* †  
Nicholas Streauslin, Karen Harmon, Phillip Gauger
- 2:00 pm Escherichia coli virulence screening for veterinary diagnostics using whole genome sequencing data §  
Patrick Mitchell, Brittany D. Chilson, Tong Ho, Esra I. Dogan, Renee Anderson, Reddy Bommineni, Shipra Dutta Mohan, Rebecca P. Wilkes, Hemant Kashinath Naikare, Cynthia Watson, Lanny Pace, Martha Pulido-Landinez, Amar Patil, Sarmila Dasgupta, Shannon Mann, Donna Kelly, Whitney LaRoche, Rebecca Franklin-Guild, Laura B. Goodman
- 2:15 pm Evaluation of targeted Next Generation Sequencing for

# SATURDAY, OCTOBER 26, 2019

## Daily Events *Continued*

	detection of equine pathogens in clinical samples Eman Anis, Marcia R.S. Ilha, Julie B. Engiles, Rebecca P. Wilkes
2:30 pm	Characterization of a novel human seasonal H3 influenza A virus spillover that is now endemic in US swine Aditi Sharma, Michael Zeller, Tavis Anderson, Amy L. Vincent, Karen Harmon, Ganwu Li, Jianqiang Zhang, Phillip Gauger
2:45 pm	Next Generation Sequencing (NGS)-Based Metagenomic Analysis: A promising diagnostic tool to identify pathogens in the blood of horses with febrile illness Murugan Subbiah, Nagaraja Thirumalapura, Julia Livengood, Derek Veith, David Thompson, Suresh Varma Kuchipudi, Bhushan Jayarao, Deepanker Tewari
1:00 pm-3:00 pm	<b>AAVLD Laboratory Operations and Management Committee</b> 552
1:00 pm-3:00 pm	<b>JOINT Committee on Diagnostic Laboratory and Veterinary Workforce Development</b> 553
1:00 pm-6:00 pm	<b>USDA APHIS VS Open Forum</b> Ballroom B
1:30 pm-3:00 pm	<b>Extension Veterinarians Business Meeting</b> 551
3:00 pm-4:00 pm	<b>AAVLD Poster Session – Authors present</b> Ballroom A
3:00 pm-5:00 pm	<b>AAVLD Laboratory Safety Committee</b> 556
3:00 pm-6:00 pm	<b>Applied Animal Health, Public Health Research and Extension Veterinarians Symposium</b> 551
3:30 pm-4:15 pm	<b>Veterinary Diagnostic and Animal Facility Construction Delivery Options - Presented by The Clark Enersen Partners &amp; McCownGordon Construction</b> 553
3:30 pm-4:15 pm	<b>AAVLD Bacteriology Steering Committee</b> 554
3:30 pm-5:30 pm	<b>AAVLD Government Relations Committee</b> 552
3:30 pm-5:45 pm	<b>AAVLD Diagnostic Pathology Slide Seminar</b> 557
3:30 pm-6:30 pm	<b>AAVLD Committee on Environment and Toxicology</b> Ballroom C
4:45 pm-5:15 pm	<b>African Swine Fever: Disease, Diagnostics and the Global Scene - Presented by Tetracore</b> 553
5:30 pm-7:30 pm	<b>ACVPM Diplomates Reception – By Invitation</b> 550
6:00 pm-8:00 pm	<b>AAVLD Laboratory Directors Committee</b> 555
6:00 pm-6:30 pm	<b>Identification of Truly Negative Animals to M. bovis presented by Dr. Rafael Paiva - Presented by IDEXX</b> 553
6:00 pm-6:30 pm	<b>African Swine Fever, the virus that loves to travel internationally</b> <b>Outbreak readiness - Presented by Thermo Fisher Scientific</b> 556
6:00 pm-8:30 pm	<b>AAVLD Gross Pathology Mock Examination</b> 557 (Registration Required)
6:30 pm-8:00 pm	<b>USAHA Committee on Program</b> 552
6:30 pm-7:00 pm	<b>From established sample and assay technologies to novel point-of-need applications, discover how INDICAL's solutions help to improve veterinary testing - Presented by INDICAL Inc.</b> 554
7:00 pm-7:30 pm	<b>Next Generation Sequencing &amp; Microarray Advances in Veterinary Diagnostics and Breeding Presenter:</b> Kahil Lawless, Ph.D. - <b>Presented by – Illumina</b> 556
8:00 pm-11:00 pm	<b>Saturday Night Reception – Hosted by IDEXX</b> Narragansett A&B - OMNI

