



## Conference of Research Workers in Animal Diseases

### CRWAD 2024 - POSTER PRESENTATIONS

The onsite Poster Session will be held on **Monday, January 22<sup>nd</sup>, 2024 from 6:00 pm – 8:00 pm** at the Chicago Marriott Downtown Magnificent Mile. All poster presenters are required to be in attendance during all the Poster Session.

Posters must be no larger than 3 feet wide and 4 feet tall. *The poster must be oriented vertically.* Please review the [POSTER PRESENTATION GUIDELINES](#) to ensure compliance with the formatting requirements. Posters not meeting these requirements may be rejected for display onsite.

Topic	Poster	Title	Authors ( <i>presenting author underlined</i> )
<b>ANTIMICROBIAL USE</b>	P001	Environmental antimicrobial resistance threats to food safety and security	<u>Kiranmayee Bhimavarapu</u> , Geoffrey Williams, Camila Rodrigues, Andre Silva, Melissa Boersma, Laura Huber
	P002	Effect of metaphylaxis on the nasopharyngeal microbiome, resistome, and Mannheimia haemolytica in stocker heifers	<u>William B. Crosby</u> , Brandi B. Karisch, Lari M. Hiott, Lee J. Pinnell, Enrique Doster, Cory Wolfe, Alexandra Pittman, Jonathan G. Frye, Charlene R. Jackson, John Dustin Loy, William B. Epperson, John Blanton, Jr., Sarah F. Capik, Paul S. Morley, Amelia R. Woolums
	P003	Effects of bovine cathelicidins on bovine respiratory disease pathogens	<u>Santiago Cornejo</u> , Cassandra Barber, Merrilee Thoresen, Amelia Woolums
	P004	Exploration of descriptive machine learning approaches on antimicrobial resistance patterns in Salmonella enterica	<u>Abdolreza Mosaddegh</u> , Claudia Cobo Angel, Maya Craig, Kevin J. Cummings, Casey L. Cazer,
	P005	Small molecules as antibiotic-alternatives for the control of Rhodococcus equi infection in horses	<u>B Lamichhane</u> , M.M Islam, K. A. Shaaban, L. V. Ponomareva, J. S. Thorson, Y. A. Helmy
	P006	Evaluating the efficacy of next-generation probiotic on Rhodococcus equi infection in vitro	Bibek Lamichhane, Yosra A. Helmy, <u>Md Islam</u>
	P007	Antimicrobial resistance patterns and virulence determinants of Salmonella spp. in necropsied livestock and equines	<u>A. Kabir</u> , C. Glover, S. Locke, E. Erol, Y.A. Helmy
	P008	Antimicrobial resistance surveillance pilot in healthy food animals in Pakistan	<u>Sami Ullah Khan Bahadur</u> , Muhammad Usman Zaheer, Muhammad Farooq Tahir, Muhammad Abubakar, Muhammad Athar Abbas, Muhammad Usman Talib, Javaria Alam, Hamid Irshad, Riasat Wasee Ullah
	P009	Global trends in antimicrobial resistance on organic and conventional farms	<u>Eldon Ager</u> , Tamilie Carvalho, Erin Silva, Steven Ricke, Jessica Hite
	P010	Investigating resistome SNP profiles of litter from pens of broilers exposed to different in-feed antimicrobials	<u>Jared G. Young</u> , Randall Singer, Noelle Noyes
	P011	Organic acids mixture protects intestinal barrier function of broiler via adhesive proteins upregulation	D.M. Masiuk, V.S. Nedzvetsky, A.V. Kokarev, <u>Roman Pogranichniy</u>

Topic	Poster	Title	Authors ( <i>presenting author underlined</i> )
	P012	In feed Bacitracin alters turkey microbiota functional and antibiotic resistance genes in a dose dependent manner	<u>Torey Looft</u> , Carmen Wickware, Tim Johnson, Julian Trachsel, Paul Oladele
