Sunday Dec. 2	Prese Abstra		Presenter Abstract #	<u>Chicago E (5th)</u> Title	Presenter Abstract #	<u>Chicago A/B (5th)</u> Title	Presenter Abstract #		Presenter Abstract #	<u>Chicago F/G (5th)</u> Title	Presenter Abstract #	<u>Avenue (4th)</u> Title	Presenter Abstract #	<u>Marrriott (4th)</u> Title
Time	Sessio	AVEPM Schwabe	Session 2	NC229 Minisymposium	Session 3	Aquaculture		Parasitology - Anaplasma		Diagnostics - Pigs	Session 6	Foodborne Pathogens	Session 7	Immunology - Cattle
1:00	D PM	Schwabe Symposium - Opening	Benfield / Rocl	k Opening remarks honoring Dr. Murtaugh	Mori 13	Transmission of waterborne fish and plant pathogens in aquaponics and physical control methods	Reppert 25	Evaluation of chlortetracycline- medicated mineral formulations to control active bovine anaplasmosis	Stanton 37	MinION-based amplicon sequencing for rapid identification of three different RNA viruses	Effenbein 49	Inhibition of Myristoylated Alanine- rich C-Kinase Substrate reduces Salmonella colonization of the bovine intestine	Coussens 61	Bovine leukemia virus alters the status of T cells in PBMCs from infected cattle
	1:15		Featured Speaker		Ben-Horin 14	Intensive oyster aquaculture can reduce disease impacts to sympatric wild oysters	Reif 26	Implications of Anaplasma marginale genetic diversity on current bovine anaplasmosis control strategies	Tsai 38	Rapid & simple detection of PRRSV by fully automated sample-to-answer POCKIT™ Central PCR system at point of need	Burin 50	SPI-13 contributes to nutritional adaptation of Salmonella	Dziuba 62	Effects of bovine leukemia virus on antibody levels in milk, serum, and saliva
Sunday	1:30 Torr 2	Torres Counteracting animal diseases at the global level	at Torremorell	Transmission and control of influenza: the role of the piglet.	Karsi 15	Prevention of enteric septicemia of catfish by novel live attenuated vaccines	Coetzee 27	Impact of an outbreak of Anaplasma marginale in dairy cows on long term milk production	Chung 39	A fully automated POCKIT Central PCR system detects Mycoplasma gallisepticum and Mycoplasma synoviae on DOCs	Wu 51	SseL deubiquitinates RPS3 to inhibit its nuclear translocation	Powell 63	Mammary gland targeting by pegylated granulocyte colony stimulating factor therapy during a chronic infection
Sun	1:45	::55			Wargo 16	Prevention efficacy of vaccines against virulence evolution of infectious hematopoietic necrosis virus	Brayton 28	Manipulation of the Dermacentor andersoni bacterial microbiome to mitigate Anaplasma marginale transmission	Wang 40	A Luminex multiplex assay for the detection of PRRSV, PCV2 and PCV3 and for PRRSV vaccine differentiation in the US	Resende 52	Effects of Lawsonia intracellularis infection on the proliferation of mammalian cell lines	Pighetti 64	Association of a SNP in TIAM-2 with T lymphocyte recruitment to bovine milk after Streptococcus uberis challenge
:	2:00 Featured S			Genetically improving resistance of pigs to PRRS virus infection.	Griffin 17	Evaluating atypical Aeromonas hydrophila (aAh) in catfish aquaculture in the Delta region of Mississippi	Skiner 29	Isolation and characterization of two Anaplasma marginale isolates	Streauslin 41	Repeatability of real-time PCR for PRRSV at different concentrations in various sample matrices	Obradovic 53	Lawsonia intracellularis proteins identified through proteomic analysis are targets of neutralizing antibodies.	Talaat 65	Persistence and virulence of M. paratuberculosis: a role for global gene regulators in disease and control
:	2:15 ³	Developing Nations	Abrahamyan 8	Global picture of nidovirus-host cell interactions revealed by comparative proteomics.	Allam 18	Validation of markers and marker- assisted selection of hard clam for resistance to QPX disease	Hoffman 30	Sequence of a novel Anaplasma marginale genome determined with next generation PacBio sequencing technology	Petrovan 42	Diagnostic application of monoclonal antibodies against African swine fever virus (ASFV)	Albers 54	Microbiological contamination of fresh retail ground beef and pork products	DeKuiper 66	The potential role of IL-17a during Johne's disease progression
	2:30	Break		Break		Break		Break		Break		Break		Break
;	2:45	Break		Break		Break		Break		Break		Break		Break
		AVEDRA Calcurates												
Time	Sessio	n 8 AVEPM Schwabe Symposium	Session 9	NC229 Minisymposium	Session 10	Virology	Session 11	Parasitology	Session 12	Diagnostics	Session 13	Bacteriology	Session 14	Immunology
Time 3:00	Featured	n 8 Symposium	Session 9 Telfer 9	NC229 Minisymposium Swine WC1 genes are a multigenic array with bacterial binding capacity.	Session 10 Perera 19	Virology Protease inhibitors broadly effective against feline, ferret and mink coronaviruses	Session 11 Brayton 31	Parasitology Anaplasma ovis: genome sequence and comparative analysis	Session 12 Kimpston- Burkgren 43	Diagnostics AlphaLISA platforms for rapid and sensitive detection of PEDV antibody		Bacteriology The foodborne pathogen that manipulates host cell footprints - links between actin and the extracellular matrix	Session 14 Kuhn 67	Immunology Targeting cytochromes as bovine inflammatory regulators
3:00	D PM Featured S	n 8 Symposium peaker in Bovine brucellosis and tuberculosis: international	Telfer	Swine WC1 genes are a multigenic array with bacterial	Perera	Protease inhibitors broadly effective against feline, ferret and	Brayton 31	Anaplasma ovis: genome sequence and comparative	Kimpston- Burkgren	AlphaLISA platforms for rapid and	Klapppenbach	The foodborne pathogen that manipulates host cell footprints - links between actin and the	Kuhn	Targeting cytochromes as bovine