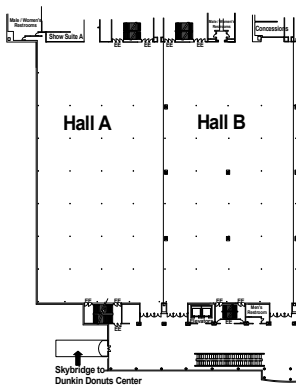
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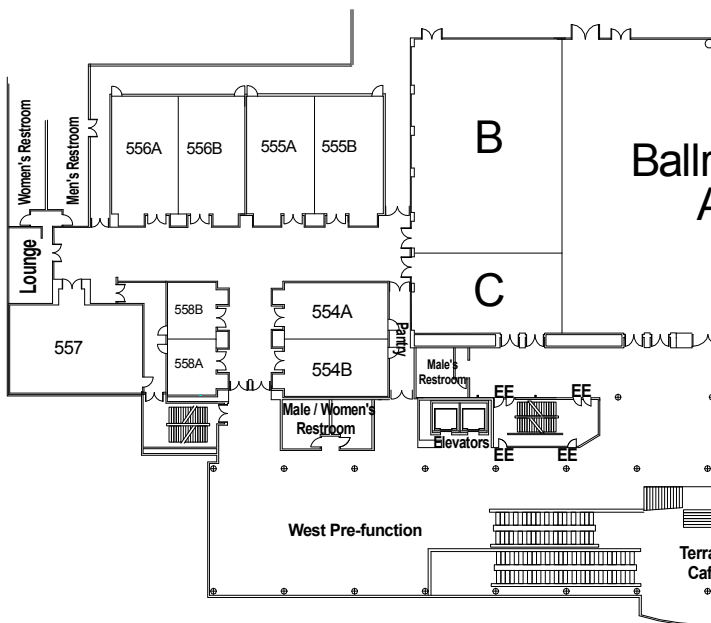
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Meeting Space

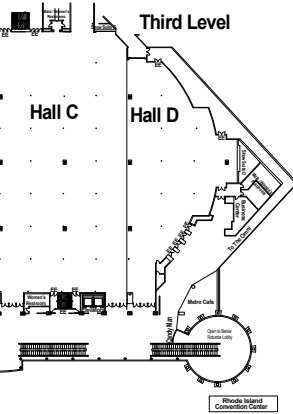
Rhode Island  
 Convention Center



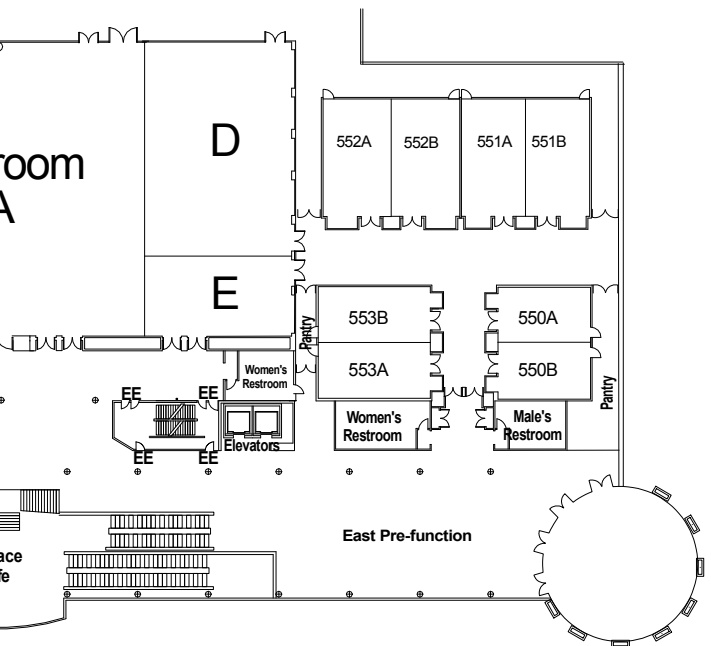
Fifth Level







Level



# SUNDAY, OCTOBER 27, 2019

**Registration: 7:00 am-5:00 pm**

## Daily Events

- 6:30 am-8:00 am **CVM Fellowship Breakfast** 550A  
7:30 am-9:00 am **USAHA District Breakfast (NE, S, W, NC, Allied)**  
Ballroom B
- 8:00 am-12:00 pm **AAVLD Scientific Session Bacteriology 2**  
Break 9:15-10:15 Ballroom E  
**Moderators:** Akhilesh Ramachandran and Sarmila Dasgupta
- 8:00 am Whole-Genome Sequencing to predict genotype and antimicrobial resistance in *Escherichia coli* isolated from pigs ◇  
Nubia Macedo, Rodger Main, Ganwu Li, Orhan Sahin
- 8:15 am Detection of bovine respiratory bacterial pathogens and determination of associated antimicrobial susceptibility profiles using clinical nanopore metagenomics  
Anatoliy Trokhymchuk, Musangu Ngeleka, Kazal Ghosh
- 8:30 am Tularemia (*Francisella tularensis*) recognition in cats - A public health message for veterinary clinicians and diagnosticians  
Marc D. Schwabenlander, Tory Whitten, Erik J. Olson
- 8:45 am Comparison of nested and quantitative PCR assays for detection of *Streptococcus equi* subspecies *equi* in clinical equine specimens  
Lance Wade Noll, Colin P. A. Stoy, Yin Wang, Elizabeth G. Porter, Xuming Liu, Jianfa Bai
- 9:00 am Evaluation of a high throughput nucleic acid extraction method for PCR-based detection of *Mycobacterium avium* ssp. *paratuberculosis* in bovine fecal samples  
Nagaraja Thirumalapura, Willard Fera, Eric Hue, Corey Zellers, Deepanker Tewari
- 9:15 am Break
- 10:15 am *Theileria orientalis* Ikeda genotype is identified in cattle in Southwestern Virginia # + †  
Vanessa J. Oakes, Michael J. Yabsley, Diana Schwartz, Tanya LeRoith, Carolyn Bissett, Charles Broaddus, Jack L. Schlater, S Michelle Todd, Katie Boes, Meghan Brookhart, Kevin Lahmers
- 10:30 am Listerial meningoencephalitis and choroid pleatitis in a saki monkey (*Simia pithecia*) +  
Abigail Finley, Alexandra Goe, Kristen Phair, Jason Struthers
- 10:45 am Increased pathogen diversity in the skin microbiome of bats affected by white nose syndrome # \* †  
Ava R. Jarvis, Renee Anderson, Derek Rothenheber, Ben Golas, Amy Glaser, Laura B. Goodman, Elizabeth Buckles
- 11:00 am *Streptococcus pneumoniae*-associated septicemia in two cats  
Heidi Huffman Rose, Lifang Yan, JayKay Thornton
- 8:00 am-12:00 pm **AAVLD Scientific Session Epidemiology 2**  
Break 9:00-10:00 am Ballroom C  
**Moderators:** Laura B. Goodman and Robert E. Gibson
- 8:00 am Diagnostic performance comparison of two PRRSV oral fluid antibody ELISAs \* †  
Alexandra Henao-Diaz, Anne Harrenstein, Ju Ji, Luis Gabriel Gimenez-Lirola, Jeff Zimmerman, Dave Baum
- 8:15 am Antibody response of different U.S. PEDV strains in pigs of different ages + \* †  
Loni L. Schumacher, Ashley Buerkley, Qi Chen, Hai Thanh Hoang, Maria Merodio, Phillip Gauger, Drew Magstadt, Ronaldo Magtoto, Luis Gabriel Gimenez-Lirola, Jianqiang Zhang
- 8:30 am Diagnostic performance of the POKKITT™ for detection of African Swine Fever and Foot and Mouth Disease viruses using insulated isothermal PCR ◇

