Sunday, Dec. 3, 5:00 - 5:30 pm	Openin	ng Comments and Dedication of CRWAD 2017 - Chicag	go Ballroom, 5th Floor	Openin	g Comments and Dedication of CRWAD 2017 - Chicago E	Ballroom, 5th Floor	Openin	g Comments and Dedication of CRWAD 2017 - Chicago	o Ballroom, 5th Floor
5:30 - 6:30	CRWAD Council Keynote: Dr. Ja	ack Gilbert - Invisible Influence: the Microbiome in Pre	ecision Medicine - Chicago Ballroom, 5th Floor	CRWAD Council Keynote: Dr. Ja	ck Gilbert - Invisible Influence: the Microbiome in Precis	sion Medicine - Chicago Ballroom, 5th Floor	CRWAD Council Keynote: Dr. Ja	ck Gilbert - Invisible Influence: the Microbiome in Pre	cision Medicine - Chicago Ballroom, 5th Floor
Poster Session I - 6:30 - 8:30	Posters	Posters	Posters	Posters	Posters	Posters	Posters	Posters	Posters
	Room 1 - Chicago Ballroom D, 5th Floor	Room 2 - Chicago Ballroom E, 5th Floor	Room 3 - Chicago Ballroom ABC, 5th Floor	Room 4 - Chicago Ballroom FGH, 5th Floor	<u>Room 5 - Marriott Ballroom, 4th Floor</u>	Room 6 - Clark Ballroom, 4th Floor	<u>Room 7 - Armitage, 4th Floor</u>	<u>Room 8 - Belmont, 4th Floor</u>	Room 9 - Denver / Houston, 5th Floor
	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #
Session:	Session 1 Antimicrobial Drug Use	Session 7 Antimicrobial Resistance - 1	Session 12 Health in Cattle Populations - 1	Session 17 Modeling and Network Analysis	Session 22 Vaccines and Vaccinology - 1	Session 27 Immunological Responses - 1	Session 33 Pathobiology of Enteric Pathogens - 1	Session 39 Respiratory Disease Keynote / Bacteria Pathogenesis Keynote	Session 45 Viral Pathogenesis - 1
Monday, Dec. 4, 9:00 am	Redding Comparison of two methods for collecting antibiotic use data on small dairy farms 2	Reyes Velez Use of Whole Genome Sequence to identify new Sequence Types of Streptococcus uberis from dairy cattle.	Hutchinson Risk of new infections with bovine leukemia virus on Michigan dairy herds 57	Baron Spatial and temporal network analysis of swine movements in Argentina from 2011 to 2016 83	Young Introduction and Overview of Vaccine Network 244	Number and location of activation induced           Levings         cytidine deaminase (AID) 'hotspot sequences' in germline variable genes of veterinary and laboratory species	Wang         Two trafficking signaling motifs at the end of the spike protein of porcine epidemic diarrhea virus are virulence determinants in pigs		Areda         Phylogenetic analysis of Bovine herpes virus-4 isolates from dairy cows in California revealed higher genetic diversity and novel genotypes
9:15	An assessment of veterinary prescription practices and factors influencing usage of antimicrobial drugs	Hau Genotypic differences between LA-MRSA STS and MRSA STS from humans with no swine contact	LaDronka Impact of bovine leukemia virus on cow-level somatic cell counts as an indicator of mammary inflammation 58	Kukielka Modeling the live-pig trade network in Georgia: Implications for disease prevention and control 84	Singh Rapid response vaccine against the porcine epidemic diarrhea virus	Le Page Classification of WC1 genes in Sus scrofa and evaluation of individual SRCR domain affinity for Mycobacterium bovis and Leptospira.	Resende Evaluation of mouse enteroids as a in vitro model for Lawsonia intracellularis infection 158	Timsit Upper and lower respiratory tract microbiotas in feedlot cattle: their structures, relationship and potential role in respiratory health 184	Abdelsalam The indirect effect of bovine viral diarrhea virus, BVDV on macrophage inflammatory function and lymphocyte apoptosis 214
9:30	Ekakoro A cross-sectional study of the determinants of antimicrobial use practices of veterinary clinicians at a US veterinary teaching hospita	Zeineldin Microbial shifts in the swine nasal microbiota in response to the parenteral antimicrobial administration	Ruggiero Selective removal of high proviral load cows to control bovine leukemia virus in dairy herds 59	Greer Greer in Ontarios, Canada B5 B2 B2 B2 B2 B2 B2 B2 B2 B2 B2	Chitosan delivery of inactivated influenza Dhakal vaccine improves heterologous protection by enhancing antibody and cellular immune 108 responses in pigs	Yirsaw         Characterization of the WC1 multigenic family of γδ T cell co-receptors and pattern recognition receptors in goats           134	Stromberg Host inflammatory response to oral inoculation with enterohemorrhagic Escherichia coll in a defined microbiota mouse model		Knapek Immunological gene expression changes in the fetal thymus after maternal infection with bovine viral diarrhea virus
9:45	Antimicrobial drug use in Canadian beef cattle: extent, indications, and risk factors fo use. 5	Characterization and prevalence of Salmonella Weissend enterica in the feces of feedlot cattle fed rations with and without Tylosin or Tylosin 34 alternatives.	Wisnieski Predictive modeling for early lactation diseases in transition dairy cattle 60	Milwid Duantifying the heterogenieity in contact patterns wthin an Ontario equine facilty: a pilot study 86	Sayedahmed Longevity of adenovirus vector immunity and its implication for annual immunization 109	Preliminary evidence for CD3+ cell generation Boettcher in pigs with severe combined immunodeficiency (SCID): a leaky causative mutation within the Artemis gene	Lu Mapping immunodominant and neutralizing epitopes of enterotoxigenic Escherichia coli (ETEC) F18 adhesin subunit FedF 160	Syzmanski	Gladue Understanding the diverse roles of viroporin activity of classical swine fever virus protein p7 216
10:00	A qualitative study of New York State dairy farmers' perceptions regarding antibiotic use and resistance in dairy cattle	The reporting characteristics of bovine O'Connor respiratory disease antibiotic trials published prior to and following publication of the 35 REFLECT statement	Areda Bovine herpes virus type-4 among postpartum dairy cows in California: Risk factor analysis using multilevel mixed model	Stenkamp-         Using geospatial methods to measure the risk of           Strahm         environmental persistence of avian influenza in           87         South Carolina	Xu Water in oil adjuvant selection for the formulation of one-shot safe bacterial vaccines for swine	Abdi Staphylococcus aureus cell surface proteins extraction and evaluation of immunogenicity 136	Shepherd Variability in porcine RVB and RVC VP7 proteins illustrates potentially important immunological sites	Expect the unexpected with Campylobacter jejuni	Zhou The outbreak of atypical porcine pestivirus in the North China and the genomic characteristics of novel Chinese strains
10:15	Break	Break	Break	Break	Break	Break	Break		Break
10:15	Break	Break Break	Break Break	Break	Break	Break Break	Break Break	Break	Break
	Break			Break Break Session 18 Ecology and Management of Foodborne Agents	Break Session 23 Vaccines and Vaccinology - 2			Break Session 40 Respiratory Disease in Swine	
10:30	Break Session 2 Antimicrobial Resistance - 2 Fkakoro Antimicrobial use practices, and perceptions	Break	Break	Break	Break	Break	Break		Break
10:30 Session:	Break           Session 2         Antimicrobial Resistance - 2           Antimicrobial use practices, and perceptions of cattle producers in Tennessee regarding antimicrobial use: a qualitative study           7           Breauvais	Break Session 8 Alternatives to Antibiotics Wisener Alternatives to antibiotic use in beef cattle: A	Break           Session 13         Health in Cattle Populations - 2           Smith         Rates of co-infection for three endemic diseases in US dairy herds	Break           Session 18         Ecology and Management of Foodborne Agents           Thomas         The characterization of retail ground beef microbiome	Break           Session 23         Vaccines and Vaccinology - 2           Passive immunity against porcine epidemic         Joshi           Joshi         diarrhea virus following immunization of pregnant gilts with a recombinant Of virus	Break           Session 28         Bovine Immunology - 1           Kaltenboeck         A novel peptide microarray ELISA detects species-specific antibodies against Chlamydia loruminant series	Break Break Session 34 Pathobiology of Enteric Pathogens - 2 Tabashsum Competitive exclusion of Campylobacter jejuni by linoleic acid overproducing Lactobacillus creat	Session 40 Respiratory Disease in Swine Yim-Im Comparison of PRRSV isolation from clinical samples using MARC-145 and ZMAC cell lines	Break
10:30 Session: 10:45	Break       Session 2     Antimicrobial Resistance - 2       Antimicrobial use practices, and perceptions of cattle producers in Tennessee regarding antimicrobial use: a qualitative study       7     A mathematical model to explore potential reductions in antibiotic resistance on feedlots.       8     Sayesian latent hierarchical model for detecting MIC creep       9     Sayesian latent hierarchical model for	Break           Session 8         Alternatives to Antibiotics           Wisener         Alternatives to antibiotic use in beef cattle: A scoping review           36         Zinc and menthol as alternatives to antibiotics: impacts on Enterococcus spp resistance in	Break           Session 13         Health in Cattle Populations - 2           Smith         Rates of co-infection for three endemic diseases in US dairy herds           62         What is the effect of eliminating pneumonia in calves prior to weaning on net income of the US cow-calf industry	Break           Session 18         Ecology and Management of Foodborne Agents           Thomas         The characterization of retail ground beef microbiome           88         Vogt         Epidemiology of Campylobacter among free-living Canada geese in Ontario, Canada	Break           Session 23         Vaccines and Vaccinology - 2           Joshi         Passive immunity against porcine epidemic           Joshi         diarrhea virus following immunization of pregnant gilts with a recombinant Orf virus vector           Garcia         Immunogenicity characterization of intradermally immunized enterotoxigenic Escherichia coli (ETEC) subunit vaccine candidates.	Break           Session 28         Bovine Immunology - 1           Kaltenboeck         A novel peptide microarray ELISA detects species-specific antibodies against Chlamydia inruminant sera           137         Characterizing responses of immune cell subsets from M. paratuberculosis (MAP) test positive and test negative cows from commercial herds to MAP antigen stimulation	Break           Session 34         Pathobiology of Enteric Pathogens - 2           Tabashsum         Competitive exclusion of Campylobacter jejuni by linoleic acid overproducing Lactobacillus casei           162         Nisar           Nisar         Molecular epidmeiology of Campylobacter upsaliensis isolated from dogs in Grenada	Session 40         Respiratory Disease in Swine           Yim-Im         Comparison of PRRSV isolation from clinical samples using MARC-145 and ZMAC cell lines           186         Development of a luminex multiplex assay for the detection and differentiation of type 2 prrsv field strains and the four us vaccine strains.	Break Session 46 Virology Keynote / Viral Pathogenesis MacLachlan Bluetongue pathogenesis: an evolving story from Theiler to climate change
