

OIE Collaborating Centres Reports Activities

Activities in 2018

This report has been submitted : 2019-01-25 20:33:08

Title of collaborating centre:	Veterinary Services Capacity Building (Americas)
Address of Collaborating Centre:	University of Minnesota 136 Andrew Boss Laboratory 1354 Eckles Avenue St Paul, Minnesota 55108 UNITED STATES OF AMERICA
Tel.:	+1-612 625.87.09
Fax:	+1-612 624.49.06
E-mail address:	aperez@umn.edu
Website:	www.cahfs.umn.edu
Name of Director of Institute (Responsible Official):	Andres Perez
Name (including Title and Position) of Head of the Collaborating Centre (formally OIE Contact Point):	Andres Perez, Director
Name of writer:	Ann Bateman, Operations Manager

ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories

ToR: To identify and maintain existing expertise, in particular within its region

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by the OIE

Training, capacity building	
Title of activity	Scope
Leadership to Address Global Grand Challenges	5-day skills-based course(January 2018)that introduces participants to integrative leadership strategies useful in addressing the global grand challenges related to the food system.
Food Safety and Defense in the Context of Global Food Security	5 day course. Public Health Institute, University of Minnesota May 2018
Food Governance, Policy and Regulation	January 2018.University of Minnesota. 12 participants.
ProgRESSVet (Programa Regional de Educación Sistemáticade Servicios Veterinarios)	ProgRESSVet is an innovative educational initiative that aims to increase the capacity of veterinary services in Spanish-speaking Latin America. ProgRESSVet is a collaborative effort between the Center for Animal Health and Food Safety (CAHFS) at the University of Minnesota and the Centro Buenos Aires para la Capacitación de los Servicios Veterinarios (CEBASEV), the designated Collaborating Centers of the World Organisation of Animal Health (OIE) in the Americas. The primary objective of ProgRESSVet is to create and implement a training program, delivered predominantly on-line, to enhance the capabilities of human resources of the Veterinary Services (VS) in Latin America. The program is based upon the OIE's Advanced Competencies for veterinary service professionals and seeks to enhance both the knowledge and skills necessary for advanced practice in veterinary services. Beyond individual and group training, ProgRESSVet is aligned with the OIE's objectives of making accessible, promoting, and sustaining measures for regional development. 10 participants in 2018.
Aquaponics Symposium	One-day conference in April 2018. 80 participants. Introduction and basic concepts in aquaponics.
Quality Assurance Workshop	12-hour training for CDC professionals on research quality and assurance. 30 participants. April 2018
PRRS Diagnostic training	One-week training for SENASA (Argentina) officers focused on improving proficiency in diagnostic procedures for PRRS. May 2018
Veterinary Public Health and Preventative Medicine (VPHPM) Residency Program	2-year residency in veterinary public health. 3 residents completed program in 2018. The residency has trained 45 residents since 2002.

University of Pristina, Faculty of Agriculture and Veterinary capacity-building project	Completed 4-year project that trained over 150 faculty and students through faculty development scholarships, farm to table seminars, guest lectures, research projects, and workshops on outreach, mentoring, grant writing, and manuscript writing.
---	---

ToR : To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare

Proposal title	Scope/Content	Applicable area
Development and implementation of a domestic swine bio-surveillance monitoring and surveillance system. Part 2: Multiple data streams integration and reporting Enhancing Dr. Bob Morrison's Swine Health Monitoring Program (MSHMP) capacity and preparedness through the integration with outputs from a SHIC-led disease surveillance programs and research integration with US higher education institutions.	Swine Health Information Center. United States	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Critical review of measures listed in the Chilean legislation limiting and framing the location and activities of salmon reproduction centers in the sea Epidemiological tools to improve strategically the sanitary management of the salmon industry in Chile. Sernapesca and Chilean salmon industry.	Chile	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
ProgRESSVet projects	Veterinary Public Health officers. Argentina, Bolivia, Brazil, Paraguay and Uruguay	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Control and surveillance of bovine tuberculosis.	Uruguay and Bolivia	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Evaluating surveillance systems for foot-and-mouth disease.	Uruguay	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Surveillance of classical swine fever	Brazil	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Analysis of movement data for evaluation of FMD surveillance	Brazil	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare

FMD surveillance program	Argentina and Paraguay	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Evaluation of control programs for rabies	Argentina	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Proposed collaboration with diagnostic lab and veterinary college to develop sustainable diagnostic testing services	Senegal	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare

ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines

ToR: To carry out and/or coordinate scientific and technical studies in collaboration with other centres, laboratories or organisations

3. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Centro Buenos Aires para laCapaitacion de lost ServiciosVeterinarios (CEBASEV) [Trainingof Veterinary Services]	Buenos Aires, Argentina	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Jointly develop new educational program related to OIE Advanced Competencies for Veterinarians (ProgRESSVet)
Veterinary Public Health Centrefor Asia Pacific (VPH-CAP)	Chiang Mai, Thailand	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration in veterinary services capacity building
Ecole Nationale des ServicesVeterinaires	Lyon, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	capacity building

4. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Reference Laboratory for ASF and AHS	Univ Complutense de Madrid, Spain	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	capacity building

ToR: To place expert consultants at the disposal of the OIE.

5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?

No

ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries

6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?

Yes

- a) Technical visits: 91
 b) Seminars: 260
 c) Hands-on training courses: 51
 d) Internships (>1 month): 1

Type of technical training provided (a, b, c or d)	Content	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
b	In 2018, ProgRESSVet was offered for the second time, providing technical training on a range of topics including Epidemiology, Spatial Analysis, and Risk Analysis, to 10 participants from 5 countries in South America (Argentina, Bolivia, Brazil, Paraguay and Uruguay). The program is a collaborative effort with Centro Buenos Aires para la Capacitación de los Servicios Veterinarios (CEBASEV) based upon the OIE's Advanced Competencies for veterinary service professionals	Brazil, Argentina, Paraguay, Uruguay, and Bolivia	10

a	Training in PRRS diagnostic techniques for SENASA officers and analysis of PRSS surveillance plan.	Argentina	2
a	Epidemiological analysis of FMD Virus in Uganda.	Uganda	2
a	Visualization and analysis of swine disease data.	United States	30
b	seminar for global participants	Vietnam	200
a, b, c	Seminar, technical and hands on training as part of One Health Workforce	Malaysia	50
a	Global Diplomacy (Leadership training)	Indonesia	40
d	Epidemiological methods applied to Animal Health. Scientist at KISR (Kuwait Institute for Scientific Research)	Kuwait	1
a	Risk Analysis tools. Epidemiologist of QuaqxiCDC, China	China	1
c	Risk Assessment of ASF introduction in US.	Spain	1
c	Development of training plan for laboratory personnel from EISMV diagnostic laboratory	Senegal	20

ToR: To organise and participate in scientific meetings and other activities on behalf of the OIE

7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?

No

ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty

8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE

a) Articles published in peer-reviewed journals: 24

Muniesa A, Escobar-Dodero J, Silva N, Henriquez P, Bustos P, Perez A, Mardones F, 2018. Effectiveness of disinfectant treatments for inactivating *Piscirickettsia salmonis*. Preventive Veterinary Medicine <https://doi.org/10.1016/j.prevetmed.2018.03.006>

Escobar-Dodero J, Kinsley A, Perez A, Ibarra R, Tello A, Monti G, Mardones F, 2018. Risk factors for infectious pancreatic necrosis in farmed Chilean Atlantic salmon (*Salmo salar* L.) from 2010 to 2013. Preventive Veterinary Medicine. S0167-5877(17)30363-X. doi: 10.1016/j.prevetmed.2018.04.016. [Epub ahead of print]

Arruda AG, Vilalta C, Puig P, Perez A, Alba A, 2018. Time-series analysis for porcine reproductive and respiratory syndrome (PRRS) in the United States. PLoS One 13(4):e0195282. doi: 10.1371/journal.pone.0195282. eCollection 2018.

Kinsley A, VanderWaal K, Craft M, Morrison R, Perez AM, 2018. Managing complexity: Simplifying assumptions of foot-and-mouth disease models for swine. *Transboundary and Emerging Diseases*. *Transbound Emerg Dis*. 2018 Oct;65(5):1307-1317. doi: 10.1111/tbed.12880.