# SUNDAY, OCTOBER 27, 2019

## Daily Events *Continued*

- Jessie D. Trujillo, Russell Ransburgh, Anthony Craig, Mark Tsai, David Tsai, Thomas Wang, Livio Heath, Juergen Richt
- 8:45 am Development and validation of an indirect ELISA for the serological diagnosis of African Swine Fever  
Shawn Babiuk, Kaye Quizon, Joseph Wang, Dmytro Zhmendak, Alfonso Clavijo, Aruna Ambagala
- 9:00 am Break
- 9:15 am Evaluation the Impact of Climate on Avian Influenza Seasonality and Disease Outbreak in Poultry Farms in Egypt †  
Asmaa Nady Mohamed
- 9:30 am Break
- 10:00 am Genotyping and Prevalence of Porcine Circovirus Type 3 (PCV3) and Type 2 (PCV2) in the Midwest of the USA during 2016-2018 # †  
Yin Wang, Lance Noll, Nanyan Lu, Elizabeth G. Porter, Colin P. A. Stoy, Wanglong Zheng, Xuming Liu, Lalitha Peddireddi, Megan Niederwerder, T.G. Nagaraja, Jianfa Bai
- 10:15 am Whole Genome Sequencing of IAVs from Ohio pig farms  
Melanie Prarat, Katherine Shiplett, Yan Zhang
- 10:30 am Optimization of the sensitivity and specificity of the oral fluids PRRSV ELISA by modifying the cut-off s/p value  
Albert Rovira, Devi P. Patnayak
- 10:45 am Genetic diversity of type 1 porcine reproductive and respiratory syndrome virus in the United States from 2010 to 2018  
Anping Wang, Huigang Shen, Ying Zheng, Qi Feng, Wannarat Yim-im, Jianqiang Zhang, Phillip Gauger, Ganwu Li
- 11:00 am Prevalence of anti-PCV3 antibodies in swine diagnostic samples by a peptide-based ELISA assay †  
Yin Wang, Wanglong Zheng, Xue Leng, Elizabeth G. Porter, Colin P. A. Stoy, Lance Wade Noll, Xuming Liu, Jianfa Bai
- 11:15 am Evaluation of Betacoronavirus fecal shedding among apparently healthy exhibition and racehorses  
Hayley G. Hofmar-Glennon, Nicole M. Andre, Alison Stout, Gary Whittaker, Laura B. Goodman, Belinda S. Thompson, Manigandan Lejeune, Wendy Hartman, Erin L. Goodrich
- 8:00 am-12:00 pm **AAVLD Scientific Session Molecular Diagnostics and Bioinformatics 2**  
Break 9:30-10:15 am 555  
**Moderators:** Hemant K. Naikare and Donna M. Mulrooney
- 8:00 am Evaluation of an easy and rapid Detection of Avian Leukosis Virus Subgroup J (ALV-J) by fully automated POCKIT™ Central PCR System  
Simon Chung, Choong Keat Fu, Wei-Fen Tsai, PingHan Chung, Chia-Chi Chang, Yu-Chun Lin, Pin CHOU, Thomas Wang
- 8:15 am Whole Genomic Sequencing of BVDV-2 Isolates using Illumina iSeq 100 and MinION technologies  
Rebecca Mackey, Yi Candy Zhang, Michael Zhang, Lanny Pace, Lifang Yan
- 8:30 am Development of process controls for bacterial Whole Genome Sequencing §  
Renee Anderson, Patrick Mitchell, Denise L. Archer, Rebecca L. Tallmadge, Brittany D. Chilson, Derek Rothenheber, Laura B. Goodman