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3:00	DPM Featured 1 3:15 4 3:00 - 1 3:00 - 1	n 8 Symposium peaker in Bovine brucellosis and tuberculosis: international challenges peaker Beyond fences: Policy options f	Telfer 9 Vu 10 Shang 11 Constance	Swine WC1 genes are a multigenic array with bacterial binding capacity. Correlates of cross-protective immunity to porcine reproductive and respiratory syndrome virus. Hyperphosphorylation of PRRSV nsp2-related proteins regulates viral subgenomic RNA	Perera 19 Kumar 20 Hutchinson	Protease inhibitors broadly effective against feline, ferret and mink coronaviruses Novel diagnostic test and phylodynamics for reducing bovine leukemia virus transmission in dairy cattle Provinal, antibody and lymphocyte dynamics in steers following intramuscular challenge with	Brayton 31 Van Voorhis 32 Busch	Anaplasma ovis: genome sequence and comparative analysis Bumped kinase inhibitors: experimental therapy for cryptosporidiosis, toxoplasmosis, neosporosis, and sarcocystosis Preventing bovine babesiosis by characterizing acaricide resistance in cattle fever ticks	Kimpston- Burkgren 43 Woolums 44 Belamaranahally	AlphaLISA platforms for rapid and sensitive detection of PEDV antibody Thoracic ultrasound, electronic stethoscope score, and tracheal wash cytology in stocker cattle with BRD Isolation and standardization of diagnostic assay for the detection of	Klapppenbach 55 Sun 56 Smith	The foodborne pathogen that manipulates host cell footprints - links between actin and the extracellular matrix Deoxycholic acid modulating anaerobes reduces Campylobacter jejuni chicken colonization Pangenome analysis of Ornithobacterium rhinotracheale clinical isolates and vaccine strains	Kuhn 67 Baldwin 68 Yirsaw	Targeting cytochromes as bovine inflammatory regulators Role of the T cell receptor with WC1, a co-receptor/pattern recognition receptor, for bovine γδ T cell activation WC1 multigenic family of γδ T cell co-receptors and pattern recognition receptors (PRR) in
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ті	me	Session 15	ACVM - Microbiology & Disease Pathogenesis Featured Speakers	Session 16	Antimicrobial Use & Resistance	Session 17	Epidemiology - Cattle	Session 18	Disease Modeling - Food Animals	Session 19	Antimicrobial Use - Food Animals	Session 20	Vaccines & Vaccinology - Poultry	Session 21	Immunology
	8:30 am	ACVM - Distinguished Miccrobiologist		Li 79	Within-host diversity of colistin resistant Enterobacteriaceae isolated from chicken in China	Lee 91	Genomic evolution of bluetongue virus in California	Apamaku 103	Economic assessment of control strategies for a simulated African swine fever epidemic in northern Uganda	Okafor 115	Perceptions of Tennessee cattle producers towards the Veterinary Feed Directive	Renu 127	Oral drinking water delivered chitosan-Salmonella nanovaccine for poultry	Temeeyasen 139	Upregulation of pro- inflammatory cytokine in NCI- H1299 cells following Senecavirus A infection
	8:45	Osterhaus 73	A one health approach in combatting emerging infections	Kathayat 80	Small molecule adjuvants potentiate the antimicrobial activity of colistin against avian pathogenic E. coli	Joan 92	Seroprevalence and risk factors of Neospora caninum and BVDV in Kenyan smallholder dairy farms	Paploski 104	Forecasting outbreaks of PRRS and PED in swine movement networks	Okafor 116	A survey of antimicrobial use practices of Tennessee beef producers, 2018	Redweik	Probiotics and live Salmonella vaccine reduce mucosal immunity and alter neurochemical profile in chicken intestine	Merodio 140	Colonization and immunological response of Mycoplasma hyorhinis in experimentally infected swine
av	9:00			Moffat 81	Extended-spectrum cephalosporin resistance in Enterobacteriaceae from Canadian turkeys	Dewell 93	Pilot project to determine benefit of BVDV testing along with Iowa Green tag preconditioning program	Blair 105	Use of machine learning to predict swine production outcomes as a proxy of the populations health	Okafor 117	Epidemiology of antimicrobial use practices among Tennessee dairy cattle producers	Toro 129	Early vaccination induces sub- optimal immunity against avian infectious bronchitis virus	Mora-Diaz 141	Characterization of immune response against porcine hemagglutinating encephalomyelitis virus in grow- finisher nizs
Mondav	9:15	Featured Speaker		Donde 82	Isolation and antimicrobial susceptibility pattern of Staphylococcus aureus from livestock milk in Ethiopia	LaDronka 94	Bovine leukemia virus in U.S. dairy cattle: update on descriptive epidemiology from a national survey	Renter 106	Risk management strategies to reduce the impacts of bovine respiratory disease complex in commercial feed cattle	Redding	Quantification of antibiotic use on Pennsylvania dairy farms	Roland	Vaccine for the prevention of necrotic enteritis in poultry	Byrne 142	Bacillus Calmette-Guerin (BCG) induces innate training in porcine monocytes
	9:30	Zhang 74	Deciphering bacterial pathogenesis: harnessing the power of genomics and experimental evolution	Hayer 83	Genomic basis of fluoroquinolone & 3rd generation cephalosporin resistance in swine clinical E. coli isolates	Valencia 95	A randomized trial comparing two metaphylaxis protocols for control of bovine respiratory disease in stocker calves	Melmer 107	Understanding the evolution of PRRS virus in Ontario using bayesian phylogenetics	Wemette 119	A survey of the United States public's perceptions of antibiotic use in dairy farming	Zeng 131	Efficacy of enterobactin conjugate vaccines to induce enterobactin specific egg yolk antibodies	Garza	Neutrophils from Suffolk sheep exhibit impaired responses to larval stages of Haemonchus contortus