	P013	Novel peptides derived from probiotics as antibiotic alternatives to control colibacillosis in poultry	<u>Menuka Bhandari</u> , Antonia Duran, Katie Galgozy, Dipak Kathyath, Yosra Helmy, James Fuchs, <u>Gireesh Rajashekara</u> , Dhanashree Lokesh, Mark Foster,
	P014	Investigating efficacy and mechanism of action of novel small molecule inhibitors of avian pathogenic E. coli	<u>Anusree Thenissery</u> , Dhanashree Lokesh, Yosra A Helmy, Dipak Kathayat, Gary Closs Jr, Katie Galgozy, James R Fuchs, Gireesh Rajashekara
	P015	Impact of colistin loaded on alginate nanoparticles on pigs infected with resistant enterotoxigenic E. coli strain	Djamel Drider, Rabah Boukherroub, Laetitia Le Devendec, <u>Yanath Belguesmia</u> , Gwenaelle Mourand, Frédéric Paboeuf, Isabelle Kempf
AQUACULTURE	P016	Cellulose nanomaterials: A novel adjuvant and delivery system for aquaculture vaccine applications	Jacob Holbrook, <u>Michael Mason</u> , Kora Kukk, Blake Turner, Deborah Bouchard, Sarah Turner
	P017	Effects of dietary glutamate supplementation on the respiratory burst of leukocytes in Hybrid Striped Bass	<u>Karina Hissen</u> , Wenliang He, Michael Criscitiello, Guoyao Wu
	P018	Investigate the impact of long-term exposure of Edwardsiella ictaluri to trans-cinnamaldehyde on resistance development	<u>Sahar Rostami</u> , Hossam Abdelhamed
	P019	Genomics analysis of multidrug-resistant Plesiomonas shigelloides strain MS-17-188	Sahar Rostami, Shahnewaj Bin Mannan, Hasan C. Tekedar, Mark L. Lawrence, <u>Hossam Abdelhamed</u>
	P020	Transcriptome profiling of lumpfish (Cyclopterus lumpus) head kidney to Renibacterium salmoninarum at early and chronic infection stages	<u>Hajarooba Gnanagobal</u> , Setu Chakraborty, Ignacio Vasquez, Joy Chukwu-Osazuwa, Trung Cao, Ahmed Hossain, My Dang, Katherine Valderrama, Surendra Kumar, Gabriela Bindea, Stephen Hill, Danny Boyce, Jennifer Hall, Javier Santander
BACTERIOLOGY	P021	Enhanced phagocytosis and complement-mediated killing of Mannheimia haemolytica with neuA gene deletion	<u>Harish Menghwar</u> , Fred M. Tatum, Robert E. Briggs, Eduardo Casas, Rohana P. Dassanayake
	P022	Development and testing of Mycobacterium avium subsp. paratuberculosis DIVA vaccines in ruminants	<u>Mostafa Hanafy</u> , Maria Alejandra Colombatti Olivieri, John P. Bannantine, Denise K. Zinniel, Raul G. Barletta
	P023	Characterization of Mycobacterium avium subsp. paratuberculosis mutants generated with CRISPRi system	<u>Jun Ho Lee</u> , Su Min Kyung, Eun-seo Lee, Han Sang Yoo
	P024	A search for unique genomic signatures among elk isolates of Mycobacterium tuberculosis variant bovis	<u>Muhammad Yasir Zahoor</u> , Khelsea Bahr, Seulee Robbe-Astermann, Tyler Thacker, Evan Brenner, Joe Darish, Srinand Sreevatsan
	P025	Circulating foamy macrophages and other features of Mycobacterium bovis BCG challenge in Golden Syrian hamsters	Ellie Putz, Claire Andreasen, Judith Stasko, Camila Hamond, <u>Steven Olsen</u> , Jarlath Nally, Mitchell Palmer
	P026	Development of an inducible expression cassette for Leptospira spp. and optimization of current CRISPR/Cas9 mutagenesis strategies	<u>Luis G.V. Fernandes</u> , Ana L.T.O. Nascimento, Jarlath E. Nally