Chamba Pardo FO, Schelkopf A, Allerson M, Morrison R, Culhane M, Perez A, Torremorell M, 2018. Breed-to-wean farm factors associated with influenza A virus infection in piglets at weaning. *Preventive Veterinary Medicine* 161. DOI: 10.1016/j.prevetmed.2018.10.008

Pozo P, VanderWaal K, Grau A, de la Cruz ML, Nacar J, Bezos J, Perez A, Minguez O, Alvarez J, 2018. Analysis of the cattle movement network and its association with the risk of bovine tuberculosis at the farm level in Castilla y Leon, Spain. *Transboundary and Emerging Diseases* doi: 10.1111/tbed.13025.

Perez AM, 2018. Editorial. Big Data - The Language and Future of One Medicine, One Science. *Frontiers in Veterinary Science* 5:114. doi: 10.3389/fvets.2018.00114. eCollection 2018.

Avila L, Picao Goncalves, V, Perez AM, 2018. Risk of introduction of bovine tuberculosis into free herds free of southern Bahia, Brazil, associated with movement of live cattle. *Frontiers in Veterinary Science* 5: 230. doi: 10.3389/fvets.2018.00230

de la Cruz ML, Branscum AJ, Nacar J, Pages E, Pozo P, Perez AM, Grau A, Saez JL, de Juan L, Diaz R, Minguez O, Alvarez J, 2018. Evaluation of the performance of the IDvet IFN-gamma test for diagnosis of bovine tuberculosis in Spain. *Frontiers in Veterinary Science* 5: 229.

Iglesias I, de la Torre A, Montes F, Martinez M, Kolbasov D, Perez A, Gogyn A, 2018. Spatio-temporal kriging analysis to identify the role of wild boar in the spread of African swine fever in Russia. *Spatial Statistics*. <https://doi.org/10.1016/j.spasta.2018.07.002>

Valdes-Donoso P, Alvarez J, Jarvis LS, Morrison RB, Perez AM, 2018. Production losses from endemic animal disease: Porcine reproductive and respiratory syndrome (PRRS) in selected Midwest US sow farms. *Frontiers in Veterinary Science* 5:102. doi: 10.3389/fvets.2018.00102. eCollection 2018.

VanderWaal K, Perez A, Torremorell M, Morrison R, Craft M, 2018. Role of animal movement and indirect contact among farms in transmission of porcine epidemic diarrhea virus. *Epidemics* 24, 67:75

Abdrakhmanov SK, Tyulegenov SB, Korennoy FI, Sytnik II, Beisembaev KK, Bainiyazov AA, Munsey AE, Perez AM, VanderWaal K, 2018. Spatiotemporal analysis of foot-and-mouth disease epidemics in the Republic of Kazakhstan, 1955 - 2013. *Transboundary and Emerging Diseases* 65:1235-1245. doi: 10.1111/tbed.12864.

Elnekave E, Hong S, Mather AE, Boxrud D, Taylor AJ, Lappi V, Johnson TJ, Vannucci F, Davies P, Hedberg C, Perez A, Alvarez J, 2018. *Salmonella enterica* serotype 4,[5],12:i:- in swine in the United States Midwest: an emerging multidrug resistant clone. *Clinical Infectious Diseases* 5;66(6):877-885. doi: 10.1093/cid/cix909.

Krishna VD, Wu K, Su D, Wang JP, Cheeran MCJ, Perez AM, 2018. Nanotechnology: review of concepts and potential application in food safety. *Food Microbiology* 75, 47-54. <https://doi.org/10.1016/j.fm.2018.01>

Kanankege K, Alkhamis M, Perez AM, Phelps N, 2018. Zebra mussels and Eurasian watermilfoil dispersal patterns in Minnesota. *Journal of Great Lakes Research* 44(3) 458-466

Machado G, Kanankege K, Schumann V, Wells SJ, Perez AM, Alvarez J, 2018. Identifying individual risk factors associated with *Mycobacterium avium* subsp. *paratuberculosis* (MAP) milk ELISA positivity in dairy cattle in the Midwest region of the United States. *BMC Veterinary Research* 14:28. doi: 10.1186/s12917-018-1354-y.

Brito BP, Mohapatra J, Subramaniam S, Pattnaik B, Rodriguez L, Moore B, Perez A, 2018. Dynamics of Widespread Foot-and-Mouth Disease Virus Serotypes A, O, and Asia1 in Southern Asia: A Bayesian Phylogenetic Perspective. *Transboundary and Emerging Diseases* 65(3):696-710. doi: 10.1111/tbed.12791. Epub 2017 Dec 17.