	9:45			Bosman 84	Antimicrobial resistance in enteric bacteria of public health importance from suckling and nursery pigs in Ontario	Milstein 96	Survey of goat herd health in the Otjiherero area of Namibia and Brucella seroprevalence.	Grohn 108	Mycobacterial transmission dynamics in agriculture: integrating phylogenetics, epidemiology, ecology, and economics	Brault 120	A review of dose-based antimicrobial use indicators in production animals	Ghorbani 132	Heterologous and heterosubtypic protection by live and inactivated vaccines against avian influenza in chickens	Sunyer 144	Discovery of primordial semi- organized lymphoid tissue in teleost fish
	10:00		Break		Break		Break		Break		Break		Break		Break
	10:15		Break		Break		Break		Break		Break		Break		Break
Tiı	me:	Session 22	ACVM - Microbiology & Disease Pathogenesis Featured Speakers	Session 23	Antimicrobial Use & Resistance	Session 24	Disease Modeling	Session 25	Epidemiology & Communication	Session 26	Antimicrobial Use & Resistance	Session 27	Vaccines & Vaccinology - Pigs	Session 28	Epidemiology
Tiı	ne: 10:30 am	Session 22 Featured Speaker	Disease Pathogenesis	Session 23 Bueno 85		Session 24 Jara 97	Disease Modeling Impact of changes in horse movement regulations on the risks of equine infectious anemia in Brazilian farms	Session 25 Wang 109		Session 26 MacKinnon 121		Session 27 Amorim-Moura 133	Pigs	Session 28 Henao-Díaz 145	Epidemiology PRRSV oral fluid ELISA performance comparison among three commercial kits.
Tiu			Disease Pathogenesis	Bueno	Resistance Investigation of antibiotic resistance genes in freshwater trout farms in a watershed in	Jara	Impact of changes in horse movement regulations on the risks of equine infectious anemia in	Wang	Communication Incorporating human behavior to inform disease control policy using factorial survey and	MacKinnon	Resistance Analysis of the burden due to antimicrobial resistance in human E.	Amorim-Moura	Pigs Improved reporting of REFLECT statement items in swine vaccine	Henao-Díaz	PRRSV oral fluid ELISA performance comparison among
	10:30 am 10:45	Featured Speaker Pekosz	Disease Pathogenesis Featured Speakers	Bueno 85 Kuiper	Resistance Investigation of antibiotic resistance genes in freshwater trout farms in a watershed in Chile Characterization of the microbiome and resistome of free-ranging elk and bison, and	Jara 97 Pelkmans	Impact of changes in horse movement regulations on the risks of equine infectious anemia in Brazilian farms Scrapie surveillance in Canada: a	Wang 109 Dodd	Communication Incorporating human behavior to inform disease control policy using factorial survey and predictive learning Creating the viral poster: improving story-telling ability and communicative value of scientific	MacKinnon 121 Gow	Resistance Analysis of the burden due to antimicrobial resistance in human E. coli infections: a systematic review CIPARS antimicrobial use and resistance in Canadian pigs at farm,	Amorim-Moura 133 Rakibuzzaman	Pigs Improved reporting of REFLECT statement items in swine vaccine trials since 2010 Designing epitope-based vaccines for enhanced immunity and	Henao-Díaz 145 Henao-Díaz	PRRSV oral fluid ELISA performance comparison among three commercial kits. Role of collared peccary (Pecari
Mondav	10:30 am 10:45	Featured Speaker Pekosz	Disease Pathogenesis Featured Speakers	Bueno 85 Kuiper 86 Ballash	Resistance Investigation of antibiotic resistance genes in freshwater trout farms in a watershed in Chile Characterization of the microbiome and resistome of free-ranging elk and bison, and comparison to cattle Recovery of beta-lactamase producing Enerobasteriaceae in free-ranging white-tailed deer in	Jara 97 Pelkmans 98 Akter	Impact of changes in horse movement regulations on the risks of equine infectious anemia in Brazilian farms Scrapie surveillance in Canada: a risk-based approach A modeling toolkit to evaluate a simulated outbreak of foot-and- mouth disease: the Animal	Wang 109 Dodd 110 Feldpausch	Communication Incorporating human behavior to inform disease control policy using factorial survey and predictive learning Creating the viral poster: improving story-telling ability and communicative value of scientific posters Evaluation of research finding dissemination in long-term pastorialist community-based	MacKinnon 121 Gow 122 De Bruyn	Resistance Analysis of the burden due to antimicrobial resistance in human E. coli infections: a systematic review CIPARS antimicrobial use and resistance in Canadian pigs at farm, abattoir and retail; 12 years of data Growth performance in antibiotic- free and conventional swine nursery	Amorim-Moura 133 Rakibuzzaman 134 Hamonic	Pigs Improved reporting of REFLECT statement items in swine vaccine trials since 2010 Designing epitope-based vaccines for enhanced immunity and detection Evaluating Immune cell recruitment in response to vaccine adjuvants delivered by intrauterine	Henao-Díaz 145 Henao-Díaz 146 Melmer	PRRSV oral fluid ELISA performance comparison among three commercial kits. Role of collared peccary (Pecari tajacu) in the ecology of PRRSV? Development of a system to monitor incidence and clinical impact of PRRS virus in Ontario