10:30 Session: 10:45 11:00	Break           Session 2         Antimicrobial Resistance - 2           Antimicrobial use practices, and perceptions of cattle producers in Tennessee regarding antimicrobial use: a qualitative study           7         Amathematical model to explore potential reductions in antibiotic resistance on feedlots.           8         Yuan         Bayesian latent hierarchical model for detecting MIC creep           9         Agent-based and hybrid models of antimicrobial use and transmission of	Break           Session 8         Alternatives to Antibiotics           Wisener         Alternatives to antibiotic use in beef cattle: A scoping review           36         Zinc and menthol as alternatives to antibiotics: impacts on Enterococcus spp resistance in feedre cattle           37         Combined treatments of probiotics and Redweik           Redweik         Combined treatments of probiotics and eliuted calanonella vaccine in chickens elicited enhanced humoral response against	Break           Session 13         Health in Cattle Populations - 2           Smith         Rates of co-infection for three endemic diseases in US dairy herds           62         Wang         What is the effect of eliminating pneumonia in calves prior to weaning on net income of the US cover-all industry           63         Apamaku         An economic decision tool for cow-calf producers in kansas under risk of bovine	Break           Break           Session 18         Ecology and Management of Foodborne Agents           Thomas         The characterization of retail ground beef microbiome           88         Vogt         Epidemiology of Campylobacter among free-living Canada geese in Ontario, Canada           89         Pires         Prevalence and risks factors of Campylobacter in livestock on small-scale, diversified farms in	Break           Session 23         Vaccines and Vaccinology - 2           Passive immunity against porcine epidemic diarrhea virus following immunization of pregnant gits with a recombinant Orf virus vector           111         vector           Garcia         Immunogenicity characterization of intradermally immunized enterotoxigenic Escherichia coli (ETEC) subunit vaccine candidates.           112         To         Geographic and temporal distribution of HPAI A/HSN1 in Vietnam in 2015-2016 and efficacy	Break           Session 28         Bovine Immunology - 1           Kaltenboeck         A novel peptide microarray EUSA detects species-specific antibodies against Chlamydia innuminant sera           137         Innuminant sera           Coursens         Characterizing responses of immune cell subsets from M. paratuberculosis (MAP) test positive and test negative cows from commercial herds to MAP antigen stimulation in vitro           BVDV and BHV-1 antibody levels in colostrum Repret         BVDV and BHV-1 antibody levels in colostrum crianted during gestation with a multivalent killed viral respiratory vaccine           Guerra-         Characterization of booine Gamma Delta T cell	Break           Session 34         Pathobiology of Enteric Pathogens - 2           Tabashsum 162         Competitive exclusion of Campylobacter jejuni by linoleic acid overproducing Lactobacillus casei           Nisar         Molecular epidmeiology of Campylobacter upsaliensis isolated from dogs in Grenada           163         Amimo astroviruses in East African smallholder piglets           164         Molecular epidmeiology of diverse novel porcine astroviruses in East African smallholder piglets	Session 40         Respiratory Disease in Swine           Yim-Im         Comparison of PRRSV isolation from clinical samples using MARC-145 and ZMAC cell lines           186         Development of a luminex multiplex assay for the detection and differentiation of type 2 prrsv field strains and the four us vaccine strains.           187         Wang         Genetic diversity and molecular detection assay development for PCV3 and PCV2 strains	Break           Session 46         Virology Keynote / Viral Pathogenesis           MacLachlan         Bluetongue pathogenesis: an evolving story from Theiler to climate change
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2           Smith         Rates of co-infection for three endemic diseases in US dairy herds           62         Wang         What is the effect of eliminating pneumonia in calves prior to weaning on net income of the US cow-calf industry           63         An economic decision tool for cow-calf producers in kansas under risk of bovine anaplasmosis         Outperstanding reservoir sites of Fusobacterium necrophorum in sheep and their importance for ovine footrot           65         Seroepidemiology of Brucella spp. In humans	Break           Break           Session 18         Ecology and Management of Foodborne Agents           Thomas         The characterization of retail ground beef microbiome           88         Vogt         Epidemiology of Campylobacter among free- living Canada geese in Ontario, Canada           89         Pires         Prevalence and risks factors of Campylobacter in livestock on small-scale, diversified farms in Galifornia           Looft         Poultry intestinal mucus modulates Campylobacter jejuni gene expression	Break           Session 23         Vaccines and Vaccinology - 2           Passive immunity against porcine epidemic diarrhea virus following immunization of pregnant gits with a recombinant Orf virus vector           111         vector           Immunogenicity characterization of Garcia         Immunogenicity characterization of intradermally immunized enterotoxigenic Escherichia coli (ETEC) subunit vaccine candidates.           112         To         Geographic and temporal distribution of HPAI A/HSN1 in Vietnam in 2015-2016 and efficacy of vaccines           Shaan         Concurrent but consecutive vaccination of Lakshnanappa modified live type 1 and type 2 PRRSV provides better protection in nursery pigs           114         Van Geolen         Live virus Immunization (LVI) with a recent 1-7-	Break           Session 25         Bovine Immunology - 1           Kaltenboeck         A novel peptide microarray EUSA detects species-specific antibodies against Chlamydia innuminant sera           137         Innuminant sera           137         Characterizing responses of immune cell subsets from M. paratuberculosis (MAP) test positive and test negative cows from commercial herds to MAP antigen stimulation in vitro           138         BVDV and BHV-1 antibody levels in colostrum of beef heifers vaccinated or unvaccinated during gestation with a multivalent killed viral respiratory vaccine           Guerra-Maupome         Characterization of bovine Gamma Delta T cell phenotype following M. bovis infection           140         Chitko-	Break           Session 34         Pathobiology of Enteric Pathogens - 2           Tabashsum         Competitive exclusion of Campylobacter jejuni by linoleic acid overproducing Lactobacillus casei           162         Casei           Nisar         Molecular epidmeiology of Campylobacter upsaliensis isolated from dogs in Grenada           163         Characterization of diverse novel porcine astroviruses in East African smallholder piglets           164         Mehdizadeh         The role of target membrane sialic acid residues in binding the Clostridium perfringens NetF toxin to host cells           165         Development and validation of multiplex PCR	Session 40         Respiratory Disease in Swine           Yim-Im         Comparison of PRRSV isolation from clinical samples using MARC-145 and ZMAC cell lines           186         Development of a luminex multiplex assay for the detection and differentiation of type 2 prrsv field strains and the four us vaccine strains.           187         Wang         Genetic diversity and molecular detection assay development for PCV3 and PCV2 strains           188         Effect of miRNA and tRNA gene expression on the homeostatic status of pigs infected with highly pathogenic PRRSV.	Break           Session 46         Virology Keynote / Viral Pathogenesis           MacLachlan         Bluetongue pathogenesis: an evolving story from Theiler to climate change           218         Gladue           Foot-and-mouth disease virus non-structural protein 2B functions as a viroporin

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	Presenter Abstract #	Titlo	Presenter Title Abstract #		Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #		Presenter Title Abstract #
1:15-2:00	0	CRWAD Business Meeting and Listening Sessi	on - Chicago Ballroom, 5th Floor			RWAD Business Meeting and Listening Session - Chicago Ballro	oom, 5th Floor		CRWAD Business Meeting and Listening Session - Chicago Ballroo	om, 5th Floor
Session:	Session 3	Antimicrobial Resistance - 3	Session 9 Companion Animal Epidemiology - 1	Session 14 Diagnostic Testing - 1	Session 19 Health in Swine Populations	Immunology Mini-Symposium	Session 29 Immunology Mini-Symposium - 1	Session 35 Pathobiology of Enteric Pathogens Keynote / Vectorborne Disease	Session 41 Bacterial Diseases in Cattle	Session 47 Viral Diseases in Swine - 1
2:00	Gaire	Age-dependency of antimicrobial resistance in fecal bacteria of animals - A Scoping review	Oguttu Antimicrobial resistance among Staphylococcus spp. from cats presented at a veterinary 41 teaching hospital in South Africa	Henao-Diaz A small step toward Schwabe's vision for Preventive Medicine? 67	Garrido Mantilla 93 Novel approaches for influenza surveillance in swine breeding herd	Break	Break		Hensel Intratracheal inoculation of the guinea pig as an improved aerosol model for Brucella 191 melitensis infection	Sturos         Susceptibility to and shedding of Senecavirus A in boars inoculated with an historical and a           221         contemporary strain
2:15	Zeineldin 13	Impacts of peri-natal antibiotic administration on gut microbiota composition and antibiotic resistance gene prevalence in piglets	Temporal trends & predictors of antimicrobial Odoi resistance among Staphylococcus spp. isolated from canine samples submitted to a diagnostic 42 laboratory	Davenport Modeling the shedding of prions in deer saliva in the face of imperfect detection 68	Perri Contact network analysis between swine herds and feed suppliersduring the early phase of the porcine epidemic diarrhea outbreak in Canada 241		Waters	Saif Enteropathogenic human and animal caliciviruses: Pathogenesis and host co-factor 167 interactions	Aburu Seroprevalence of cattle brucellosis slaughtered in abattoir and its occupational risks	Houston Senecavirus A infection and transmission in mice under experimental conditions 222