	P027	Isolation, identification and development of lactic acid bacteria and yeast as starter cultures for the production of “teff” (Eragrostis tef) injera	Ayenew Meresa, Hirut Assaye, Takele Habitu, <u>Demelash Areda</u>
	P028	Detection of Salmonella in turkeys by cloacal swab in comparison to intestinal tissue prevalence and colonization	<u>Melissa S. Monson</u> , Bradley L. Bearson, Samuel Whelan, Selma Burciaga, Shawn M.D. Bearson

Topic	Poster	Title	Authors ( <i>presenting author underlined</i> )
	P029	Competitive exclusion of Salmonella colonization in chickens using a defined community of bacteria	<u>Carmen L. Wickware</u> , Dylan Harris, Briony Atkinson, Shawn Bearson, Melissa Monson, Adelumola Oladeinde, Christopher Anderson, Torey Looft
	P030	Prevalence of brucellosis in milk from livestock in Nyagatare district, Rwanda	<u>Emmanuel Kabalisa</u> , Agrippine Mukarurangwa, Immaculée Nyampinga, Claude Muvunyi Mambo, Jean Bosco Ntivuguruzwa, Maurice Byukusenge, Martin Ntawubizi, Nadine Rujeni, Joram Buza, Robab Katani
	P031	Molecular epidemiology of Mycoplasma capricolum subsp. capripneumoniae; causative agent of contagious caprine pleuropneumonia in Pakistan	<u>Faisal Ahmad</u> , <u>Faisal Ahmad</u> , Farhan Anwar Khan, Muhammad Saeed, Hayatullah Khan
	P032	Goblet cells in swine enteroids are not infected by Lawsonia Intracellularis during the first 24 hours of exposure	<u>Yvonne Peng</u> , Caitlin Klæui, Milena Saqui-Salces, Connie J. Gebhart
	P033	Intramammary infections in primigravid heifer mammary glands during progressing stages of gestation	<u>B. D. Enger</u> , M. X. S. Oliveira, P. H. Baker, C. S. Gammariello, K. M. Enger, M. A. McGuire, J. Williams
	P034	Microbiota-metabolizing chenodeoxycholic acid inhibits Clostridium perfringens growth and virulence	Tahrir Alenezi, Ying Fu, Bilal Alrubaye, Thamer Alanazi, Hong Wang, Xiaolun Sun
	P035	Assay demonstrates the efficacy of direct-fed microbials against potentially harmful bacteria	<u>Jennifer Schutz</u> , Octavio Guimaraes, Bruno Cappelozza, Lena Capern, Giuseppe Copani
VIROLOGY	P036	Evidence of a new protein-coding gene in bovine herpesvirus 1.	Victoria A. Jefferson, Hannah Bostick, Darby Oldenburg, <u>Florencia Meyer</u>
	P037	Effects of temperature and relative humidity on the survival of ASFV dried on porous and non-porous surfaces	<u>Janine Simmons</u> , Jessica Mason, Lauren Martignette, Mariceny Zurita, Jose Barrera, John Neilan, Lindsay Gabbert
	P038	Characterization of the role of EHV viral genes for neuropathogenesis and immune regulation in horses	<u>Gisela Soboll Hussey</u> , Glorian Berríos-Vázquez, Amie Wilson, Melissa Esser, Lutz Goehring, Nikolaus Osterrieder, Swati Sharma, Trevor Gilbert
	P039	SARS-CoV-2 pseudovirus infects equine bronchial epithelial cells in vitro	<u>R.M. Legere</u> , A.R. Allegro, Y. Affram, B.P. da Silveira, J.L. Fridley, K.M. Wells, N. Oezguen, R.C. Burghardt, G.A. Wright, J. Pollet, A.I. Bordin, P. de Figueiredo, J.L. Leibowitz, N.D. Cohen
	P040	The effects of RHDV2 3C-like protease in inflammation and cell death	<u>Luija Wijesekara</u> , Kyeong-Ok Chang, Yunjeong Kim
	P041	Development of a multispecies double-antigen ELISA using RBD and N proteins to detect antibodies against SARS-CoV-2	<u>Maritza Alejandra Cordero Ortiz</u> , Mónica Reséndiz-Sandoval, Freddy Dehesa-Canseco, Mario Solís-Hernández, Jahir Pérez-Sánchez, Carlos Martínez-Borges, Verónica Mata-Haro, Jesús Hernández