	10:30 am 10:45	Featured Speaker Pekosz 75 Kettelkamp	Disease Pathogenesis Featured Speakers Influenza surveillance and the identification of novel genetic mutations that facilitate virus circulation Bacterial decontamination of supplies entering swine farms with aerosolized aqueous azone or	Bueno 85 Kuiper 86 Ballash 87 Hayter	Resistance Investigation of antibiotic resistance genes in freshwater trout farms in a watershed in Chile Characterization of the microbiome and resistome of free-ranging elk and bison, and comparison to cattle Recovery of beta-lactamase producing Enterobacteriaceae in free-ranging white-tailed deer in Cleveland, Ohio Antimicrobial resistance patterns from human and cattle isolates of Salmonella Typhimurium in the	Jara 97 Pelkmans 98 Akter 99 Yadav	Impact of changes in horse movement regulations on the risks of equine infectious anemia in Brazilian farms Scrapie surveillance in Canada: a risk-based approach A modeling toolkit to evaluate a simulated outbreak of foot-and- mouth disease: the Animal Disease Spread Model Estimation of foot-and-mouth disease infection state durations	Wang 109 Dodd 110 Feldpausch 111 Keay	Communication Incorporating human behavior to inform disease control policy using factorial survey and predictive learning Creating the viral poster: improving story-telling ability and communicative value of scientific posters Evaluation of research finding dissemination in long-term pastorialist community-based research, Tanzania 2018 A survey of swine veterinarians benchmarking priority interests and barriers to knowledge	MacKinnon 121 Gow 122 De Bruyn 123 Shen	Resistance Analysis of the burden due to antimicrobial resistance in human E. coli infections: a systematic review CIPARS antimicrobial use and resistance in Canadian pigs at farm, abattoir and retail; 12 years of data Growth performance in antibiotic- free and conventional swine nursery herds in Ontario The emerging erm(B) mediated macrolide resistance associated with	Amorim-Moura 133 Rakibuzzaman 134 Hamonic 135 Amaral	Pigs Improved reporting of REFLECT statement items in swine vaccine trials since 2010 Designing epitope-based vaccines for enhanced immunity and detection Evaluating Immune cell recruitment in response to vaccine adjuvants delivered by intrauterine vaccination in sows. Establishing the pig as a model for Chlamydia trachomatis vaccine	Henao-Díaz 145 Henao-Díaz 146 Melmer 147 Ruggiero	PRRSV oral fluid ELISA performance comparison among three commercial kits. Role of collared peccary (Pecari tajacu) in the ecology of PRRSV? Development of a system to monitor incidence and clinical impact of PRRS virus in Ontario sow herds Evaluating control of bovine
	10:30 am 10:45 11:00 11:15	Featured Speaker Pekosz 75 Kettelkamp 76 Kordas	Disease Pathogenesis Featured Speakers Featured Speakers Influenza surveillance and the identification of novel genetic mutations that facilitate virus circulation Bacterial decontamination of supplies entering swine farms with aerosolized aqueous ozone or Symergize Use of UV light chambers to decontaminate surfaces	Bueno 85 Kuiper 86 Ballash 87 Hayter 88 Volkova	Resistance Investigation of antibiotic resistance genes in freshwater trout farms in a watershed in Chile Characterization of the microbiome and resistome of free-ranging elk and bison, and comparison to cattle Recovery of beta-lactamase producing Enterobacteriaceae in free-ranging white-tailed deer in Cleveland, Ohio Antimicrobial resistance patterns from human and cattle isolates of Salmonella Typhimurium in the NARMS database Analyzing antimicrobial minimum inhibitory concentration (MIC)	Jara 97 Pelkmans 98 Akter 99 Yadav 100 Zaheer	Impact of changes in horse movement regulations on the risks of equine infectious anemia in Brazilian farms Scrapie surveillance in Canada: a risk-based approach A modeling toolkit to evaluate a simulated outbreak of foot-and- mouth disease: the Animal Disease Spread Model Estimation of foot-and-mouth disease infection state durations in cattle Estimating the location and population of animal holdings in developing countries for spatial	Wang 109 Dodd 110 Feldpausch 111 Keay 112 Rotolo	Communication Incorporating human behavior to inform disease control policy using factorial survey and predictive learning Creating the viral poster: improving story-telling ability and communicative value of scientific posters Evaluation of research finding dissemination in long-term pastoralist community-based research, Tanzania 2018 A survey of swine veterinarians benchmarking priority interests and barriers to knowledge translation (KT) Application of spatially balanced	MacKinnon 121 Gow 122 De Bruyn 123 Shen 124 Norman	Resistance Analysis of the burden due to antimicrobial resistance in human E. coli infections: a systematic review CIPARS antimicrobial use and resistance in Canadian pigs at farm, abattoir and retail; 12 years of data Growth performance in antibiotic- free and conventional swine nursery herds in Ontario The emerging erm(B) mediated macrolide resistance associated with novel MDRGIs in Campylobacter Effects of antibiotics on intestinal and extra-intestinal MDR and pan-	Amorim-Moura 133 Rakibuzzaman 134 Hamonic 135 Amaral 136 Tan	Pigs Improved reporting of REFLECT statement items in swine vaccine trials since 2010 Designing epitope-based vaccines for enhanced immunity and detection Evaluating Immune cell recruitment in response to vaccine adjuvants delivered by intrauterine vaccination in sows. Establishing the pig as a model for Chlamydia trachomatis vaccine development Predicting swine flu vaccine efficacy: Assessing T cell epitope cross-conservation in vaccine and	Henao-Díaz 145 Henao-Díaz 146 Melmer 147 Ruggiero 148 Marques	PRRSV oral fluid ELISA performance comparison among three commercial kits. Role of collared peccary (Pecari tajacu) in the ecology of PRRSV? Development of a system to monitor inchere and clinical impact of PRRS virus in Ontario sow herds Evaluating control of bovine leukemia virus in dairy herds The effect of foot-and-mouth disease (FMD) vaccination on early pregnancy loss in beef