2:40	<b>0</b> MacKinno 14	Comparison of annual and regional variation n identified using various multidrug resistance classification metrics for E. coli from chicken abattoir surveillance in Canada	Brault Brault Staphylococcus pseudintermedius isolation in dogs treated at a veterinary teaching hospital	Identifying within-host multiple infections of Wang Paratuberculosis using Whole genome sequencing data to improve precision in transmission analysis	Rotolo Surveillance is "30" still the right answer? 95	Immunology Keynote	Immunology of bovine tuberculosis: Perspectives on one health approaches and defining correlates of protection versus infection		Disease state influences the presence of Jenvey macrophages and Mycobacterium avium subsp. paratuberculosis in bovine intestinal tissue	Shang A naturally occurring cross order recombinant of enterovirus and torovirus
2:45	5 Hetman	Assessing the transmission dynamics of antimicrobial resistant Salmonella Heidelberg in Canadian poultry production using draft genome sequence data	Occurrence and antimicrobial resistance Qekwana patterns of E. coli from dogs with urinary tract infection at the veterinary academic hospital in 44	Poonsuk Molecular technology in foreign animal disease (FAD) antibody assay development 70	Blair Describing the cull sow and cull hog market networks in the US; A pilot project. 96			Clow Northward range expansion of ixodes scapularis evident over short timescale in Ontario, Canada 251	Jenvey Relationship between the pathology of bovine intestinal tissue and current diagnostic tests for Johne's disease 194	Multiplexed digital mRNA profiling of immune shang responses in pigs persistently infected with porcine reproductive and respiratory syndrome virus
3:00	0 Taylor 16	Effects of increasing concentrations of dietary zinc on levels of antimicrobial resistance among fecal Escherichia coli in feedlot cattle	LeCuyer Bacterial and patient factors in persistent and recurrent Escherichia coli urinary tract infection in dogs	Schneider Comparison of three detection methods used to identify enterohemorrhagic Escherichia coli samples of bovine origin	Perez Epidemiological dynamics of porcine reproductive and respiratory syndrome (PRRS) in U.S. sow farms		McGill Bovine gamma delta T cells participate in local	Sadeghieh A scoping review of importation and predictive models for vector-borne disease, pathogens and/or vectors that exist globally	Severson Non-pathogenic bacteria in the udder and their effect on Somatic Cell Count 195	Li A dual ribosomal frameshifting mechanism transactivated by an arterivirus protein and host cellular factors
3:15	2	Effects of intermittent feeding of tylosin phosphate during the finishing period on antimicrobial resistance of Enterococcus spp. in feedlot steers	Leon Genotypic and phenotypic analysis of Moreno Salmonella enterica isolated from patients at an equine referral hospital	Strouss         Assessing the use of a commercially available stall-side serum amyloid A test for diagnosing sepsis in equine neonates           72         Stall-side serum amyloid A test for diagnosing	Reynolds Bioavailability of ketoprofen when compounded with iron dextran for use in nursing piglets 98		immunity to Mycobacterium bovis infection 143	Gene gun-delivered DNA immunization of Fry cattle induces humoral and cell-mediated immune responses against the Theileria parva 170 polymorphic immunodominant molecule	Angelos Moraxella bovoculi pilin sequence similarity amongst geographically diverse isolates 196	RNA stem-loop structures and conserved Li regions in ORF6 are important for the replication of porcine reproductive and 226 respiratory syndrome virus
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3:45	5	Break	Break	Break	Break	Break	Break	Break	Break	Break
3:45 Session:	5 1: Session 4	Break Population Health Keynotes	Break Population Health Keynotes	Break Population Health Keynotes	Break Population Health Keynotes	Break Session 24 Vaccines and Vaccinology - 3	Break Session 30 Immunology Mini-Symposium - 2	Break Session 36 Vectorborne and Parasitic Disease		
3:45 Session: 4:00						Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified           Sun         live virus vaccine candidate against porcinereproductive and respiratory syndrome           116         virus			Break           Session 42         Bacterial Disease Pathogenesis         Session	Break
	0 Mazet					Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified           Sun         live virus vaccine candidate against           porcinereproductive and respiratory syndrome	Session 30 Immunology Mini-Symposium - 2 Brown Immunoinhibitory receptors PD-1 and LAG-3	Session 36         Vectorborne and Parasitic Disease           A genetic system for creating targeted         Mang           Wang         mutations to disrupt and restore genes in Ehrlichia chaffeensis that is broadly applicable	Break           Session 42         Bacterial Disease Pathogenesis         Second Sec	Break           Session 48         Viral Diseases in Swine - 2           Yoo         Porcine reproductive and respiratory syndrome virus nucleocapsid protein activates NF-k8 through binding to PIAS1
4:00	0 5 Mazet 18	Population Health Keynotes Veterinary Epidemiology: Expanding	Population Health Keynotes	Population Health Keynotes	Population Health Keynotes	Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified           Sun         live virus vaccine candidate against           porcinereproductive and respiratory syndrome           116         virus           Intranasal vaccination of swine with nanodisc-           Zuckermann         incorporated PRRS virus envelope           glycoproteins provides protective immunity	Session 30         Immunology Mini-Symposium - 2           Brown         Immunoinhibitory receptors PD-1 and LAG-3 contribute to T-cell exhaustion during Anaplasma marginale infection.           144         WC1 hybrid pathogen recognition receptors	Session 36         Vectorborne and Parasitic Disease           A genetic system for creating targeted mutations to disrupt and restore genes in Ehrlichia chaffeensis that is broadly applicable 171           to other obligate bacteria           Wang           Experimental transfusion-induced Babesia canis infection: Pathogenicity and dynamics of narasitemia in a Baeale dne model	Break           Session 42         Bacterial Disease Pathogenesis         4           Yoo         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA         19           197         The Streptococcus suis serotype 2 surface lipoproteins, but not the lipoteichoic acids, are important activators of the innate immune	Break           Break           Session 48         Viral Diseases in Swine - 2           Yoo         Porcine reproductive and respiratory syndrome virus nucleocapsid protein activates NF-k8 through binding to PLAS1           227         Jeon           Importance of cellular cholesterol for the entry process of porcine nidoviruses
4:00	0 5 Mazet 18	Population Health Keynotes Veterinary Epidemiology: Expanding	Population Health Keynotes	Population Health Keynotes	Population Health Keynotes	Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified- live virus vaccine candidate against porcinereproductive and respiratory syndrome virus           Intranasal vaccination of swine with nanodisc- glycoproteins provides protective immunity against homologous virus infection           Shi         Development of a one-dose classical swine fever subunit vaccine: antigen titration, onset and duration of immunity	Session 30 Immunology Mini-Symposium - 2 Brown Immunoinhibitory receptors PD-1 and LAG-3 contribute to T-cell exhaustion during Anaplasma marginale infection. WC1 hybrid pathogen recognition receptors	Session 36         Vectorborne and Parasitic Disease           Wang         A genetic system for creating targeted mutations to disrupt and restore genes in Ehrlichia chaffeensis that is broadly applicable 171           Wang         Experimental transfusion-induced Babesia canis infection: Pathogenicity and dynamics of parasitemia in a Beagle dog model           Afshan         Evaluation of immuno- and copro-diagnostic techniques against Fasciola hepatica infection in Small Ruminants Pakistan	Break           Session 42         Bacterial Disease Pathogenesis         S           Yoo         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA         S         S           197         The Streptococcus suis serotype 2 surface lipoproteins, but not the lipoteichoic acids, are important activators of the innate immune response         Sub-MIC concentrations of commonly used antibiotics in the livestock industry effect formation af fortaneorous rule is binfilms	Break           Break         Break           Session 48         Viral Diseases in Swine - 2           Yoo         Porcine reproductive and respiratory syndrome virus nucleocapaid protein activates NF-k8 through binding to PIAS1           227         Importance of cellular cholesterol for the entry process of porcine nidoviruses           228         Kyriakis           Assessing of the zoonotic potential of swine influenza viruses in a primary cell culture model
4:00	0 5 Mazet 18 0	Population Health Keynotes Veterinary Epidemiology: Expanding	Population Health Keynotes	Population Health Keynotes	Population Health Keynotes	Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified- live virus vaccine candidate against porcinereproductive and respiratory syndrome virus           Intranasal vaccination of swine with nanodisc- zuckermann incorporated PRRS virus envelope glycoproteins provides protective immunity against homologous virus infection           Shi         Development of a one-dose classical swine fever subunit vaccine: antigen titration, onset and duration of immunity           Jang         Induction of mucosal immunity and broadened antibody response by live attenuated influenza vaccine candidate in chickens	Session 30     Immunology Mini-Symposium - 2       Brown     Immunoinhibitory receptors PD-1 and LAG-3 contribute to T-cell exhaustion during Anaplasma marginale infection.       144     WC1 hybrid pathogen recognition receptors and signaling co-receptors direct immune responses by bovine gamma delta T cells to pathogens       Pascual     Alternative immune mechanisms for protection	Session 36         Vectorborne and Parasitic Disease           Wang         A genetic system for creating targeted mutations to disrupt and restore genes in Ehrlichia chaffeensis that is broadly applicable to other obligate bacteria           Wang         Experimental transfusion-induced Babesia canis infection: Pathogenicity and dynamics of parasitemia in a Beagle dog model           Afshan         Evaluation of immuno- and copro-diagnostic techniques against Fasciola hepatica infection in Small Ruminants, Pakistan           Wei         Monovalent cation/sodium: proton antiporter proteins of Ehrlichia chaffeensis           174         Shahzad	Break           Session 42         Bacterial Disease Pathogenesis         Session 42           Yoo         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA           197         The Streptococcus suis serotype 2 surface lipoproteins, but not the lipoteichoic acids, are important activators of the innate immune response           Waack         Sub-MIC concentrations of commonly used antibiotics in the livestock industry effect formation of Streptococcus suis biofilms           Ueite         Matrix metalloproteinase-7 and other molecules involved in cellular proliferation and inflammation are associated with lawsonia intracellulari informine ine	Break           Break           Session 48         Viral Diseases in Swine - 2           Yoo         Porcine reproductive and respiratory syndrome virus nucleocapsid protein activates NF-kB           227         through binding to PIAS1           Jeon         Importance of cellular cholesterol for the entry process of porcine nidoviruses           228         Assessing of the zoonotic potential of swine influenza viruses in a primary cell culture model           229         Model