	P042	Assessment of spike processing by host proteases in the entry of SARS-CoV, SARS-CoV-2, and MERS-CoV	<u>Alexandria Zabiegala</u> , Yunjeong Kim, Kyeong-Ok Chang
	P043	Molecular characterization of canine parvovirus in domestic dogs presented to veterinary clinics in Botswana.	<u>K. Tlotleng</u> , A. Abdallah, D.M. Pfukenyi, S.S. Ramabu, E.A.M. Anis
	P044	US-UK Collab: Influence of vaccines, host genetics, and mutation rates on the evolution of infectious diseases	<u>John Dunn</u> , Jody Mays, Cari Hearn, Hans Cheng, Margo Chase-Topping, Samantha Lycett, Andrea Doeschl-Wilson
	P045	Genotyping avian reovirus genomic segments	<u>James B. Stanton</u> , Kelsey T. Young, Holly S. Sellers, Vicente A. Avila Reyes, Morgan L. Cunningham, JoAnna D. Bowers, Crosby S. Casto
P046	Pathogenesis of reoviral arthritis in turkeys derived from vaccinated breeder hens	<u>Saroj Khatiwada</u> , John Ngunjiri, Patricia A. Boley, Kush Kumar Yadav, Carolyn M. Lee, Chang-Won Lee, Saad Gharaibeh, Gireesh Rajashekara, Scott P. Kenney	

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	P047	A zoonotic strain of Rocahepevirus ratti experimentally infects chickens	Kush Kumar Yadav, <u>Patricia Boley</u> , Carolyn Lee, Saroj Khatiwada, Scott Kenney,
	P048	Genetic and serological comparison between current highly pathogenic avian influenza H5Nx virus clade 2.3.4.4	<u>Darrell Kapczynski</u> , Kelsey Briggs, Ryan Sweeney, Karen Segovia, Klaudia Chrzastek, Samantha Lycett, Lonneke Vervelde, Daniel Perez, Lu Lu, Wenjun Liu, Paul Digard
	P049	Protective antigens of ASFV Georgia-07	<u>David Doub</u> , <u>Jehadi Osei-Bonsu</u> , <u>Herman Chambaro</u> , Gustavo Delhon, Edan Tulman, Daniel L. Rock
	P050	Cytoplasmic Tail Truncation of SADS-CoV Spike Protein Facilitates Cell Surface Expression and Cell-Cell Fusion	Bac Tran Le, <u>Jung-Eun Park</u>
	P051	Detection of multiple influenza A virus subtypes at the single pig level under field conditions	<u>Joaquin Alvarez-Norambuena</u> , Chong Li, My Yang, Marie Culhane, Montse Torremorell
	P052	A CRISPR screen identifies host factors involved in PRRSV replication in a pig macrophage cell line	<u>Jiyoun Kim</u> , Christopher J. Davies, Brian B. Gowen, Dongwan Yoo, Young-Min Lee
	P053	Virus replication kinetics and risk of spillback of cervid-adapted SARS-CoV-2 variants in deer and wildlife	<u>Mariano Carossino</u> , Wellesley Dittmar, Udeni Balasuriya, Juergen Richt, Natasha Gaudreault, Côme Thieulent, Igor Morozov, Jeffrey Hall, Ganwu Li
	P054	Identification of avian influenza resistance host factors through CRISPR/Cas9 knockout screening in DF-1 cells	<u>Evelyn A. Weaver</u> , Tae H. Kim,
PARASITOLOGY	P055	Transcriptomic insights into tissue-specific expression in the invasive Asian long-horned ticks	<u>Mohamed A. M. Moustafa</u> , Dana Price
	P056	Metagenomic analysis to study associations between gastrointestinal nematodes and the fecal microbiome of North American bison	<u>Jeba Jesudoss Chelladurai</u> , Theresa Quintana, Grace Schieferecke, Guwin Weerawarna Nilaweera
	P057	Immunological evaluation of recombinant RAP-1 and RRA proteins of Babesia bovis	Manuel J. Rojas, Reginaldo G. Bastos, Jinna Navas, Jacob M. Laughery, Paul A. Lacy, <u>Carlos E. Suarez</u>