Monday, De	c. 3	Presenter Abstract #	<u>Chicago D (5th)</u> Title	Presenter Abstract #	<u>Chicago E (5th)</u> Title	Presenter Abstract #	Chicago A/B (5th) Title	Presenter Abstract #	<u>Chicago C (5th)</u> Title	Presenter Abstract #	<u>Chicago F/G (Sth)</u> Title	Presenter Abstract #	Avenue (4th) Title	Presenter Abstract #	<u>Marrriott (4th)</u> Title
Time:		Session 29	AAVI-SMI Immunology Minisymposium	Session 30	Metagenomic Assessment of Antimcrobial Resistance	Session 31	Disease Modeling	Session 32	Antimicrobial Use & Resistance - Companion Animals	Session 33	Microbiome	Session 34	Zoonosis	Session 35	Virology
2	:00 PM	Lear 151	Exploring placental immunity: exosomal cargo in pregnant sheep infected with bovine viral diarrhea virus	Weinroth 157	Metagenomic characterization of antimicrobial resistance in cull cows at slaughter	Webb 169	Estimation and comparison of foot and mouth disease spatial spread parameters for three outbreaks	Love 181	Selection of methicillin-resistant Staphylococcus pseudintermedius by non-β- lactam antimicrobials in dogs	Megahed 193	Impacts of environmental complexity on microbial community characteristics in growing pigs	Lyons 205	I-TICK: increasing tick surveillance in Illinois through collaboration between governmental, academic, and citizen	Ciobanu 217	Investigation of host genetic r in PCV2 and PRRSV susceptibi
	2:15	AAVI - Distinguished Immunologist		Thomas 158	A comparison of the resistome and microbiome of conventional and natural retail ground beef products	Torremorell 170	Characterization of influenza diversity in piglets and risk factors for diversity: role of sow vaccination	Lavigne 182	Barriers to improving antibiotic prescribing behavior among companion animal veterinarians: cost is key	Beyene	Antimicrobial resistance in gut bacteria of cattle administered with metaphylactic and therapeutic antimicrobials	206		Kang 218	Sputum processing method f rapid diagnosis of Middle Eas respiratory syndrome corona (MERS-CoV)
day	2:40	Gershwin	Comparative immunobiology: from asthma to vaccines	Doster 159	Metagenomic characterization of the microbiome and resistome in ground beef	Paploski 171	Spatiotemporal patterns of different genetic subtypes of PRRS in pig movement networks	Qekwana 183	Occurrence and predictors of respiratory tract infection and antimicrobial resistance among dogs, South Africa	Hill	Association between the tonsil microbiota and clinical Streptococcus suis infection	Cain 207	Factors associated with rabies vaccination of dog shelter workers	Van de Walle 219	Characterization of recently discovered liver-tropic virus horses
Monday	2:45			Doster 160	Antimicrobial use in beef feedlots: effects on microbiome and resistome dynamics	Jara 172	Spatial distribution and spread of Leptospira serovars in Brazil and New Zealand using ecological niche models	Adams 184	Intrauterine antibiotic infusion increases antimicrobial resistance in the reproductive microbiota of mares	Pilch 196	Characterization of the microbiota of recycled dairy bedding sand and the ability of Salmonella to persist	Omodo 208	Characterization of circulating rabies virus in animals and knowledge, attitude and practice on rabies in Uganda	Lee	Genomics-informed reconstruction of global migration of Equine influen: virus identified from 2012 to
	3:00	Featured Speaker	Mucosal immune development in	Bulut	Transfer of antimicrobial resistance from beef cattle with different antimicrobial uses through manure management	Cazer 173	Network analysis applied to association rules identifies resistance patterns in chicken- associated Escherichia coli	Huber 185	Epidemiology of macrolide and rifampicin resistance in isolates of Rhodococcus equi at horse farms in the USA	Raabis 197	The nasopharyngeal microbiota of pre-weaned dairy calves with and without ultrasonographic lung lesions	Khrongsee 209	Case report: first successful treatment and management of canine melioidosis	Izumiya 221	2017 Oncogenic Pathways of Ma Disease Virus; Viral Non-co RNA Expression and Replica