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| ◇ USAHA Paper                           | ‡ Presentation Award Applicant |

# SUNDAY, OCTOBER 27, 2019

## Daily Events *Continued*

- 8:45 am Phylogenetic analysis of type 1 porcine reproductive and respiratory syndrome virus ORF5 sequences in the United States from 2003 to 2018 †  
Wannarat Yim-im, Tavis Anderson, Phillip Gauger, Karen Harmon, Jianqiang Zhang
- 9:00 am Application of a Nanopore MinION sequencing workflow in pathogen identification and detection of antimicrobial resistance gene analysis in a veterinary diagnostic setting # †  
Grazieli Maboni, Rodrigo de Paula Baptista, Joy Wireman, Anne Summers, Suan Sanchez
- 9:15 am Diagnosis of Bovine Tuberculosis using a defined skin test in Buffaloes in India # \* †  
Sreenidhi Srinivasan, Maroudam Veerasami, Douwe Bakker, Martin Vordermeier, Vivek Kapur
- 9:30 am Break
- 10:15 am Genetic characterization of *Erysipelothrix rhusiopathiae* using Whole Genome Sequencing  
Jing Cui, Melanie Prarat, Katherine Shiplett, Dominika Jurkovic, Yan Zhang
- 10:30 am Quantitative real-time PCR detection of African Swine Fever virus on a field-based PCR platform, the Biomeme Franklin hand-held thermocycler ◇  
Jessie D. Trujillo, Russell Ransburgh, Anthony Craig, Livio Heath, Juergen Richt
- 10:45 am Development of a probe based real-time PCR for the accurate diagnosis of *Avibacterium paragallinarum* §  
Rhiannon Barry, Ruth Nissly, Jen Williams, Maurice Byukusenge, Traci Pierre, Tammy Matthews, Eva Wallner-Pendleton, Patricia Dunn, Barnhart Denise, Sean Loughrey, Sherrill Davison Yeakel, Donna Kelly, Deepanker Tewari, Bhushan Jayarao, Suresh V. Kuchipudi
- 11:00 am AgroDiag PorCoV : a multiplex immunoassay for the differential diagnosis of swine enteric coronaviruses  
Rémi Malbec, Kay Kimpson-Burkgren, Elisa Vandenkoornhuysse, Jose Carrillo-Ávila, Christophe Audebert, Dave Baum, Luis Gabriel Gimenez-Lirola
- 11:15 am Molecular and ELISA assessment of risk of cyanotoxin poisoning by water supplies to swine facilities #  
Jian Yuan, Hyun-Joong Kim, Steve Ensley, Kyoung-Jin Yoon
- 11:30 am Development of a novel multiplex real-time PCR for the detection and differentiation of SADS-CoV, an emerging swine coronavirus  
Rolf Rauh, Travis Clement, Jane Christopher-Hennings, Johnny Callahan, Shao-Lun Zhai, Diego G. Diel
- 11:45 am Aggregating results and summarizing findings from multiple veterinary diagnostic laboratories in the US on a near real-time basis # + \* †  
Giovani Trevisan, Leticia Linhares, Bret Crim, Poonam Dubey, Kent J. Schwartz, Eric Burrough, Rodger Main, Paul Sundberg, Mary Thurn, Paulo T. F. Lages, Cesar A. Corzo, Jerry Torrison, Rob McGaughey, Jamie Henningson, Eric Herrman, Gregg Hanzlicek, Ram Raghavan, Douglas Marthaler, Shivali Gupta, Jon Greseth, Travis Clement, Jane Christopher-Hennings, Daniel C. L. Linhares
- 8:00 am-12:00 pm **AAVLD Scientific Session Toxicology**  
Break 9:30-10:30 am 557  
**Moderators:** Catherine Barr and Karyn Bischoff
- 8:00 am Quantitation of ionophores in animal feed samples  
Gwendolyne Alarcio, Elizabeth R. Tor, Linda S. Aston, Robert H. Poppenga