Alkhamis M, Arruda A, Vilalta C, Morrison RB, Perez AM, 2018. Surveillance of porcine reproductive and respiratory syndrome virus in the United States using risk mapping and species distribution modeling. *Preventive Veterinary Medicine* 150:135-142. doi: 10.1016/j.prevetmed.2017.11.011.

Kanankege KST, Alkhamis MA, Phelps NBD, Perez AM, 2017. A probability co-kriging model to account for reporting bias and recognize areas at high risk for Zebra Mussels and Eurasian Watermilfoil invasions in

Minnesota. *Frontiers in Veterinary Sciences*. 4:231. doi: 10.3389/fvets.2017.00231. eCollection 2017.

Alba A, Perez A, Puig P, Wünschmann A, Ponder J, VanderWaal K, Alvarez J, Willette M, 2017. Syndromic surveillance for West Nile Virus using raptors in rehabilitation. *BMC Veterinary Research* 13:368 <https://doi.org/10.1186/s12917-017-1292-0>.

Al-Mouqatea S, Alkhamis M, Akbar B, Ali A, Al-Aqeel H, Bin-Heji A, Elipay S, Razzaque M, Perez A, 2018. Bayesian estimation of ELISA and gamma-interferon tests accuracy for the detection of bovine tuberculosis in caudal fold test-negative dairy cattle of Kuwait. *Journal of Veterinary Diagnostic Investigation* 30(3):468-470 <https://doi.org/10.1177/1040638718759574>

Alvarez J., Whitten T., Branscum A.J., Garcia-Seco T., Bender J.B., Scheftel J., Perez A, 2018. Understanding Q fever risk to humans in Minnesota through the analysis of spatio-temporal trends. *Vector-Borne and Zoonotic Diseases* 18(2):89-95. doi: 10.1089/vbz.2017.2132.

Hayer S, VanderWaal K, Ranjan R, Biswal JK, Subramaniam S, Mohapatra JK, Sharma GK, Rout M, Dash BB, Das B, Prusty BR, Sharma AK, Stenfeldt C, Perez AM, Delgado A, Sharma MK, Rodriguez LL, Pattnaik B, Arzt J, 2018. Foot-and-mouth disease virus transmission dynamics and persistence in a herd of vaccinated dairy cattle in India. *Transboundary and Emerging Diseases* 65(2):e404-e415. doi: 10.1111/tbed.12774.

b) International conferences: 19

Vilalta C, Sanhueza J., Arruda A, Alkhamis M, Geary E, Fioravante P, Machado G, Muellner P, VanderWaal K, Perez A, Corzo C. The Dr. Morrison Swine Health Monitoring Project an industry initiative that brings new insights into PRRS epidemiology. ESPHM European Symposium of Porcine Health Management. Barcelona, Spain, May 2018.

Vilalta C, Sanhueza J., Arruda A, Alkhamis M, Geary E, Fioravante P, Machado G, Muellner P, VanderWaal K, Perez A, Corzo C. The Dr. Morrison Swine Health Monitoring Project an industry initiative that brings new insights into PRRS epidemiology., IPVS International Pig Veterinary Symposium. Chongqing, China, June 2018.

VanderWaal K, Paploski I, Bhojwani R, Vilalta C, Perez AM, Corzo C, Machado G. Forecasting the spread of viruses in swine in the United States: translating network and environmental data to actionable insights for stakeholders Ecology and Evolution of Infectious Diseases. Glasgow, Scotland. June 2018.

Omondi G, Obanda V, Wolf T, Unwin S, Mugisha L, Perez A, Leendertz F, Travis DA. The role of research in care of captive and wild nonhuman primates: enhancing the role of African wildlife sanctuaries. International Primatological Society Conference. Nairobi, Kenya, August 2018.

VanderWaal K, Obanda V, Alkhamis M, Sangula A, Gakuya F, Hartwig E, Pauszek S, Smoliga G, Brito B, Perez A, Arzt J, Omondi G. Between-herd transmission dynamics of foot-and-mouth disease in Kenya rangelands. Open session of the European Commission for the Control of Foot-and-Mouth Disease (EuFMD). Puglia, Italy. October 2018.

König GA, Cabanne GS, Marcos A, Perez AM. Evolución del virus de la Fiebre Aftosa a nivel local. XXXVIII Reunión Científica Anual de la Sociedad Argentina de Virología. Cordoba, Argentina, December 2018.