	3:15	Bailey	pig intestines related to gut microbiota	Kastendieck	A bioinformatics approach to mobile genetic elements: understanding the ecology in a feedlot setting.	Slizovkiy 174	Characterizing risks of mobilizing antibiotic resistance in beef production: A metagenomics- network approach	Álvarez- Narváez 186	Paradoxical evidence of clonal spread of macrolide- and rifampin-resistant R. equi isolates	Dean 198	Sampling considerations for conducting large-scale microbial ecology studies of cow udder epithelium.	Beyene 210	One-health approach to evaluate canine rabies vaccination in Ethiopia	Boley	Susceptibility of layer chicke infection by porcine deltacoronavirus
3:30-4	:15 PM		CF	RWAD Busine	ess Meeting and Listenin	g Session - C	hicago D (5th)				CRWAD Busine	ss Meeting	and Listening Session - Ch	icago D (5th))
Time:		Session 36	AAVI-SMI Immunology Minisymposium	Session 37	Antimicrobial Use & the Microbiome	Session 38	Epidemiology	Session 39	Antibiotic Alternatives	Session 40	Microbiome	Session 41	Zoonosis	Session 42	Porcine Reproductiv Respiratory Syndro Virus
4	:15 PM	Featured Speaker	Gut health in food animals	Aref 163	Gut microbiome ecosystem in ceftiofur-challenged preweaned lambs	Benitez 175	Effect of bovine leukosis virus on beef cow longevity	Adhikari 187	Evaluation of Bacillus direct-fed microbial for control of necrotic enteritis in chickens	Valeris-Chacin 199	Campylobacter and microbiome interactions in broiler litter: a matched case-control study	Pham Quang 211	The model of anthrax transmission in human and animal in Vietnam	Rodriguez-Zas 223	Impact of PRRSV infection of pregnancy on metabolic indicators
	4:30	Kogut 154	especially in chicken	Looft 164	The in-feed antibiotic bacitracin modulates microbiome and metabolome profiles in a dose- dependent manner	Mora-Diaz 176	Seroprevalence of Porcine hemagglutinating encephalomyelitis virus in sow herds in the United States	Johnson 188	Antibiotic-free alternatives to improve health and performance in commercial turkeys	Dunn 200	The role of host genetic resistance and vaccination on transmission of Marek's disease virus in poultry	Rossouw 212	Seroprevalence and risk factors of human Brucellosis in a farming community in South Africa, 2015- 2016	Li 224	Interactome analysis of nsp protein of porcine reproduc and respiratory syndrome v
lay	4:45	Featured Speaker	ter Delineating dendritic cell subsets and their responses to classical	Basbas 165	Effect of dry cow antimicrobial treatment on fresh cow's milk microbiota	Giang 177	Estimating the Basic Reproduction Number of a Streptococcus suis outbreak within a swine herd in Ontario, Canada	Dawes 189	Antibiotic-free alternatives to improve health and performance in commercial turkeys	Ngunjiri 201	Respiratory microbiota of chicken layers: diversity, dynamics, and correlations with vaccines & infections	Ekong 213	A systematic review of seroprevalence of Rift Valley fever in humans, livestock, and wildlife in affected regions	Tang 225	Control of PRRSV infection inhibition of CD163 express pig macrophages
Mond	5:00	Summerfield	swine fever virus infection in lymphoid tissue	Zeineldin 166	Perinatal tulathromycin administration enriched early life antimicrobial resistome in piglets.	Siegford 178	Reducing production losses using behavioral and genomic tools to identify pigs suited for group living	Zhou 190	Nanoparticle delivery of CRISPR/Cas9-based antimicrobials	Mellata 202	Genetic and biological stress markers of layers from different commercial poultry housing systems	Jiranantasak 214	Serodiagnosis of swine melioidosis in intensive pig farming systems in southern Thailand	Yan 226	Genetic characterization of emerging PRRSV in the U.S. features of -2/-1 ribosome frameshifting in nsp2 regio
~		Featured Speaker		Gaire	Age dynamics of fecal	Uribe Corrales	Relationship between pre-	<u>.</u>	Using chitosan microparticles to	Carl	Sampling method: the first obstacle in next generation sequencing	Lee	Seroprevalence of zoonotic diseases (leptospirosis and Japanese	Stoian	Domains and peptide sequ
	5:15	reduice openier	Uterine and fetal responses to	167	microbiome composition and AMR are similar in production and breeder swine	179	slaughter handling plus welfare practices on pork quality in Valle de Aburrá, Colombia	Galvao 191	treat metritis in lactating dairy cows.	Cook 203	studies in a veterinary hospital environment	215	encephalitis) in swine from 10 provinces in Vietnam	227	in CD163 involved in recog by PRRSV