4:00 4:15 4:30 4:45	0 5 18 0 5 6 7 19	Population Health Keynotes Veterinary Epidemiology: Expanding solutions for global health problems	Population Health Keynotes Epidemiology Keynote	Population Health Keynotes Epidemiology Keynote	Population Health Keynotes Epidemiology Keynote	Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified- live virus vaccine candidate against porcinereproductive and respiratory syndrome virus           Intranasal vaccination of swine with nanodisc- zuckermann glycoproteins provides protective immunity against homologous virus infection           Shi         Development of a one-dose classical swine fever subunit vaccine: antigen titration, onset and duration of immunity           Jang         Induction of mucosal immunity and broadened antibody response by live attenuated influenza vaccine candidate in chickens           119         Effect of injectable trace minerals given at the time of priming vaccination on the systemic and mucosal antibody response to BHV1, BRSV	Session 30         Immunology Mini-Symposium - 2           Brown         Immunoinhibitory receptors PD-1 and LAG-3 contribute to T-cell exhaustion during Anaplasma marginale infection.           144         WC1 hybrid pathogen recognition receptors and signaling co-receptors direct immune responses by bovine gamma delta T cells to pathogens	Session 36         Vectorborne and Parasitic Disease           Wang         A genetic system for creating targeted mutations to disrupt and restore genes in Ehrlichia chaffeensis that is broadly applicable to other obligate bacteria           Wang         Experimental transfusion-induced Babesia canis infection: Pathogenicity and dynamics of parasitemia in a Beagle dog model           Afshan         Evaluation of immuno- and copro-diagnostic techniques against Fasciola hepatica infection in Small Ruminants, Pakistan           Wei         Monovalent cation/sodium: proton antiporter proteins of Ehrlichia chaffeensis           174         Shahzad	Break           Session 42         Bacterial Disease Pathogenesis         S           Yoo         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA         S           197         The Streptococcus suis serotype 2 surface ilipoproteins, but not the lipoteichoic acids, are important activators of the innate immune response           Waack         Sub-MIC concentrations of commonly used antibiotics in the livestock industry effect formation of Streptococcus suis biofilms           Leite         Matrix metalloproteinase-7 and other molecules involved in cellular proliferation and inflammation are associated with lawsonia intracellularis infection in pigs           Kathayat         Novel small molecule compounds with antimicrobial activities against avian pathoeneir Crearching and in and inflammation	Break           Break           Session 48         Viral Diseases in Swine - 2           Yoo         Porcine reproductive and respiratory syndrome virus nucleocapsid protein activates NF-kB           227         through binding to PIAS1           228         Importance of cellular cholesterol for the entry process of porcine nidoviruses           228         Assessing of the zoonotic potential of swine influenza viruses in a primary cell culture model           229         Chothe         NLRC5, a critical player in influenza virus pathogenesis in chickens           230         Development of a new protocol for quantitative real-time PCR (qPCR) for the detection of African swine feever virus in from
4:00 4:15 4:30 4:45 5:00	0 5 Mazet 18 0 5 6 7 7 9 7 9 7 9 5	Population Health Keynotes Veterinary Epidemiology: Expanding solutions for global health problems	Population Health Keynotes Epidemiology Keynote	Population Health Keynotes Epidemiology Keynote	Population Health Keynotes Epidemiology Keynote	Session 24         Vaccines and Vaccinology - 3           Developmentof a broadly protective modified- live virus vaccine candidate against porcinereproductive and respiratory syndrome virus           Intranasal vaccination of swine with nanodisc- group or the productive and respiratory syndrome virus           Intranasal vaccination of swine with nanodisc- group or the productive and respiratory syndrome virus           Intranasal vaccination of swine with nanodisc- group or the productive and respiratory syndrome glycoproteins provides protective immunity against homologous virus infection           Shi         Development of a one-dose classical swine fever subunit vaccine: antigen titration, onset and duration of immunity           Jang         Induction of mucosal immunity and broadened antibody response by live attenuated influenza vaccine candidate in chickens           19         Hoyos- Jaramilio and mucosal antibody response to BHV1, BRSV and PI3V in young dairy calves           Proteomic analysis of local disease-sparing responses to bovine respiratory syncytial virus in intranasally vaccinated and challenged	Session 30     Immunology Mini-Symposium - 2       Brown     Immunoinhibitory receptors PD-1 and LAG-3 contribute to T-cell exhaustion during Anaplasma marginale infection.       144     WC1 hybrid pathogen recognition receptors and signaling co-receptors direct immune responses by bovine gamma delta T cells to pathogens       Pascual     Alternative immune mechanisms for protectio against brucellosis	Session 36         Vectorborne and Parasitic Disease           A genetic system for creating targeted mutations to disrupt and restore genes in Ehrlichia chaffeensis that is broadly applicable 171         to other obligate bacteria           Wang         Experimental transfusion-induced Babesia canis infection: Pathogenicity and dynamics of parasitemia in a Beagle dog model           Afshan         Evaluation of immuno- and copro-diagnostic techniques against Fasciola hepatica infection in Small Ruminants, Pakistan           Wei         Monovalent cation/sodium: proton antiporter proteins of Ehrlichia chaffeensis           174         Shahzad           Preliminary development of a PCR-based assay panel to screen ticks collected from elk in Missouri           175         Development of a bovine model to identify tick molecules targeted by immune sera associated with reduced performance of Dermacentor	Break           Session 42         Bacterial Disease Pathogenesis         S           Yoo         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA         In silico analysis of Actinobacillus pleuropneumoniae exotoxins, ApxIA, -IIA, -IIIA and -IVA           197         The Streptococcus suis serotype 2 surface lipoproteins, but not the lipoteichoic acids, are important activators of the innate immune response           Waack         Sub-MIC concentrations of commonly used antibiotics in the livestock industry effect formation of Streptococcus suis biofilms           Leite         Matrix metalloproteinase-7 and other molecules involved in cellular proliferation and inflammation are associated with havsonia intracellularis infection in pigs           Kathayat         Novel small molecule compounds with antimicrobial activities against avian pathogenic Escherichia coli           Walker         Evaluation of clinical signs as early humane endpoints in the hamster vaccination challenge proteory model for leatostria	Break           Break           Session 48         Viral Diseases in Swine - 2           Yoo         Porcine reproductive and respiratory syndrome virus nucleocapsid protein activates NF-kB           227         through binding to PIAS1           Jeon         Importance of cellular cholesterol for the entry process of porcine nidoviruses           228         Kyriakis         Assessing of the zoonotic potential of swine influenza viruses in a primary cell culture model           229         Chothe         NLRC5, a critical player in influenza virus pathogenesis in chickens           230         Development of a new protocol for quantitative real-time PCR (qPCR) for the detection of Aricran swine fever virus in from formalin-fixed, paraffin-embedded tissues.           Trujillo         Point of need molecular based detection of african swine fever virus

	Room 1 - Chicago Ballfoom D, 5th Floor	Room 2 - Chicago Ballroom E, 5th Floor	Room 3 - Chicago Ballroom ABC, 5th Floor	Room 4 - Chicago Ballroom FGH, 5th Floor	Room 5 - Northwestern / Ohio, 6th Floor	Room 6 - Purdue / Wisconsin, 6th Floor	<u>Room 7 - Armitage, 4th Floor</u>	<u>Room 8 - Belmont, 4th Floor</u>	Room 9 - Denver / Houston, 5th Floor
	Presenter Title Abstract #	Presenter Title Abstract #		Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #	Presenter Title Abstract #
Session	Session 5 Antimicrobial Resistance - 4	Session 10 Companion Animal Epidemiology - 2	Session 15 Diagnostic Testing - 2	Session 20 Ecology of Infectious Agents - 1	Session 25 Vaccines and Vaccinology - 4	Session 31 Immunological Responses - 2	Session 37 Vectorborne and Parasitic Disease Keynotes	Session 43 Respiratory Disease in Cattle	Session 49 Swine Immunology
Tuesday, Dec. 5, 9:00 am	Weinroth Metagenomic investigations of antimicrobial resistance in beef, pork, and broiler production systems	Swirski Assessing the suitability of a North American companion animal poison control centre as a novel data source for surveillance	Adaptation of the porcine epidemic diarrhea Sarmento virus (PEDV) fluorescent focus neutralization (FFN) assay to a high-throughput format using 73 imaging cytometry	Mosha Confirmation of Zoonotic Anthrax outbreaks in Humans in Tanzania, 2016-2017 99	Intranasal recombinant Moraxella bovis Angelos cytotoxin subunit vaccine to prevent naturally occurring infectious bovine keratoconjunctivitis 122 (pinkeye)	Yoo THP-1 Cells Stimulated with Brucella abortus Recombinant Proteins, PsD and PmG.		Molecular and epidemiological characterization Workman of a respiratory disease outbreak in pre- weaned beef dues associated with bovine 203 coronavirus	Oral fluid specimens can be clarified without Poonsuk affecting porcine epidemic diarrhea virus (PEDV) isotype-specific (IgG, IgA) ELISA 233 responses