Machado G, Vilalta C, Corzo C, Recamonde-Mendoza M, Perez AM, VanderWaal K. Data-driven predictions and novel hypotheses about outbreaks of porcine epidemic diarrhea virus based on neighboring farms and disease intelligence. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Omondi G, VanderWaal K, Sangula A, Gakuya F, Hartwig E, Pauszek S, Smoliga G, Brito B, Alkhamis M, Perez A, Arzt J, Obanda V. Molecular epidemiology of foot-and-mouth disease virus in rangelands shared by African buffalo and cattle in Kenya. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Kanankege KST, Abdrakhmanov SK, Alvarez J, Glaser L, Bender JB, Mukhanbetkaliyev YY, Korennoy FI, Kadyrov AS, Abdrakhmanova AS, Perez AM. Comparison of spatiotemporal patterns of historic animal anthrax outbreaks in Minnesota and Kazakhstan. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Gunasekera UC, Arzt J, Ranjan R, Biswal J, Perez A, VanderWaal K. Modeling the spatiotemporal dynamics of foot-

and-mouth disease in during mass vaccination programs India. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Picasso C, VanderWaal K, Alvarez J, Craft M, Wells S, Fernandez F, Gil A, Perez A. Assessment of the bovine tuberculosis control program in Uruguay; what can we do better? International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Miller EA, Johnson TJ, Perez AM, Ponder JB, VanderWaal KL. Understanding the role of anthropogenic landscapes in wildlife antimicrobial resistance: Merging metagenomics and spatial epidemiology. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Muellner P, Muellner U, Ahlstrom C, VanderWaal K, Alba A, Alvarez J, Perez A. Bridging the gap – an interactive self-study tool for advanced epidemiological methods. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Munsey A, Mwiine F, Rieder E, Ochwo S, Velazquez-Salinas L, Ahmed Z, Perez A, VanderWaal K. Spatial epidemiology, phylogenetic history, and risk factors for foot-and-mouth disease in Uganda. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Alkhamis MA, VanderWaal K, Obanda V, Gakuya F, Sangula A, Hartwig E, Pauszek S, Smoliga G, Brito B, Perez A, Arzt J, Omondi G. Novel Insights into the evolutionary epidemiology of SAT1 and SAT2 Foot-and-Mouth Disease Virus in Eastern and Southern Africa. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Pozo P, VanderWaal K, Grau A, de la Cruz ML, Nacar J, Bezos J, Perez A, Minguez O, Alvarez J. Are movements epidemiologically important in the transmission of bovine tuberculosis in Castilla y Leon, Spain? International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Avila L, Gonçalves V, Perez A. Epidemiological applications for the control of bovine tuberculosis in the state of Bahia, Brazil. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Kanankege KST, Wiratsudakul A, Prasarnphanich O, Wongnak P, Yoopattthanawong C, Alvarez J, Perez AM, Myhre Errecaborde K. Identifying opportunities to improve the effectiveness in rabies control in Thailand using geographical analysis. International Society for Veterinary Epidemiology and Economics. Chiang Mai, Thailand. Nov 12-16, 2018

Ames T, Torrison J. One Health Roundtable. Inter- State School of Veterinary Sciences and Medicine of Dakar (EISMV) 50th Anniversary Symposium. 200 attendees. Dakar, Senegal. Nov 26-30, 2018.

c) National conferences: 19

Geeks to Geeks workshop: A practitioners guide to study design. Sept 18, 2018. Allen Lemman Swine Conference. 25 attendees.

Nirmala J, Perez A, Culhane M, Allerson M, Sreevatsan S, Kinney M, Mohr A, Torremorell M. Is influenza sow vaccination a key driver of influenza genetic diversity in piglets? Conference of Research Workers on Animal Disease (CRWAD). Chicago, December 2018.

Kanankege KST, VanderWaal KL, Corzo C, Perez AM. Estimation of the risk of Porcine Reproductive and Respiratory Syndrome (PRRS) in Minnesota counties at a given month using surveillance data from 2013 -2017. Lemman conference. St Paul, Minnesota, September 2018.