Ryan

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healthy adult horses

gastrointestinal microbiota of

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explanatum (Trematoda:

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Paramphistomidae) from buffalo,

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Presenter

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O'Shaughnessy farms: Comparing swine and human

farm risk factors

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environments and assessing on-

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Presenter Marrriott (4th)

Doeschl-Wilson preventable? Evidence from a

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data-supported mechanistic

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Chicago E (5th) Presenter Chicago A/B (5th) Presenter Chicago C (5th)

Streptococcus suis in nursery pigs

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from Ontario, Canada

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Worsley-Tonks Antimicrobial resistance in urban

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Tuesday, I	Dec. 4	Presenter Abstract #	<u>Chicago D (5th)</u> Title	Presenter Abstract #	<u>Chicago E (5th)</u> Title	Presenter Abstract #	<u>Chicago A/B (5th)</u> Title	Presenter Abstract #		Presenter Abstract #	<u>Chicago F/G (5th)</u> Title	Presenter Abstract #		Presenter Abstract #	<u>Marrriott (4th)</u> Title
Time	:	Session 43	Population Health Featured Speakers	Session 44	Foodborne Pathogens	Session 45		Session 46	Epidemiology -	Session 47	Bacteriology - Cattle	Session 48		Session 49	
;	8:30 AM	Featured Speaker		Stout 235	Modeling public health effects of immune priming by naturally occurring virulence attenuated Listeria monocytogenes	Blikslager 247	Piglets have reduced epithelial wound healing associated with an immature enteric glial cell network	Sanglikar 259	How long will my horse shed Salmonella? - A preliminary evaluation	Perea 271	Molecular epidemiology of cattle tuberculosis in Mexico through whole genome sequencing and spoligotyping	Hou 283	A Tyrosine-Based Sorting Motif in PEDV Spike Protein is an Endocytosis Signal and Contributes to Viral Virulence	Rowe 295	A novel supplementation approach to enhance host response to sublingual vaccination
	8:45	Szymczak	The social determinants of prescribing: leveraging social science to improve the use of	Baruch	Enterohemorrhagic Escherichia coli (EHEC) prevalence on hides and feces of cull dairy cattle at	Kim	Serological profiles of sows and their offspring after experimental infection with Seneca Valley virus	Vogt	Efficacy of the Borrelia burgdorferi vaccine in dogs in North America: a systematic	Hadi	DNA selection against Mycobacterium bovis-specific biomarkers for rapid diagnosis of	Wang	Molecular attenuation mechanisms of porcine epidemic diarrhea virus (PEDV) in pigs		T cell populations in calves infected with BVDV + IBR after intranasal vaccination and trace
ay	9:00	229	antibiotics	236 Seger	harvest Nonpathogenic E. coli fecal shedding and environmental survival in a pen of orally-	248 Putman	(SVV) Oxylipid profiles of dairy cattle vary throughout the transition into early mammary gland	260 Loftin	review and meta-analysis Survey of humane organizations that care for dogs in Colorado, Michigan, Mississippi,	272 Miyagaki Shoyama	bovine tuberculosis. The role of Fur protein in Mycobacterium avium subsp. paratuberculosis pathogenesis	284 Oh	Caspase-mediated cleavage of nucleocapsid protein of a protease- independent strain of genogroup 2	296 Flemming	minerals injection Transcriptomic analysis of varyin immune responses to BRD vaccination in BVDV challenged
Tuesday	9:15	Featured Speaker		237 Stromberg 238	inoculated feedlot steers Lon protease is upregulated in Shiga toxin-producing Escherichia coli strains during intestinal colonization	249 Taylor 250	involution Tripartite collaborative: identification of regulatory element variants impeding immune response to BRD pathogens	261 Woodruff 262	Pennsylvania and Oklahoma Number of dogs entering shelters in 5 states and factors affecting their outcomes: a study of the sheltering system	273 5 Inzana 274	The interactive nature of Histophilus somni & Pasteurella multocida in a biofilm and their effect on host response	285 Yuan 286	PEDV Isolation and characterization of a divergent strain of porcine sapelovirus from swine farm in US	297 Chowdhury 298	cattle Novel bovine herpesvirus type 1 vectored vaccine against viruses associated with bovine respiratory disease complex
	9:30	Wang 230	Spatio-temporal approaches to surveillance sampling for disease detection	Remfry 239	Prevalence of Shiga toxin- producing Escherichia coli in finisher pig feces from commercial production systems	Bickhart 251	Reassembly of cattle immune gene clusters for quantitative analysis	Howard-Azzel	Identifying risk factors h contributing to opioid poisonings in U.S. pet dogs using data from a Poison Control Center	Zheng 275	A multiplex real-time PCR assay for the detection and differentiation of five bovine pinkeye pathogens	Chen 287	Isolation and characterization of a U.S. porcine sapelovirus associated with poliomyelitis	Tabynov 299	A novel influenza viral vector based Brucella abortus vaccine a the stage of implementation into practice