9:15	Incorporating traditional bacterial culture Doster methods and metagenomic sequencing to evaluate antimicrobial use and resistance in beef feedlot production. 22	Campigotto Using big data and machine learning to analyze cat weight 48	Barrera Vaca New duplex real time RT-PCR to detect Porcine Teschovirus and Sapelovirus in US pigs	Pham Quang Geographic epidemiology of anthrax in Vietnam 100	Curtiss Vaccine design to safely induce protective immunity of long duration	Single stranded (ss) ribonucleic acids (RNA)- mediated antiviral response against infectious laryngotracheitis virus infection correlating with macrophage numbers and the expression 148 of pro-inflammatory mediators	Dryden Theory and application of modern flea control 177	Bovine herpesvirus type 1 (BHV-1): d'Offay Comparative analysis and phylogenetic relationship between the respiratory (BHV-1.1) and genital (BHV-1.2b) strains of the virus 204	Development of a fluorescent imaging Mora Diaz cytometry-based immunoassay for the detection of porcine epidemic diarrhea virus (PEDV) antibodies 234
9:30	Mathys Carbapenem resistant Enterobacteriaceae present in wastewater treatment plant effluent and nearby surface waters in the US 23	Observational study to determine risk factors Lyons associated with tick exposure in dogs and their owners within Champaign and Piatt counties of 49 Illinois	Yuan PCR assay for the detection of Atypical Porcine Pestivirus 75	Donde Rabies outbreak among livestock in a pastoralist community and lack of post exposure vaccine seeking behavior , southern Ethiopia	Talaat Chicken immunization using polyanhydride nanovaccines 124	In ovo delivered CpG DNA increases innate anc Abdul-Cader adaptive immune cells in multiple body systems post-hatch correlating with lower 149 infectious laryngotracheitis virus infection		d'Offay lsolation of a naturally occurring vaccine/wild- type recombinant bovine herpesvirus type 1 (BHV-1) from an aborted bovine fetus.	Lavagna Streptococcus suis serotype 2-induced interleukin-1 beta (IL-18)
9:45	Mollenkopf Recovery of carbapenemase-producing Enterobacteriaceae from waste and surface 24 waters	Kish         Leptospirosis in shelter dogs and cats in the tristate area of Kentucky, Tennessee, and           50         Virginia	Burgess Evaluation of a rapid test strip for detection of Salmonella enterica in equine fecal samples 76	Yoon Big Data machine learning model for assessing risk of highly pathogenic avian influenza outbreak 102 on poultry farms in Korea	Renu Mucoadhesive Chitosan nanovaccine oral delivery against Salmonella in poultry 125	Byrne Tolerated vs trained: porcine monocyte responses to beta-glucan 150		Heller Evaluation of iodide supplementation to decrease respiratory disease in pre-weaned 206 dairy calves	Maggioli Dynamics of adaptive immune responses following Senecavirus A infection in pigs 236
10:00	Characterization of plasmid mediated Mollenkopf carbapenemase-producing Enterobacteriaceae from waste and surface 25 waters	Woodruff Transection as a safe and faster means to release the suspensory ligament during canine ovariohysterectomy 51	Detection of Bovine Viral Diarrhea Virus in Vander Ley stable files (Stomoxys calcitrans) following consumption of blood from persistently 77 infected cattle	Ahmed Brucellosis in small ruminants in Mymensingh, Bangladesh 103	Mellata Our vaccine strategies to provide broad protection against Escherichia coli and Salmonella in poultry	Casas Circulating transfer RNA fragments in white blood cells associated with antibody response to bovine leukemia virus in cattle 151	Macaluso Changing paradigms of rickettsial diseases	Characterization of Polymicrobial Biofilm Petruzzi Formation by Pasteurella multocida and Histophilus somni in vitro and during Bovine 207 Respiratory Disease	Miller Comparative analysis of signature genes in PRRSV-infected porcine monocyte-derived cells to different stimuli.
10:15	Break	Break	Break	Break	Break	Break		Break	Break
10:30	Break	Break	Break	Break	Break	Break	Break	Break	Break
10:30 Session			Break Session 16 Disinfection and Biosecurity	Break Session 21 Ecology of Infectious Agents - 2	Break Session 26 Vaccines and Vaccinology - 5	Break Session 32 Bovine Immunology - 2	Session 38 Antimicrobial Resistance - 6	Break Session 44 Respiratory Disease	Session 50 Equine and Bovine Immunology
		Break Session 11 Epidemiology and Animal Health A systematic review of the literature pertaining					Session 38 Antimicrobial Resistance - 6 Evaluation of diagnostic tools for Bovine		
Session	Session 6         Antimicrobial Resistance - 5           Ballash         Recovery of Carbapenem resistant           Enterobacteriaceae from wildlife, agriculture, and the environment in the Scioto River,	Break           Session 11         Epidemiology and Animal Health           Hassebroek         A systematic review of the literature pertaining to health outcomes in wild and captive wolf populations worldwide           52         Clustered data analysis in epidemiologic	Session 16         Disinfection and Biosecurity           Dee         Evaluation of the survival of viral pathogens in contaminated feed ingredients using	Session 21         Ecology of Infectious Agents - 2           Cousins         Using a dynamic infectious disease model to examine multiple transmission pathways for campulobacteriosis	Session 26         Vaccines and Vaccinology - 5           Ou         Assessment of a bivalent probiotic live vaccine candidate for porcine post-weaning diarrhea (PWD)           245         Method for detecting Lawsonia intracellularis outer membrane proteins that interact with intestinal cells to reveal strong candidates for subunit vaccine formulation.	Session 32         Bovine Immunology - 2           Kesterson         Evaluation of single versus paired calf housing on acquired immunity.	Session 38         Antimicrobial Resistance - 6           Evaluation of diagnostic tools for Bovine Baruch         Evaluation of diagnostic tools for Bovine horizon Disease in calves challenged with bovine rhinotracheitis virus and Mannheimia	Session 44         Respiratory Disease           Clothier         Validation of a real-time PCR assay for Avibacterium paragallinarum in clinical samples during an outbreak investigation	Session 50         Equine and Bovine Immunology           Deletion of the ORF2 gene of the neurogenic         cquine herpesvirus type 1 strain Ab4 reduces           schnabel         equine herpesvirus type 1 strain Ab4 reduces           virulence by maintaining strong         immunogenicity
Session 10:45	Session 6         Antimicrobial Resistance - 5           Ballash         Recovery of Carbapenem resistant           Ballash         Enterobacteriaceae from wildlife, agriculture, and the environment in the Scioto River,           26         Ohio Watershed           Albers         The efficacy of Pulsed Electric Field to reduce antimicrobial resistant bacteria in	Break           Session 11         Epidemiology and Animal Health           Hassebroek         A systematic review of the literature pertaining to health outcomes in wild and captive wolf populations worldwide           52         Clustered data analysis in epidemiologic studies: demonstration of application of multilevel mixed model for binary outcome using data from bovine tuberculosis study in	Session 16         Disinfection and Biosecurity           Dee         Evaluation of the survival of viral pathogens in contaminated feed ingredients using transboundary shipment models           78         Megahed           Evaluation of the decontamination power of aqueous ozone on various Salmonella	Session 21         Ecology of Infectious Agents - 2           Cousins using a dynamic infectious disease model to examine multiple transmission pathways for Campylobacteriosis.           Purdy         The complexity and dynamics of the bovine	Session 26         Vaccines and Vaccinology - 5           Ou         Assessment of a bivalent probiotic live vaccine candidate for porcine post-weaning diarrheae (PWD)           Obradovic         Method for detecting Lawsonia intracellularis outer membrane proteins that interact with intestinal cells to reveal strong candidates for subunit vaccine formulation.           246         Characterizing the innate immune response to vaccine adjuvants delivered by intrauterine vaccination in sows.	Session 32         Bovine Immunology - 2           Kesterson         Evaluation of single versus paired calf housing on acquired immunity.           152         Lee           Evaluating the interaction of stocking density and heat stress on changes in cell-mediated	Session 38         Antimicrobial Resistance - 6           Baruch         Evaluation of diagnostic tools for Bovine Respiratory Disease in calves challenged with bovine rhinotracheitis virus and Mannheimia 179           179         bovine rhinotracheitis virus and Mannheimia haemolytica           Snyder         Epidemiology of multi-drug resistant Mannheimia haemolytica isolated form high-	Session 44         Respiratory Disease           Clothier         Validation of a real-time PCR assay for Avibacterium paragallinarum in clinical samples during an outbreak investigation           208         Willingham- lane           Effects of macrolide and rifampin resistance on	Session 50         Equine and Bovine Immunology           Deletion of the ORF2 gene of the neurogenic         equine herpesvirus type 1 strain Ab4 reduces virulence by maintaining strong           238         immunogenicity           Schnabel         Quantification of equine immunoglobulin A in serum and mucosal secretions by a fluorescent bead-based assay
Session 10:45 11:00	Session 6         Antimicrobial Resistance - 5           Ballash         Recovery of Carbapenem resistant           Ballash         Enterobacteriaceae from wildlife, agriculture, and the environment in the Scioto River,           26         Ohio Watershed           Albers         The efficacy of Pulsed Electric Field to reduce antimicrobial resistant bacteria in wastewater           27         Multidrug resistant (MDR) Salmonella Heidelberg: an emerging problem in the dairy industry           Voet         Epidemiology of antimicrobial resistant	Break           Session 11         Epidemiology and Animal Health           Hassebrock         A systematic review of the literature pertaining to health outcomes in wild and captive wolf populations worldwide           52         column and an analysis in epidemiologic studies: demonstration of application of multilevel mixed model for binary outcome using data from bovine tuberculosis study in resource poor settings           Cabezas         A model of foot-and-mouth disease transmission, detection, and intervention	Session 16         Disinfection and Biosecurity           Dee         Evaluation of the survival of viral pathogens in contaminated feed ingredients using transboundary shipment models           78         Evaluation of the decontamination power of aqueous ozone on various Salmonella Typhimurium contaminated surfaces           79         Megahed           Megahed         Microbial killing capacity of aqueous and gaseous ozone in different surfaces	Session 21         Ecology of Infectious Agents - 2           Cousins         Using a dynamic infectious disease model to examine multiple transmission pathways for Campylobacteriosis.           