	P058	Efficacy of buparvaquone against Theileria orientalis (US Ikeda genotype) infection in cattle	<u>Reginaldo Bastos</u> , Amany Hasan, Cynthia Onzere, David Herndon, Nicolas Villarino, Lindsay Fry
	P059	Efficacy of Bacillus thuringiensis crystal proteins against monogastric and ruminant gastrointestinal nematodes	<u>Katherine H. Petersson</u> , Elizabeth P. Kass, Kelly Flanagan, Duy Hoang, Nicholas Cazeault, Hanchen Li, Qian Ding, Florentina Rus, Ernesto Soto, Martin Nielsen, Gary Ostroff, Raffi Aroian
	P060	Evaluation of extracellular vesicles as anti-tick vaccines in white-tailed deer	Julia Gonzalez, Cristina Harvey, Carita de Souza Ribeiro-Silva, Brenda Galvan-Leal, Kelly Persinger, Tammi Johnson, <u>Adela Oliva Chavez</u> , <u>Adela Oliva Chavez</u>
IMMUNOLOGY	P061	Transcriptome analysis of hepatic tissue during the development of liver abscess in Holstein Steers	<u>N Beneduzi</u> , O Benitez, D Paiva, Y Borges, P. R. Broadway, T. G. Nagaraja, K Hales, C. S. Barboza, W. L. Crossland, M. A. Ballou, V. Machado
	P062	Characterization of bovine CD4 T cell memory responses following BCG vaccination	<u>Haley Greiman</u> , Ellie Putz, Steven Olsen, Paola Boggiatto
	P063	Transcriptome analysis of high-risk stocker cattle associates consistent inflammation-related pathways with BRD	Haleigh Prosser, Bradly Ramirez, Robert Valeris-Chacin, William Crosby, Paul S. Morley, Amelia Woolums, Brandi Karisch, Matthew Scott

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	P064	The effect of pair housing in dairy calves on immune function and stress response to weaning and social mixing	<u>K.N. Pachniak</u> , L.S. Caixeta, M.C. Cheeran, S.M. Godden, N.R. Noyes, W.A. Knauer
	P065	Epithelial-dendritic cell cross-talk during bovine cryptosporidiosis	<u>Deborah Molehin</u> , <u>Brina S. Lopez</u>
	P066	Programming the immune system for resilience: maternal and neonatal vitamin D supplementation	<u>Corwin D. Nelson</u> , Kieran Meade, John Driver, Jose Santos, K.C. Jeong, Haipeng Yu
	P067	Effects of an innate immune stimulant on dairy calf respiratory health, Salmonella shedding, and nasopharyngeal cytokine gene expression	<u>Grace M. Jakes</u> , L.D. Sommer, J.N. Gotte, T.J. Applegate, S. Dow, S.M. Raabis
	P068	Cellular and humoral immune responses to persistent colonization of Brucella abortus strain RB51 in cattle	<u>Paola Boggiatto</u> , Haley Greiman, Shollie Falkenberg, Ellie Putz, Kaitlyn Sarlo-Davila, Steven Olsen
	P069	Dose titration assessing the impact of an intramammary liposome-TLR agonist (LTC) on differential somatic cell count	<u>Emily Leonard</u> , Brian Crooker, Steve Dow, Luciano Caixeta
	P070	Cytochrome P450 pathway dynamics during experimental bovine coliform mastitis	<u>J.D. Wilson</u> , T. Nyholm, D. Zimmerman, J. Lippolis, V. Mavangira
	P071	Upregulation of antileukoproteinase in neonatal foals and postpartum mares	<u>Camille M. Holmes</u> , Bettina Wagner
	P072	Swine immune reagent development and characterization for monitoring pig immune status and biomedical research	<u>Gourapura J Renukaradhya</u> , Crystal Loving, Joanna LaBresh, Raksha Suresh, Milan Royer, Kristen E Walker, Jovan Aquino, Joan K Lunney