	9:45	230		Atobatele	Detection, isolation, and antimicrobial susceptibility testing of Salmonella enterica from wheat grain samples.	Mansfield	Human microbiota influenced Campylobacter jejuni colonization and autoimmunity more than host genetic background	Feldpausch	Rabies response: a novel approach to animal bite reporting in Georgia, USA	Walker	Long-term storage of virulent Leptospira by cryopreservation for rapid in vivo use	Temeeyasen	Pathogenicity and immune response against porcine circovirus 3 infection in cesarean derived- colostrum deprive pigs	Jacob	Developing a protective immunity enhanced Salmonella vaccine against Brucella melitensis
	10:00		Break	240	Break	252	Break	264	Break	276	Break	288	Break	300	Break
	10:00		Break		Break		Break		Break		Break		Break		Break
Time		Session 50	Population Health Featured Speakers	Session 51	Foodborne Pathogens	Session 52	Disease Pathogenesis	Session 53		Session 54	Influenza	Session 55	Virology - Pigs	Session 56	Vaccines & Vaccinology Pigs
1	0:30 AM	Featured Speaker		Hovdey 241	Investigating acute environmental drivers of human verocytotoxigenic Escherichia coli infections in Ontario	Lamont 253	Rapid transcriptome responses in chicken spleen to avian pathogenic E. coli infection: US-UK collaborative research	Srinivasan 265	Development of a peptide-based skin test with DIVA capabilities for the diagnosis of bovine tuberculosis	Kapczynski 277	Differential expression of the M2 protein influences localization and morphology during avian influenza replication	Matias Ferreyr	Development of a polioencephalomyelitis in swine following experimental inoculation with porcine astrovirus type 3	Lu 301	New fimbriae-toxoid vaccine candidate can induce immunogenic and neutralizing antibodies against porcine ETEC
	10:45		Big data and smart-connected epidemiology in practice	Checkley 242	Epidemiology of Shiga Toxin- Producing and Antimicrobial Resistant Escherichia coli in southern Alberta Well Water	Rhoads 254	Validation of a SNP panel for selection for ascites resistance in broilers	Menshawy 266	The use of heat-inactivated Mycobacterium bovis in goats	Xie 278	A within-host model of H9N2 avian influenza virus infection kinetics in chickens	Buckley 290	Sequence comparison of historic and contemporary strains of Seneca Valley virus	Sang 302	Antiviral regulation underlying the activation status of porcine monocytic innate immune cells
lay	11:00	231		Khaitsa 243	Efficiency and quality of six surfaces in drying Haplochromis sp (enkejje) at Rubare fish landing site in Uganda	Hanafy 255	Respiratory Models for non- tuberculous mycobacterial infections	Tinker 267	A Staphylococcus aureus challenge trial to assess the efficacy of an enterotoxin-based vaccine for bovine mastitis	Zeller 279	N2 neuraminidase and hemagglutinir coordinated evolution increases influenza A virus genetic diversity in swine	Gladue 291	Identification of structural glycoprotein E2 domain critical to mediate Classical Swine Fever Virus replication	Verhoeven 303	Optimization and testing of a universal influenza vaccine for swine
Tuesd	11:15	Gearhart Award Winner 232	ТВА	Sylte 244	Identifying selective media and isolates of Campylobacter jejuni to experimentally colonize turkey poults	Swiderski 256	HCN4 mediates airway hyper- responsiveness in pasture- associated severe equine asthma	Kerro Dego 268	Protective effects of Staphylococcal Surface Proteins as Vaccine Antigens to Control Mastitis in Dairy Cows	Keay 280	Influenza A virus vaccine research in swine since 1990 - Findings of a scoping review	Choi 292	Comparison of classical swine fever virus and atypical porcine pestivirus (APPV) Npro	Käser 304	Prediction of vaccine-induced long-term protection via advanced analysis of pathogen- specific memory immune cells
	11:30	Bassel 233	Mannheimia haemolytica & Mycoplasma bovis in the nasal cavity of feedlot cattle: temporal and disease associations	Megahed 245	Antimicrobial efficacy of ozone on Salmonella contaminated chicken carcasses using the sequential washing system	Taylor 257	Ascorbic acid and low-dose hydrocortisone therapy in an equine model of sepsis	Choi 269	Tip-separable dissolving microneedle for vaccination: application in intradermal canine influenza vaccine delivery	Garrido 281	Experimental transmission of influenza A virus from nurse sows to adopted pigs during lactation	Stoian 293	Survival of ASFV in feed ingredients under transboundary shipping conditions	Gladue 305	Rapid development of experimental live attenuated vaccines for outbreak strains of African swine fever virus
		DeBey	Dietary supplementation effects of L-carnitine &/or L-carnosine on plasma metabolites and body	Baumler	Commensal Enterobacteriaceae protect against Salmonella colonization by competing for	Negretti	Campylobacter jejuni manipulates trafficking in intestinal epithelial cells to promote survival	Srivastava 270	Lower efficacy of human rotavirus vaccine in a microbiota humanized gnotobiotic pig model: A microbiota prospective	Lee 282	Evolution and spread of highly pathogenic avian influenza virus H5N2 in the United States during 2014-2015	Collin 294	HA key amino acid site may determine cross-reactivity of human-like H3N2 viruses to cluster IV antisera	Gauger 306	Efficacy of a T cell epitope DNA vaccine, an inactivated vaccine, and use of both in the H1N1 pig challenge model
	11:45	234	composition of cats	246	oxygen	258								306	
	11:45 12:00	234	,	246	oxygen Break	258	Break	270	Break		Break	254	Break	306	Break
12:15 - 2	12:00	234	composition of cats Break					270		sing Commer	Break			306	Break