104         Campylobacteriosis.           Purdy         The complexity and dynamics of the bovine mammary gland microbiome           105         Amimo           Viral metagenomics analysis identify pathogens of zoonotic potential in asymptomatic pigs in East to form	Session 26         Vaccines and Vaccinology - 5           Ou         Assessment of a bivalent probiotic live vaccine candidate for porcine post-weaning diarrhea (PWD)           245         Method for detecting Lawsonia intracellularis outer membrane proteins that interact with intestinal cells to reveal strong candidates for subunit vaccine formulation.           246         Characterizing the innate immune response to vaccine adjuvants delivered by intrauterine variation in the vace of t	Session 32         Bovine Immunology - 2           Kesterson         Evaluation of single versus paired calf housing on acquired immunity.           152         Evaluating the interaction of stocking density and heat stress on changes in cell-mediated and humoral immunity           153         Kull           Effects of acute lying and sleep deprivation on metabolism and immunity of Holstein dairy	Session 38         Antimicrobial Resistance - 6           Evaluation of diagnostic tools for Bovine Respiratory Disease in calves challenged with bovine rhinotracheitis virus and Mannheimia 179           haemolytica           Snyder           Epidemiology of multi-drug resistant Mannheimia haemolytica isolated form high- risk stocker cattle           180           Brault           Association between antimicrobial use and from feces or respiratory secretions of feedlot cattle: a systematic review and meta-analysis           Brault         Ionophore use in food animal production and its immact on human health in terms of	Session 44         Respiratory Disease           Clothier         Validation of a real-time PCR assay for Avibacterium paragallinarum in clinical samples during an outbreak investigation           208         Effects of macrolide and rifampin resistance on in vitro growth of Rhodococcus equi           209         Ngunjiri         Understanding the respiratory microbiome of commercial turkeys and chicken layers	Session 50         Equine and Bovine Immunology           Deletion of the ORF2 gene of the neurogenic equine herpesvirus type 1 strain Ab4 reduces virulence by maintaining strong           238         immunogenicity           Schnabel         Quantification of equine immunoglobulin A in serum and mucosal secretions by a fluorescent bead-based assay           239         Intracellular survival and replication of Rhodococcus equi in equine macrophages
Session: 10:45 11:00 11:15	Session 6         Antimicrobial Resistance - 5           Recovery of Carbapenem resistant         Ballash           Enterobacteriaceae from wildlife, agriculture, and the environment in the Scioto River, 26         Ohio Watershed           Albers         The efficacy of Pulsed Electric Field to reduce antimicrobial resistant bacteria in wastewater           27         Multidrug resistant (MDR) Salmonella Heidelberg: an emerging problem in the dairy industry           Vogt         Epidemiology of antimicrobial resistant generic Escherichia coli among free-living Cread-anona in Dentrine, Condo	Break           Session 11         Epidemiology and Animal Health           Hassebroek         A systematic review of the literature pertaining to health outcomes in wild and captive wolf populations worldwide           52         Clustered data analysis in epidemiologic studies: demonstration of application of multilevel mixed model for binary outcome using data from bovine tuberculosis study in 53           Cabezas         A model of foot-and-mouth disease transmission, detection, and intervention strategies within a U.S. beef feedlot           Cabezas         An expert opinion survey of foot-and-mouth disease transmission, detection, and dinical more forther to be for strategies within a U.S. beef feedlot	Session 16         Disinfection and Biosecurity           Dee         Evaluation of the survival of viral pathogens in contaminated feed ingredients using transboundary shipment models           Megahed         Evaluation of the decontamination power of aqueous ozone on various Salmonella Typhimurium contaminated surfaces           79         Microbial killing capacity of aqueous and gaseous ozone in different surfaces contaminated with manure           80         Biofilm formation and susceptibility of Ecoli O157:H7 from goats ot disinfectants in vitro	Session 21         Ecology of Infectious Agents - 2           Cousins         Using a dynamic infectious disease model to examine multiple transmission pathways for Campylobacteriosis.           104         Purdy           Purdy         The complexity and dynamics of the bovine mammary gland microbiome           105         Viral metagenomics analysis identify pathogens of zoonotic potential in asymptomatic pigs in East Africa           Flancman         Evaluation of the impact of dental prophylaxis on the oral microbiota of dogs           242         Sylte         Evaluation of Campylobacter jejuni isolates to	Session 26         Vaccines and Vaccinology - 5           Ou         Assessment of a bivalent probiotic live vaccine candidate for porcine post-weaning diarrheae (PWD)           245         Method for detecting Lawsonia intracellularis outer membrane proteins that interact with intestinal cells to reveal strong candidates for subunit vaccine formulation.           246         Method for detecting the innate immune response to vaccine adjuvants delivered by intrauterine vaccination in sows.           247         Characterizing the innate immune response profiles induced by adjuvants PCEP and Emulsigen at the injection site and the draining lymph nodes	Session 32         Bovine Immunology - 2           Kesterson         Evaluation of single versus paired calf housing on acquired immunity.           152         Evaluating the interaction of stocking density and heat stress on changes in cell-mediated and humoral immunity.           153         Effects of acute lying and sleep deprivation on metabolism and immunity of Holstein dairy cows           DeKuiper         The potential role of Th17-like immune responses in Johne's disease test positive cows	Session 38         Antimicrobial Resistance - 6           Evaluation of diagnostic tools for Bovine Respiratory Disease in calves challenged with bovine rhinotracheitis virus and Mannheimia haemolytica           Snyder         Epidemiology of multi-drug resistant Mannheimia haemolytica isolated form high- risk stocker cattle           180         Association between antimicrobial use and antimicrobial resistance in bacteria isolated from feees or respiratory secretions of feedlot cattle: a systematic review and meta-analysis           Brault         Ionophore use in food animal production and its impact on human health in terms of	Session 44         Respiratory Disease           Clothier         Validation of a real-time PCR assay for Avibacterium paragallinarum in clinical samples during an outbreak investigation           208         Effects of macrolide and rifampin resistance on in vitro growth of Rhodococcus equi           209         Ngunjiri         Understanding the respiratory microbiome of commercial turkeys and chicken layers           210         Dassanayake         Antimicrobial activity of bovine NK-lysin- derived peptides on Mycoplasma bovis	Session 50         Equine and Bovine Immunology           Deletion of the ORF2 gene of the neurogenic equine herpesvirus type 1 strain Ab4 reduces virulence by maintaining strong 238           238         immunogenicity           Schnabel         Quantification of equine immunoglobulin A in serum and mucosal secretions by a fluorescent bead-based assay           239         Intracellular survival and replication of Rhodococcus equi in equine macrophages stimulated with cytokines           Silveira         Analysis of BVDV-1a, 1b and 2a replication and co-infection dynamics in epithelial and
Session: 10:45 11:00 11:15	Session 6         Antimicrobial Resistance - 5           Recovery of Carbapenem resistant         Ballash           Enterobacteriaceae from wildlife, agriculture, and the environment in the Scioto River, Ohio Watershed         Ohio Watershed           Albers         The efficacy of Pulsed Electric Field to reduce antimicrobial resistant bacteria in wastewater           27         Aulik         Multidrug resistant (MDR) Salmonella Heidelberg: an emerging problem in the dairy industry           Vogt         Epidemiology of antimicrobial resistant generic Escherichia coli among free-living Canada geese in Ontario, Canada           Grooters         Sequence characterization of an IncHI2 plasmid with an encoded carbapenemase-gene	Break           Session 11         Epidemiology and Animal Health           Hassebrock         A systematic review of the literature pertaining to health outcomes in wild and captive wolf           52         populations worldwide           Clustered data analysis in epidemiologic studies: demonstration of application of multilevel mixed model for binary outcome using data from bovine tuberculosis study in resource poor settings           Cabezas         A model of foot-and-mouth disease transmission, detection, and intervention strategies within a U.S. beef feedlot           Cabezas         An expert opinion survey of foot-and-mouth disease marriefstations in beef cattle           S5         Development and validation foa multiplex rtPCR assay for the detection and	Session 16         Disinfection and Biosecurity           Dee         Evaluation of the survival of viral pathogens in contaminated feed ingredients using transboundary shipment models           Regahed         Evaluation of the decontamination power of aqueous ozone on various Salmonella Typhimurium contaminated surfaces           79         Microbial killing capacity of aqueous and gaseous ozone in different surfaces           80         contaminated with manure           Skinner         Biofilm formation and susceptibility of Ecoli O157:H7 from goats ot disinfectants in vitro and in footbaths           Xia         Airborne inactivation of PRRSv by a packed bed dielectric barrier discharge non-thermal plasma	Session 21         Ecology of Infectious Agents - 2           Cousins         Using a dynamic infectious disease model to examine multiple transmission pathways for Campylobacteriosis.           104         The complexity and dynamics of the bovine mammary gland microbiome           105         Mimo           Viral metagenomics analysis identify pathogens of zoonotic potential in asymptomatic pigs in East Africa           Flancman         Evaluation of the impact of dental prophylaxis on the oral microbiota of dogs           242         Sylte         Evaluation of Campylobacter jejuni isolates to experimentally colonize turkey poults	Session 26         Vaccines and Vaccinology - 5           Ou         Assessment of a bivalent probiotic live vaccine candidate for porcine post-weaning diarrhea (PWD)           245         Method for detecting Lawsonia intracellularis outer membrane proteins that interact with intestinal cells to reveal strong candidates for subunit vaccine formulation.           