	P073	Characterizing the changes in the antigen-specific immunoglobulin glycosylation in gilts throughout pregnancy	<u>Diane Mutumwinka</u> , Poja Choudhary, Dr.Heather Wilson, Prof. George Mutwiri
	P074	The WC1 multigenic array in the immune response to zoonotic pathogens in agricultural species	Lauren Le Page, Oriana Attridge, Cynthia L. Baldwin, <u>Janice C. Telfer</u>
	P075	Tissue localization and acute peripheral transcriptomic response following Salmonella enterica Typhimurium infection of pigs	<u>Crystal L Loving</u> , Jayne E Wiarda, Kristen A Byrne, Christopher L Anderson
	P076	Evaluating immunological reagents and expanding molecular assays across ruminant species	<u>Jamison R. Slate</u> , Paola Boggiatto, Mitch Palmer,
	P077	Humoral responses of elk to experimental challenge	Paola Boggiatto, Ellie Putz, <u>Steven Olsen</u>
	P078	Protective effects of Green tea extract against oxidative-stress mediated airway inflammation and mucus hypersecretion in asthmatic mice model	Jeong-Won Kim, Jin-Hwa Kim, Ji-Soo Jeong, Chang-Yeop Kim, Seo-Ryeong Lee, Eun-Hye Chung, Eui-Ju Hong, Tae-Won Kim, <u>Je-Won Ko</u>
	P079	Anti-IL-10 does not affect broiler systemic IL-10 concentrations in models with or without Salmonella Typhimurium	<u>K. Fries-Craft</u> , S. Schmitz-Esser, E.A. Bobeck
VACCINOLOGY	P080	Deletion of a single gene abrogates the ability of mycobacterial pathogens to establish a persistent infection	<u>Asmaa Mahmoud</u> , Gaber Abdellrazeq, Victoria Hulubei, William Davis
	P081	Sheep-associated malignant catarrhal fever vaccine candidate: safety and immunogenicity in cattle	<u>Daniela D. More</u> , Katherine N. Baker, Maria Herndon, Naomi Taus, Cristina W. Cunha
	P082	Broadly protective bovine parainfluenza 3 virus and bovine viral diarrhea virus vaccine	Tae Kim, Huldah Sang, <u>Waithaka Mwangi</u>
	P083	Progress on development of an "intelligently-designed" vaccine to prevent diseases due to Histophilus somni	<u>Thomas J. Inzana</u> , Dianjun Cao, Amelia Woolums, Merrilee Thoresen, Kelsey M. Harvey
	P084	Development of a bovine IL-18 expression vector for Histophilus somni	<u>D. Cao</u> , X. Zhu, T.J. Inzana

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	P085	Bovine papular stomatitis virus as a vaccine vector for cattle	Gustavo Delhon, Sushil Khatiwada, <u>David Doub</u> , Seth Harris, Sabal Chaulagain, Mostafa El-Gaffary, Daniel L. Rock
	P086	First trials and development of effective caseous lymphadenitis inactivated vaccine in South Korea	<u>Gyeong-Seo Park</u> , Byoung-Joo Seo, So-Min Lee, Min-A Jeong, Dong-Geun Cho, Won-Il Cho, Chong-Han Kim
	P087	Inactivated whole cell antigen vaccine protects dogs from Rocky Mountain Spotted Fever independent of an adjuvant used	<u>Perle Latre de Late</u> , Swetha Madesh, Jonathan Ferm, Dominica Genda, Ian Stoll, Jodi McGill, Kim D. Yong, Abha Sahni, Sanjeev Sahni, Roman R. Ganta
	P088	Generation of a targeted disruption mutant in Anaplasma phagocytophilum and its application as a vaccine candidate	<u>Jonathan Ferm</u> , Huitao Liu, Dominica Genda, Roman Ganta
	P089	Genetically modified live vaccine to prevent monocytotropic ehrlichiosis in dogs resulting from Ehrlichia canis	<u>Dominica D. Genda</u> , Arathy Nair, Jonathan D. Ferm, Huitao Liu, Roman R. Ganta