# SUNDAY, OCTOBER 27, 2019

## Daily Events *Continued*

- 8:15 am GC/MS confirmation of Atrazine exposure in a cow  
Abigail Props, Hilary Richards, Stephen B. Hooser, Christina Wilson, Grant N. Burcham
- 8:30 am Determining approximate minimum toxic dose of diphacinone in horses, and corresponding serum, blood, and liver diphacinone concentrations †  
Megan C. Romano, Kyle A. Francis, Jennifer G. Janes, Amanda A. Adams, Robert H. Poppenga, Michael Filigenzi, Cynthia Gaskill
- 8:45 am Inter-laboratory evaluation of a high performance liquid chromatography-fluorescence method for the quantitative measurement of aflatoxins B1 and M1 in animal urine  
Xiangwei Du, Dwayne Edward Schrunk, Paula Martin Imerman, John Tahara, Andriy Tkachenko, Jake Guag, Renate Reimschuessel, Wilson Kiiza Rumbelha
- 9:00 am Biphasal extractive pentafluorobenzoylation of monofluoroacetate  
John Philip Buchweitz, Andreas F. Lehner
- 9:15 am Residual analysis of ivermectin in White-tail deer in Texas for safe human consumption  
Juan Carlos Castro
- 9:30 am Break
- 10:30 am Liver and muscle tissue Pentobarbital concentrations following euthanasia  
Robert H. Poppenga, Michael Filigenzi, Robyn Noonan
- 10:45 am Detection of Black Walnut wood in equine bedding by PCR  
Stephen B. Hooser, Keith Woeste, Rebecca P. Wilkes, Hilary Richards, Angela Chan, Christina Wilson
- 11:00 am Illicit drugs of abuse screen in biological samples by LCMS  
Gwendolyne Alarcio, Elizabeth R. Tor, Linda S. Aston, Robert H. Poppenga
- 11:15 am Congenital skeletal abnormalities in a Michigan dairy herd associated with manganese deficiency and comparison to classical cases of rickets  
Dodd Sledge, Gordon Ehrensing, John Philip Buchweitz, Matti Kiupel
- 11:30 am Determination factors associated with the mercury-selenium ratio in cat food and tuna \* † ◇  
Qin Yuan, Lakshman Balaji, Matthew Freer, Jennifer Moiseff, Karyn Havas, Karyn Bischoff
- 11:45 am Development and validation of a method for quantification of Vitamin D in pet food  
Vamsi Thiriveedhi, Michael Filigenzi, Robert H. Poppenga
- 8:00 am-12:00 pm **AAVLD Scientific Session Pathology 2**  
Break 9:45-10:45 am 556  
**Moderators:** Kelli Almes and Jonathan P. Samuelson
- 8:00 am Canid predators kill bites and the injuries to their animal victims  
Nanny Wenzlow
- 8:15 am Virulent Newcastle disease in Southern California, 2018-2019  
Francisco A. Uzal, Francisco R. Carvallo, Janet Moore, Akinyi Nyaoke, Beate Crossley

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| ◇ USAHA Paper                           | § Presentation Award Applicant |

# SUNDAY, OCTOBER 27, 2019

## Daily Events *Continued*

- 8:30 am Diagnostic histopathological features of small intestinal lymphatic hypoplasia in Dogs with protein-losing enteropathy  
Gerald E. Duhamel, Adam J. Miller, Tristan Weinkle
- 8:45 am Small ruminant abortion cases at the Ontario Animal Health Laboratory: Shifting patterns, novel and re-emerging pathogens  
Maria Spinato, Margaret Stalker, Murray Hazlett, Josepha DeLay, Jan Shapiro, Andrew Brooks, Emily Brouwer, Amanda Mansz, Hein Snyman, Hugh Cai, Durda Slavic
- 9:00 am Semilunar valve malformations in two Quarterhorses  
Mayane Faccin, Beth Graham-Williams, Esther Crouch, W. Shane Sills, Kathleen Mullen, Kathleen Kelly
- 9:15 am Cause of death and pathology in search-and-rescue Dogs deployed to Sept. 11, 2001 terrorist attack sites  
Scott D. Fitzgerald, Cynthia M. Otto, Kathleen M. Kelsey, Elizabeth Hare, John Philip Buchweitz
- 9:30 am Eastern Equine Encephalitis Virus: recent avian cases diagnosed in New England + †  
Emily Reinhardt, Neha Mishra
- 9:45 am Break
- 10:45 am Pulmonary hypertension and copper deficiency in four yearling Angus bulls  
John Ragsdale, Norbert Takacs, Peter G. Moisan, Tim Hanosh
- 11:00 am Suspected fatal adverse reactions to a commercial Mannheimia haemolytica Toxoid vaccine in young holstein heifers on two New York dairy farms  
Gerald E. Duhamel, Belinda S. Thompson
- 11:15 am Use of diagnostic codes to summarize respiratory and enteric diseases detected in tissues submitted to the ISU-VDL from 2010-2018 + \* †  
Giovani Trevisan, Kent J. Schwartz, Leticia Linhares, Bret Crim, Poonam Dubey, Eric Burrough, Rodger Main, Daniel C. L. Linhares
- 11:30 am Sudden death caused by fetlock failure in a Thoroughbred racehorse + †  
Monika Aleksandra Samol, Susan Stover, Francisco A. Uzal, Rick Arthur
- 11:45 am Development and Use of a Database of Retrospective Diagnostic Data of Psittacine Birds  
D. Gibson\*, N. Nemeth, H. Beaufrere, C. Varga, L. Susta  
Affiliation Ontario Veterinary College, University of Guelph  
\*(ACVP/AAVLD award winner)
- 8:00 am-10:00 am **AAVLD Laboratory Operations and Management Committee** 550B
- 8:00 am-12:00 pm **Food Safety Symposium Sponsored by American Association of Food Safety and Public Health Veterinarians (AAFSPHV) and National Association of Federal Veterinarians (NAFV)** Ballroom D
- 8:00 am USDA FSIS Foodborne Illness Outbreak Investigations – Sheryl Shaw, DVM, MPH, Dipl ACVPM
- 9:00 am FSIS Pork Sampling Program - Capt. Kis Hale, DVM, MPH
- 10:00 am CDC *Salmonella*, STEC, and *Listeria Monocytogenes* Foodborne Outbreak Investigations – Laura Gieraltowski, PhD, MPH; Misha Robyn, DVM, MPH, DACVPM
- 11:00 am Root Cause Analysis Of Foodborne Illness Outbreaks In The United States – Learning From The Past To Prevent Outbreaks In The Future – Karen Hoelzer, DVM, PhD
- 9:00 am-11:30 am **Northeast District Meeting** 554B
- 9:00 am-11:30 am **North Central District Meeting** 553A
- 9:00 am-11:30 am **Southern District Meeting** 554A
- 9:00 am-11:30 am **Western District Meeting** 553B