246         Characterizing the innate immune response to vaccine adjuvants delivered by intrauterine vaccination in sows.           247         Cytokine and inflammatory response profiles induced by adjuvants PCEP and Emulsigen at the injection site and the draining lymph nodes in pigs           Jang         PED vaccine development using new genetic variant PEDV strain isolated in field	Session 32         Bovine Immunology - 2           Kesterson         Evaluation of single versus paired calf housing on acquired immunity.           152         Evaluating the interaction of stocking density and heat stress on changes in cell-mediated and humoral immunity           153         Effects of acute lying and sleep deprivation on metabolism and immunity of Holstein dairy cows           DeKuiper         The potential role of Th17-like immune responses in Johne's disease test positive cows           155         Coussens         Reduced antigen-specific and total IgM in plasma from cattle infected with bovine leukemia virus	Session 38         Antimicrobial Resistance - 6           Evaluation of diagnostic tools for Bovine Respiratory Disease in calves challenged with bovine rhinotracheitis virus and Mannheimia 179         haemolytica           Snyder         Epidemiology of multi-drug resistant Mannheimia haemolytica isolated form high- risk stocker cattle         haemolytica           Braut         Association between antimicrobial use and antimicrobial resistance in bacteria isolated from feeses or respiratory secretions of feedlot tastle: a systematic review and meta-analysis           Brault         Ionophore use in food animal production and its impact on human health in terms of antimicrobial resistance: a scoping review           Volkova         Analyzing antimicrobial minimum inhibitory concentration distributions without interroretive hereaknoints	Session 44         Respiratory Disease           Clothier         Validation of a real-time PCR assay for Avibacterium paragallinarum in clinical samples during an outbreak investigation           208         Effects of macrolide and rifampin resistance on in vitro growth of Rhodococcus equi           209         Ngunjiri           Understanding the respiratory microbiome of commercial turkeys and chicken layers           210         Dassanayake           Antimicrobial activity of bovine NK-lysin- derived peptides on Mycoplasma bovis           211         A field-deployable automatic nucleic acid extraction and insulated isothermal RT-PCR system for sensitive on-site detection of avian	Session 50         Equine and Bovine Immunology           Deletion of the ORF2 gene of the neurogenic equine herpesvirus type 1 strain Ab4 reduces virulence by maintaining strong 238         Immunogenicity           Schnabel         Quantification of equine immunoglobulin A in seum and mucosal secretions by a fluorescent bead-based assay           239         Intracellular survival and replication of Rhodococcus equi in equine macrophages stimulated with cytokines           Silveira         Analysis of BVDV-1a, 1b and 2a replication and co-infection dynamics in epithelial and lymphoid cell lines by PrimeFlow RNA assay           Tabatabai         Comparative proteomic analysis of four strains of Mycoplasma bovis, strains G45, M23, 428E and DSA16 by differential protein extraction

Poster Session I - Sui	nday, Dec. 3,	6:30 - 8:30 pm
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Section	Presenter	Abstract #	Title
Bacterial	Sidamonidze	P001	Whole genome sequencing and comparative genome analysis of Brucella isolates from human and animal samples from the country of Georgia
Pathogenesis	Yoo	P002	Invasion efficiency and cytokine productions of Brucella abortus wild type and mutant strains in RAW 264.7 cells
	Boggiatto	P003	Coincidence cloning recovery of Brucella melitensis RNA from goat tissues: advancing the in situ analysis of pathogen gene expression in brucellosis
	Khalaf	P004	Characterization of the NOD-scid IL2rγ-null mouse model to study the safety of B. abortus S19 ΔvjbR vaccine candidate in Brucella-induced osteoarticular disease
	Wang	P005	An effective immunofluorescence staining assay for diagnosis or treatment evaluation of human brucellosis patients
	Stranahan	P006	Towards the development of a live attenuated vaccine for canine brucellosis
	Kung'u	P007	Risk of human brucellosis among pastoralist community in Kajiado County, Kenya: a case -control study
	Hadi	P008	Detection of circulating immune-complexes in calves infected with Mycobacterium bovis
	Acharya	P009	Seroprevalence & associated risk factors of paratuberculosis among smallholder dairy farms in western Chitwan, Nepal
	Barletta	P010	Molecular genetic analysis of a large Mycobacterium avium subsp. paratuberculosis mutant bank
	Vaughn	P011	Genetic diversity and enterotoxin production profiles of Staphylococcus aureus strains from cases of bovine mastitis
	Brown	P012	Amino acid inhibition of biofilm formation by Staphylococcus aureus, Pseudomonas aeruginosa, and Listeria monocytogenes
	Sanchez Romano	P013	The pathogenic role of Moraxella bovoculi in infectious keratoconjunctivitis in semi-domesticated reindeer
	Lippolis	P014	Analysis of Escherichia coli strains associated with persistent and transient bovine mastitis and the role of colanic acid on motility and complement resistance
	Wilson-Welder	P015	Current research on digital dermatitis: lessons from the model
	Chang	P016	Molecular analysis of the interaction of LigB and tropoelastin
	Beigel	P017	Qlp19, a novel infection-associated leptospiral protein
	Verma	P018	Lipid biomarkers of immune activation in equine leptospirosis and Leptospira-vaccinated horses
	Bujold	P019	Using Actinobacillus suis to identify putative invasion determinants in other members of the genus Actinobacillus
	Brockmeier	P020	Vaccine development for protection against systemic infections with Streptococcus suis and Haemophilus parasuis in swine
	HUR	P021	Generation of the enterotoxigenic Escherichia coli vaccine candidate by lysozyme-PMAP36 fusion protein & its protection efficacy against pig colibacillosis
	Auger	P022	Role of antigen I/II in the Streptococcus suis serotype 9 virulence: Implication in the systemic infection and development of clinical disease
	Cabello	P122	Identification and characterization of novel Brucella melitensis virB-T4SS effector proteins
	Nguyen	P123	Initial investigation of Burkholderia pseudomalleiin pigs in Nghe An province, Vietnam
	Srivastava	P124	Characterization of Campylobacter jejuni tlp2 and its role in pathogenesis and colonization of chicken gut
Epidemiology &	Denich	P023	Investigation of the association between the Streptococcus suis genome and expression of clinical disease in nursery pigs
Animal Health	Кигирри	P024	A case control study to explore the interaction between Streptococcus suis infection and respiratory viral pathogens of nursery pigs
Economics	Kim	P025	Streptococcus suis infections: seroprevalence in community in Nam Dinh, Vietnam
	Valeris Chacin	P026	Survival analysis of protocols for eradication of Mycoplasma hyopneumoniae in swine farms
	Furutani	P027	Assessment of reproductive performance in commercial farms with different porcine reproductive and respiratory syndrome status in Japan
	Singh	P028	Quantifying porcine epidemic diarrhea virus-specific neutralizing antibodies with a rapid colorimetric assay
	Perri	P029	A case-control study investigating the early outbreak of porcine epidemic diarrhea (PED) in Canada 2014
	Coatney	P030	Prospective randomized clinical trial comparing therapeutic interventions for complete healing of advanced digital dermatitis lesions in dairy cows
	Coatney	P031	Prospective randomized clinical trial examining the use of formalin footbaths to halt disease progression in early stage digital dermatitis lesions
	Ceres	P032	The role of environmental transmission of Mycobacterium avium ssp. paratuberculosis: an individual based model
	Raabis	P033	The effect of Celmanax™ SCP on fecal pathogen shedding, health and performance of pre-weaned Holstein dairy calves

Section	Presenter	Abstract #	Title
	Kino	P034	Epidemiological investigation of the occurrence of disease on a commercial dairy farm located in temperate climate zone in Japan
	Baruch	P035	Evaluation of diagnostic tools for Bovine Respiratory Disease in calves challenged with Bovine Rhinotracheitis Virus and Mannheimia haemolytica
	Couture	P036	Identifying pathogens causing subclinical mastitis in Southeast organic dairies
	AWOSILE	P037	Whole genome sequence analysis of four fecal generic blaCMY-2 producing Escherichia coli isolates from Holstein dairy calves
	Adams	P038	Extended-spectrum cephalosporin, carbapenem, and fluoroquinolone resistant coliform bacteria present on companion animal, equine, and livestock environmental surfaces
	Xia	P039	Prevalence and antimicrobial susceptibility of Campylobacter in sheep
	Wu	P040	Identification of a predominant Campylobacter coli clone in feedlot cattle in the United States
	Montanye	P041	Organic trace mineral supplementation and fecal microbiome with reduced prevalence of DD and shedding of Escherichia coli 0157 in beef cattle
	Kilonzo	P042	A One Health approach to brucellosis surveillance at the human animal interface in rural Tanzania
	Lee	P043	Biotyping and genotyping (MLVA) of Brucella isolates from different animals in Thailand
	Mkrtchyan	P044	Brucellosis in Armenian livestock 2016
	Alusi	P045	Socio-cultural risk factors for human brucellosis in Lolgorian division, Trans Mara district, Kenya
	Sargsyan	P046	The role of awareness and rapid response during outbreaks of African swine fever
	Iglesias	P047	Spatio-temporal kriging analysis to evaluate the interface livestock-wildlife in the spread of African swine fever in the Russian Federation
	Khaitsa	P048	Leptospirosis in abattoir workers in Uganda: a risk assessment pilot
	Ninidze	P049	Wildlife rabies surveillance study in Georgia
	wang	P050	Using a factorial survey to characterize risk profiles of cattle herds and owners to develop a more effective policy for bovine tuberculosis surveillance
	Yoon	P051	Understanding current issues on the foot-and-mouth diseases using mathematical simulation models
	Thakur	P052	A comparison of infectious agents between hatchery-enhanced and wild out-migrating juvenile Chinook salmon from Cowichan River, British Columbia
	Paim	P053	Detection of Deltacoronavirus ( $\delta$ -CoVs) in avian cloacal swabs from wild birds in the Mississippi flyway
	Pogranichniy	P054	Serological investigation of exposure to influenza A virus H3N2 in dogs and cats
	нШ	P055	Inter-observer agreement in categorization of racehorse necropsy reports
	Azimov	P128	Husbandry practices and factors associated with risk of brucellosis in winter pasture flocks in Azerbaijan.