Elnekave E, Hong S, Hayer SS, Boxrud D, Taylor AJ, Johnson TJ, Rovira A, Davies P, Perez A, Alvarez J. Genetic resistance to quinolones and 3rd generation cephalosporins in Salmonella serotypes circulating in the Midwest swine. Lemman conference. St Paul, Minnesota, September 2018.

Trevisan G, Linhares L, Crim B, Dubey P, Schwartz K, Burrough E, Main R, Sundberg P, Thurn M, Lages P, VanderWaal K, Perez A, Torrison J, Henningson J, Herrman E, Hanzlicek G, Raghavan R, Marthaler D, Greseth J, Hennings JC; Linhares D. Swine Disease Reporting System – an online tool to communicate aggregated USA veterinary diagnostic laboratory results. Lemman conference. St Paul, Minnesota, September 2018.

Biscia M, Anthony L, Torremorell M, Perez AM, Sarradell J. Dynamics of infection by Influenza A virus using nasal

swabs and oral fluids in swine farms in Argentina. Leman conference. St Paul, Minnesota, September 2018.

Befort B, Torrison J, Corzo C, Perez A, Linhares D, VanderWaal K. Comparing temporal dynamics of PRRS diagnostic testing rates to trends in clinical incidence. Leman conference. St Paul, Minnesota, September 2018.

Paladino E, Perez Aguirreburualde MS, Chapman J, Al Ghalith G, Torrison J, Deen J, Sundberg P, Perez A. An early warning system for global surveillance of health threats to the U.S. swine industry. Leman conference. St Paul, Minnesota, September 2018.

Schettino DN, Perez AM. Qualitative risk assessment for the introduction of classical swine fever virus via pig movements into the State of Mato Grosso, Brazil. iCOMOS meeting, Minneapolis, April 2018

Nirmala J, Perez A, Culhane M, Allerson M, Sreevatsan S, Kinney M, Mohr A, Torremorell M. Is influenza vaccination a key driver of influenza genetic diversity in piglets? AASV meeting, San Diego, March 2018

Rovira A, Perez A, Alba A. Using "Optisample" to determine sampling strategy and size for specific needs. AASV meeting, San Diego, March 2018

Munsey A, Mwiine F, Rieder E, Ochwo S, Velazquez-Salinas L, Ahmed Z, Perez A, VanderWaal K. Spatial epidemiology, phylogenetic history, and risk factors for foot-and-mouth disease in Uganda. iCOMOS meeting, Minneapolis, April 2018

Elnekave E, Ding T, Hong S, Perez A, Baumler D, Alvarez J. Use of Genome Scale Metabolic Models (GEMs) to understand the emergence of Salmonella I 4,[5],12:i:-. iCOMOS meeting, Minneapolis, April 2018

Gunasekera UC, Arzt J, Ranjan R, Biswal JK, Subramaniam S, Mohapatra JK, Sharma GK, Rout M, Dash BB, Das B, Prusty BR, Pattnaik B, Perez A, VanderWaal K. Tracking the progress of foot-and-mouth disease control in India. iCOMOS meeting, Minneapolis, April 2018

Kinsley AC, Craft ME, Perez AM VanderWaal K. Characterization of swine movement in the United States and implications for disease control. iCOMOS meeting, Minneapolis, April 2018

Picasso C, Grau A, Nacar J, Perez A, Minguez O, Alvarez J. Association between results on diagnostic tests for bovine tuberculosis and Johne 's disease in cattle in Spain. iCOMOS meeting, Minneapolis, April 2018

O'Brien MK, Perez A, Leon E. ProgRESSVet (Programa Regional de Educación Sistemática de Servicios Veterinarios): Systematic Education to Promote Capacity and Development. iCOMOS meeting, Minneapolis, April 2018

Pozo P, VanderWaal K, Grau A, de la Cruz ML, Nacar J, Bezos J, Perez A, Mínguez O, Álvarez J. Are movements important in the transmission of bovine tuberculosis in Castilla y León, Spain? iCOMOS meeting, Minneapolis, April 2018

de la Cruz ML., Pozo P., Grau A., Nacar J., Mínguez O., Pérez A., Domínguez L., de Juan L., Álvarez J. Application of a scenario tree to evaluate the performance of the official bovine tuberculosis eradication program in a specific region of Spain. iCOMOS meeting, Minneapolis, April 2018

d) Other

(Provide website address or link to appropriate information): 1

Development of amrls.umn.edu website on antimicrobial use and resistance