# SUNDAY, OCTOBER 27, 2019

## Daily Events *Continued*

9:00 am-1:00 pm	<b>AAVLD Exhibits &amp; Poster Session</b> – Ballroom A Food & beverages 9:00-10:30 am & 11:30 am-1:00 pm Poster Presentations 12:00 pm-1:00 pm
10:00 am-12:00 pm	<b>USAHA Tuberculosis Scientific Advisory Subcommittee</b> 552
11:00 am-12:00 pm	<b>USAHA District at-Large Meeting (Allied Industry, and Regional Delegates)</b> 550A
12:00 pm-1:00 pm	<b>AAVLD Poster Session – Authors present</b> Ballroom A
12:00 pm-1:00 pm	<b>USAHA Committee on Audit</b> Stateside Suite - OMNI
12:30 pm-2:00 pm	<b>AAVLD Pathology Committee</b> 556
12:00 pm-3:00 pm	<b>JOINT Committee on NAHLN (National Animal Health Laboratory Network)</b> 551
12:30 pm-5:30 pm	<b>USDA Research Reviews</b> 557
12:30 pm	USDA-NIFA Updates - NIFA national program leaders
12:45 pm	USDA-ARS Updates - ARS national program leaders
1:00 pm	State of the art and future perspectives on the serological and molecular methods for the diagnosis of bovine babesiosis - Carlos E. Suarez, Animal Disease Research Unit. USDA-ARS, Pullman, WA
1:30 pm	Transcriptome analysis of <i>Babesia bovis</i> blood and tick stages reveals potential vaccine targets - Massaro Ueti, Animal Disease Research Unit. USDA-ARS, Pullman, WA
2:00 pm	Quantitative analysis of <i>Anaplasma marginale</i> acquisition and transmission by in vitro fed <i>Dermacentor andersoni</i> - Massaro Ueti, Animal Disease Research Unit. USDA-ARS, Pullman, WA
2:30 pm	Break
3:00 pm	Identification of <i>Anaplasma marginale</i> adhesins for use as vaccine candidates - Susan Noh, Animal Diseases Research Unit, USDA-ARS, Pullman, WA
3:30 pm	Heart water: Risk of introduction and tools for intervention - Susan Noh, Animal Diseases Research Unit, USDA-ARS, Pullman, WA
4:00 pm	Potential involvement of salivary cholinesterase activity in arthropod vector-borne disease transmission - Kevin Temeyer, Livestock Arthropod Pests Research Unit, Kerrville, TX
12:30 pm-5:00 pm	<b>JOINT Committee on Aquaculture</b> Ballroom C
1:00 pm-5:00 pm	<b>USAHA Subcommittee on Tuberculosis</b> Ballroom D
1:00 pm-5:00 pm	<b>USAHA Committee on Animal Emergency Management</b> Ballroom B
1:00 pm-5:00 pm	<b>JOINT Committee on Food and Feed Safety</b> 555
2:00 pm-5:00 pm	<b>Avian Pathology Symposium</b> Ballroom E (Registration/addt'l fee required)
2:00 pm-6:00 pm	<b>USAHA Display Tables</b> Rotunda Foyer
3:00 pm-5:00 pm	<b>AAVLD-NSVL Proficiency Testing Committee</b> 551
3:00 pm-6:00 pm	<b>AAVLD – Strategic Planning Committee</b> 550B
3:00 pm-6:00 pm	<b>JOINT Committee on Animal Health Surveillance and Information Systems</b> 556
5:00 pm-6:00 pm	<b>USAHA New Member Orientation</b> 552
5:30 pm-6:30 pm	<b>Presidents' Reception</b> Exhibit Hall A
6:30 pm-9:00 pm	<b>USAHA/AAVLD Presidents' Dinner</b> Exhibit Hall A

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◇ USAHA Paper	

# MONDAY, OCTOBER 28, 2019

**Registration: 7:00 am-5:00 pm**

## Daily Events

7:00 am-8:00 am	<b>AAVLD Past Presidents' Breakfast - CLOSED</b> 558
8:00 am-10:00 am	<b>Networking Breakfast</b> Exhibit Hall A Foyer
8:00 am-5:00 pm	<b>USAHA Display Tables</b> Rotunda Foyer
10:00 am-11:30 am	<b>USAHA/AAVLD Keynote Session: Overcoming Challenges for the Control of African Swine Fever - A Global Threat in Your Backyard</b> - Dr. Juan Lubroth, UN-FAO Exhibit Hall A
12:00 pm-12:30 pm	<b>USAHA Membership Luncheon &amp; Meeting</b> Exhibit Hall A
12:00 pm-12:45 pm	<b>AAVLD House of Delegates</b> 557
1:00 pm-3:00 pm	<b>USAHA Subcommittee on Trichomoniasis</b> 556
1:00 pm-5:00 pm	<b>USAHA Subcommittee on Salmonella</b> Ballroom C
1:00 pm-5:00 pm	<b>USAHA Subcommittee on Brucellosis</b> Ballroom E
1:00 pm-6:00 pm	<b>USAHA Committee on Equine</b> 557

### Time Specific Paper Committee on Equine

**Monday, October 28 • 2:00-2:30 pm**

Managing the risk of EHV-1 infection - a new tool and strategy to prevent EHV-1 disease outbreaks in the U.S.