	Gunaskekera	P129	The identification of risk factors associated with foot-and-mouth disease in Sri Lanka
	Checkley	P130	Traditional and local knowledge for muskox health and food security in the Canadian Arctic
	Choi	P131	Foot-and-mouth disease virus antibody screening using LPB-Chromatographic strips test
	Zeineldin	P133	The Effects of saline water consumption on the ultrasonographic and histopathological appearance of liver and kidney in sheep
0,	Lu	P056	Identifying immunodominant and neutralizing epitopes from K88 fimbriae of enterotoxigenic Escherichia coli
Enteric Pathogens	Leite	P057	Microbiome changes in the small intestine of newborn piglets related to enterotoxigenic Echerichia coli challenge and gilt vaccination
	Jung	P058	A novel bioinformatics pipeline for efficient metagenomics analysis; a 16s study of the microbiome of the preputial skin of bulls
	Ruddell	P059	RNAseq reveals a complex survival response by Campylobacter jejuni in close association with the ovine gallbladder mucosa in an experimental model of infection
	Shah	P060	Inter- and intra-serotype diversity in biofilm formation by the most prevalent poultry-associated Salmonella serotypes
	Kim	P061	Co-circulation of hepatitis E virus genotypes 3 & 4 in domestic pigs in Korea
	Pilch	P062	Inhibitory activity of reduced pH on Salmonella survival in calf milk replacer
	Lorentz	P136	Comparative genomic study of Salmonella heidelberg from chicken and turkey poultry production systems
	Monte	P137	Co-occurrence of mcr-1 and extended spectrum $\beta$ -lactamase in Escherichia coli isolated from commercial chicken meat in Brazil

## Poster Session I - Sunday, Dec. 3, 6:30 - 8:30 pm

Section	Presenter	Abstract #	Title
Vectorborne & Parasitic	Jashiashvili	P063	A pilot seroprevalence study of tick-borne encephalitis virus in eastern Georgia
	Choi	P064	Molecular survery of Anaplasma bovis in Holstein cattle in the Republic of Korea
	Evason	P140	Prevalence of four vector-borne pathogens in Canadian dogs, 2007-2016.
	Neely	P141	Seroprevalence of Borrelia burgdorferi and Anaplasma phagocytophilum in Ontario horses
	Dinkel	P142	Production of free, infectious T. parva sporozoites from ticks using a continuous flow in vitro feeding system

## Poster Session II - Monday, Dec. 4, 5:30 - 7:30 pm Section Presenter Abstract # Title P065 Roland Plant-based vaccine to prevent necrotic enteritis in chickens **Biosecurity &** Biosafety Molecular and genomics based approaches to assess public health risks associated with bushmeat Katani P066 consumption in Tanzania Hakobyan Detection and control of nodular dermatitis in the Republic of Armenia, 2015-2016 P067 Olsen P068 Inactivation of virulent Brucella species in culture and animal samples Parrillo P069 "On demand" vaccine design: application to African swine fever virus Using modified radio frequency identification tags to quantify contact patterns within an Ontario Milwid P070 equine facility: a validation study Development of a real-time polymerase chain reaction (qPCR) method for rapid and accurate Yuan P121 detection of toxic Microcystis spp. based on microcystin synthetase C (mcyC) gene Companion Phylogenetic analyses of the wild-type strains of canine distemper virus circulating in the United Anis P071 States Animal Epidemiology Diagnostic efficiency of some diagnostic procedures of bovine brucellosis Abdalaal P072 Recent trends of canine leptospirosis in the United States: spatial, temporal, environmental and Smith P125 animal-level risk factors Beigel P126 Leptospirosis in rural Appalachia Aerotolerance of Campylobacter jejuni and Campylobacter coli isolated from various retail meat Ecology & Fakhr P073 and liver products Management of Prevalence of extended-spectrum ß-lactamases producing Gram negative bacteria in backyard Foodborne Shah P074 poultry flock environment in Washington State Agents Metagenomic analysis on the effects of chlortetracycline and ceftiofur on grower swine intestinal Morales P075 microbiota Shah P076 Genotypically distinct lineages of Salmonella Typhimurium ST313 and ST19 are circulating in Brazil Multiplex molecular serotyping of Salmonella using Luminex xMAP assay and Check&Trace Liu P077 Salmonella kit comparing with serological method Davidson P078 Antimicrobial resistance trends in northern California dairy cattle Salmonella isolates, 2002-2016 Frequency and genus distribution of chromosomally-mediated carbapenem-resistant Sechrist P079 Enterobacteriaceae in surface water Impacts of feeding preweaned calves milk containing drug residues on the functional profile of the Pereira P080 fecal microbiota Fecal microbiome of periparturient dairy cattle and associations with the onset of Salmonella Muñoz-Vargas P081 shedding Iglesias P127 Evaluation of antimicrobial resistance genes during avian manure composting process. Modulation of bovine mammary gland epithelial cell permeability and actin distribution by McClenahan P082 extracellular adenosine triphosphate Immunology Identification of C-C motif chemokine ligand (CCL) production in equine peripheral blood Schnabel P083 mononuclear cells by newly generated monoclonal antibodies Singh P084 Improved delivery of a HA and M2e based peptide vaccine against swine influenza viruses. Exploring the effects of pegbovigrastim (Imrestor) therapy on experimental mastitis in Holsteins Powell P085 during lactation Paudel P086 The use of IgGt as a diagnostic tool in foals with naturally acquired Rhodococcus equi pneumonia Bovine neutrophils form extracellular traps in response to the gastrointestinal parasite Ostertagia Mendez P087 ostertagi. Immunogenicity of a microencapsulated Bacillus anthracis Sterne strain 34F2 vaccine by Benn P088 subcutaneous and oral administration Carrisoza Urbina P089 Atypical granuloma formation by Mycobacterium bovis in young calves Thermography, serum amyloid A, and prostaglandin E2 to assess inflammation in a reversible P090 Taylor equine foot lameness model Development and characterization of immune reagents for swine health, vaccine, and disease Lunnev P091 studies Effect of cell immortalization on TLRs expression and transcriptome profiling of TLRs and cytokine Kaushik P092 genes in bovine ileal epithelial cells stimulated with bacterial ligands Canine distemper virus and parvovirus: how long does immune memory last and are we over-Leistikow P093 vaccinating? Investigation of circulating immunoglobulin-gamma (IgG) in swine with Severe Combined Varley P094 Immunodeficiency (SCID) and development of an IgG supplementation regimen Bovine viral diarrea virus induce different interleukin-1 beta release patterns on bovine López-Reyes P095 macrophages Evaluation of the immune response and protection in dairy cows vaccinated with immunodominant

P096

Staphylococcal surface proteins

Merrill

Section	Presenter	Abstract #	Title
	Tomlinson	P097	Novel multispectral cell sorting protocol and immunophenotyping panel for lymphocyte subpopulations from equine peripheral blood mononuclear cells (PBMC)
	Menshawy	P134	Oral Vaccination of goats with heat-inactivated Mycobacterium bovis
	Toepfer	P135	PCV2 serology ELISA comparison
Respiratory	Park	P098	Isolation and characterization of a porcine parainfluenza virus-1 associated with respiratory disease in weaned pigs
Disease	Elaish	P099	Update of real time RT-PCR for the detection and titration of swine influenza viruses
	Liu	P100	A multiplex real-time RT-PCR assay for simultaneous detection and differentiation of Influenza D, C, B and A viruses in swine and cattle
	Lee	P101	Porcine reproductive and respiratory syndrome virus JA142 induces a protective T cell mediated immune responses in pigs
	Parrillo	P102	EpiCC: a new tool for selecting the optimal vaccine during an emerging outbreak
	Nguyen	P103	Genetic & antigenic characterization of H5N6 viruses in Vietnam 2015-2016
	Abundo	P104	Successional changes in respiratory microbiome in clinically healthy chicken layers
	Cramer	P105	The effect of lung consolidation on average daily gain until 50 days of age in preweaned group- housed dairy calves
Viral	Urushadze	P106	Phylogenetic analysis of emerging zoonotic coronavirus in Georgian bats
Pathogenesis	Yoo	P107	Inhibition of type III interferons in the intestinal epithelial cells by porcine epidemic diarrhea virus and innate immune evasion
	Lee	P108	Molecular characterization of porcine deltacoronaviruses in South Korea, 2014-2016
	Sung	P109	Efficacy test novel PRRSV live vaccine candidate
	Lee	P110	Evaluation of the efficacy of an attenuated live vaccine based on a virulent type 2 porcine reproductive and respiratory syndrome virus strain in young pigs
	Guo	P111	Double-stranded viral RNA persists in vitro and in vivo during prolonged infection of PRRSV
	Sobraske	P112	The effects of bovine herpes virus 1 on monocyte-derived dendritic cell cytokine production and surface marker expression
	Droscha	P113	Developing novel molecular diagnostic assays for bovine leukemia virus
	Osorio-Gallardo	P114	Regional seroprevalence & identification of local dominant epitopes for the development of immunodiagnostic assays
	Mitchell	P115	Surveillance for and characterization of non-primate hepacivirus in east Alabama
	Kyriakis	P116	In vitro investigation of the potential of Zika virus to infect livestock and the development of an alternative animal model
	Abdul-Cader	P117	The effect of macrophage depletion against H4N6 low pathogenic avian influenza viral infection in chicken
	Li	P118	Development of a real-time RT-PCR assay for detecting porcine parainfluenza virus 1 infection in pigs
	Ahn	P119	Adverse fetal outcomes in pregnant rabbits experimentally infected with rabbit hepatitis E virus
	Singh	P120	Efficacy of a commercial PCV2 vaccine against the contemporary PCV2d strain
	Yuzhakov	P132	Detection and genetic characterization of porcine circovirus type 3 in Russia