*Dr. Bettina Wagner*

### Time Specific Paper Committee on Equine

**Monday, October 28 • 3:15-3:45 pm**

Equine Influenza: A Resurgent Threat to Global Equid Populations in 2018 / 2019

*Dr. Peter Timoney*

1:00 pm-6:00 pm	<b>USAHA Committee on Foreign and Emerging Diseases</b> Ballroom D
1:00 pm-8:00 pm	<b>Directors of State Meat Inspection</b> 555
1:30 pm-3:30 pm	<b>AAVLD Committee Chairs and Program Committee</b> 550
2:30 pm-3:30 pm	<b>Break</b> Rotunda Foyer
3:00 pm-6:00 pm	<b>USAHA Subcommittee on BVDV</b> 553
3:30 pm-5:00 pm	<b>USAHA and AAVLD Executive Committees</b> 550
5:30 pm-8:00 pm	<b>National Association of Federal Veterinarians</b> 552
6:00 pm-7:00 pm	<b>USAHA Board of Directors Meeting</b> Ballroom A
7:00 pm-9:00 pm	<b>Global Vet Link Reception</b> Narragansett A&B - OMNI



# TUESDAY, OCTOBER 29, 2019

**Registration: 7:30 am-5:00 pm**

## Daily Events

7:00 am-8:00 am	<b>Morning Coffee, by Boehringer Ingelheim</b> Rotunda Foyer
7:30 am-9:30 am	<b>USAHA Past Presidents' Breakfast - CLOSED</b> 550A
8:00 am-9:00 am	<b>National Scrapie Oversight Board</b> 553
8:00 am-12:00 pm	<b>USAHA Committee on Diseases of Farmed Cervidae</b> 554
8:00 am-12:00 pm	<b>USAHA Committee on Global Animal Health and Trade</b> 557
8:00 am-12:00 pm	<b>USAHA Subcommittee on Rabies</b> 552
8:00 am-12:00 pm	<b>USAHA Committee on Biologics and Biotechnology</b> 551
8:00 am-12:00 pm	<b>USAHA Subcommittee on Cattle Identification</b> Ballroom B
8:00 am-5:00 pm	<b>USAHA Display Tables</b> Rotunda Foyer
8:00 am-5:00pm	<b>USAHA Committee on Diseases of Poultry and Other Avian Species</b> Ballroom D
8:00 am-5:30 pm	<b>Directors of State Meat Inspection</b> 555
9:00 am-12:00 pm	<b>USAHA Subcommittee on Scrapie and Identification</b> 553
9:30 am-10:30 am	<b>Break</b> Rotunda Foyer
1:00 pm-5:00 pm	<b>USAHA Committee on Swine</b> 551
1:00 pm-5:00 pm	<b>USAHA Committee on Wildlife</b> 552
1:00 pm-5:00 pm	<b>USAHA Committee on Sheep, Goats and Camelids</b> 553

**Time Specific Paper**  
**Committee on Sheep, Goats and Camelids**  
**Tuesday, October 29 • 1:50 pm**  
Parasite Resistance in Small Ruminants  
*Dr. Dahlia O'Brien*

1:00 pm-5:00 pm	<b>USAHA Subcommittee on Pharmaceutical Issues</b> 557
1:00 pm-5:00 pm	<b>USAHA Committee on Cattle and Bison</b> Ballroom B
2:30 pm-3:30 pm	<b>Break</b> Rotunda Foyer
6:00 pm-7:00 pm	<b>USAHA Board of Directors Meeting</b> Ballroom A

# WEDNESDAY, OCTOBER 30, 2019

*Registration: 7:30 am-10:00 am*

## Daily Events

7:00 am-8:00 am	<b>Morning Coffee, by Boehringer Ingelheim</b> Rotunda Foyer
8:00 am-12:00 pm	<b>USAHA Display Tables</b> Rotunda Foyer
8:00 am-12:00 pm	<b>USAHA Committee on One Health</b> Ballroom D
8:00 am-12:00 pm	<b>USAHA Committee on Animal Welfare</b> 551
8:00 am-12:00 pm	<b>USAHA Committee on Parasitic &amp; Vector Borne Diseases</b> 552
9:30 am-10:30 am	<b>Break</b> Rotunda Foyer
2:00 pm-3:30 pm	<b>USAHA Business Session - Membership Meeting</b> Ballroom D
3:30 pm-4:30 pm	<b>USAHA Board of Directors Meeting</b> Ballroom A
6:00 pm	<b>USAHA Executive Committee Meeting and Dinner - CLOSED</b>

# AAVLD SPONSOR PRESENTATIONS

## **Sponsor Presentations • Saturday, October 26**

### **The Clark Enersen Partners & McCownGordon Construction 3:30-4:15 pm Room 553**

Title: Veterinary Diagnostic and Animal Facility Construction  
Delivery Options

### **Tetracore 4:45-5:15 pm Room 553**

Title: African Swine Fever: Disease, Diagnostics and the Global  
Scene

### **IDEXX 6:00-6:30 pm Room 553**

Title: Identification of Truly Negative Animals to M. bovis  
presented by Dr. Rafael Paiva

### **Thermo Fisher Scientific 6:00-6:30 pm Room 556**

Title: African Swine Fever, the virus that loves to travel  
internationally.  
Outbreak readiness.

### **INDICAL Inc. 6:30-7:00 pm Room 554**

Title: From established sample and assay technologies to novel  
point-of-need applications, discover how INDICAL's solutions  
help to improve veterinary testing.

### **Illumina 7:00-7:30 pm Room 556**

Title: Next Generation Sequencing & Microarray Advances in  
Veterinary Diagnostics and Breeding  
Presenter: Kahlil Lawless, Ph.D.

# AAVLD EXHIBITORS

## **Exhibit Hall Times and Poster Session**

### **Rhode Island Convention Center**

October 26 Saturday 9:00 am-6:00 pm

October 27 Sunday 9:00 am-1:00 pm

Food and beverage in exhibit area

Observe poster sessions throughout exhibit area.

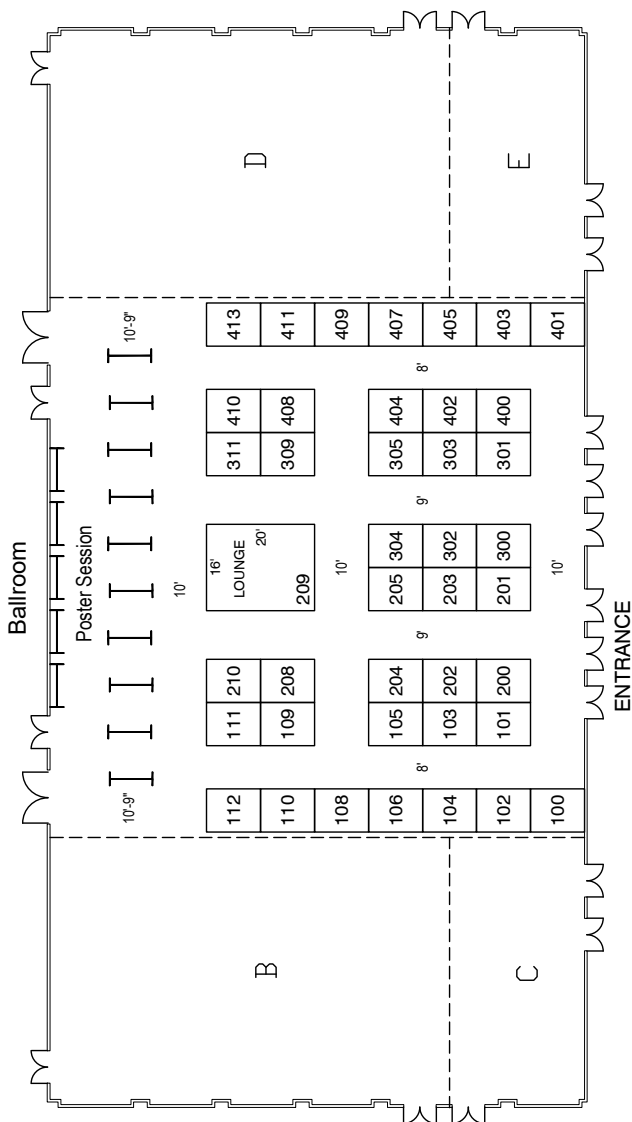
### **Authors at posters**

October 26 Saturday 3:00-4:00 pm

October 27 Sunday 12:00-1:00 pm

<b>BOOTH #</b>	<b>COMPANY</b>
305	Acclaim Systems Inc
301	Advanced Technology Corp. VADDS
111	Anaerobe Systems
103	Avantik
402	BioChek
210	bioMérieux
105	Bio-Rad Laboratories
109	Biovet Inc.
202	Bruker
401	Centaur Animal Health
100	The Clark Enersen Partners
208	ECL2/Q-Pulse
104	Fluxergy
106	GeneReach Biotechnology Corp.
108	GIMDx, Inc.
407	Gyros Protein Technologies
101 & 200	IDEXX Laboratories
409	Illumina
201 & 203	INDICAL Inc.
400	iVention, LLC
410	Longhorn Vaccines and Diagnostics LLC
411	Meridian Life Science
405	Merrick & Company
303	MicroVet Diagnostics
110	Milestone Medical Technologies, Inc.
404	MP Biomedicals, LLC
112	OPS Diagnostics, LLC.
408	Precision System Science USA, Inc.
403	PRI Bio (Progressive Recovery, Inc.)
102	Roche Diagnostic Corporation
204	Tetracore, Inc.
300, 302 & 304	Thermo Fisher Scientific
413	Trace First, Inc
309 & 311	VMRD, Inc.
205	Zoetis

# AAVLD EXHIBITORS FLOORPLAN



## NOTES



# FUTURE USAHA/AAVLD ANNUAL MEETINGS

Nashville, Tennessee  
October 15-21, 2020  
Gaylord Opryland Hotel

Denver, Colorado  
October 21-27, 2021  
Gaylord Rockies Hotel

## **Thanks to the 2019 Sponsors:**

Advanced Technology Corporation (VADDs)

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