	P090	Development of mucosally administered multivalent vaccine to prevent poultry infection by multiple Eimeria species	Shifeng Wang, <u>Roy Curtiss</u> , Soo-Young Wanda, Mark Jenkins
	P091	Enhancing the production of type I interferons to create rationally-defined Marek's disease vaccines	<u>John Dunn</u> , Maria Bahamon Naranjo, Sonsiray Alvarez Narvaez, Steven Conrad, Jef Boeke
	P092	Generation of a Newcastle disease vaccine that protects against infectious laryngotracheitis and Marek's disease	<u>Stephen Spatz</u> , Sherif Ibrahim, Lei He, Qingzhong Yu
	P093	Evaluation of return on investment following the use of different avian coccidiosis vaccines based on their attenuation	<u>Santiago De Castro Verges</u> , Martina Dardi, Marina Solé, Shyong Wey Ong, Kesavan Sivagiganesan
	P094	Development of an intranasal highly pathogenic avian influenza nanovaccine: Kazakhstan's new project with international collaboration	Kairat Tabynov, Talgat Karibayev, Maksat Berdikulov, Leila Yelchibayeva, Kuantay Zharmambet, Aidana Kuanyshbek, Nikolai Petrovsky, Gourapura J. Renukaradhya, <u>Kaissar Tabynov</u>
	P095	Evaluation of inactivated vaccine formulated with new polymer adjuvant Montanide <sup>TM</sup> GEL P PR against Salmonellosis in layers	<u>Marie-Eve Koziol</u> , Sarah Kharief, Nicolas Versillé, Juliette Ben Arous
	P096	Haemonchus contortus vaccine using novel controlled release delivery in sheep	<u>Darby Harris</u> , Doug Jones, Carly Kanpie, Paola Boggiatto, Wenbin Tuo, Steven Olsen
	P097	Immunogenicity and protection of a novel glycoengineered vesicle vaccine against Glaesserella parasuis	<u>Jinjing Liu</u> , Isabel A. Carvalho, Yung-Fu Chang
	P098	Novel pseudorabies virus (PRV) vectored subunit vaccine against African swine fever	Selvaraj Pavulraj, Caleb S Kleinpeter, <u>Shafiqul I Chowdhury</u>
	P099	Safe and broadly cross-protective live attenuated influenza virus vaccines for use in swine	<u>Daniela Rajao</u> , C. Joaquin Caceres, Brianna Cowan, Tavis Anderson, Amy Vincent Baker, Daniel Perez
	P100	Intradermal vaccination with a STING-targeting nanoparticle adjuvant enhances immunity against swine influenza	<u>Juan F. Hernandez-Franco</u> , Gourapura J. Renukaradhya, Harm HogenEsch,
	P101	A minimally replicative PRRSV vaccine targeting improved safety and efficacy	Wenjuan Fang, <u>Sheela Ramamoorthy</u>
	P102	Validation of a live-virus PRRSV vaccine candidate for efficient attenuation and better protection	<u>Laura C. Miller</u> , Sarah J. Anderson, Alexandra Buckley, Erin Schirtzinger, Kaitlyn M. Sarlo Davila, Damarius Fleming, Albert Van Geelen, Kelly Lager, Jiuyi Li, Yongming Sang

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	P103	T cell epitope content comparison of swine H1 influenza A virus hemagglutinin to identify the best vaccine match	Andres H. Gutierrez, William D. Martin, <u>Anne S. De Groot</u>
EPIDEMIOLOGY	P104	Vet-ting for victory: exploring bison producers' access to veterinary services in Ontario, Canada	<u>Natassia H Lambrou</u> , Kelsey L Spence, Charlotte B Winder,
	P105	Evaluating estimated carbon emissions and feedlot production data to address beef sustainability	<u>Deanna M. Gennett</u> , Taylor B. McAtee, David G. Renter
	P106	2023 update on the impact of management decisions on BRD morbidity, mortality, and performance in beef calves	Sarah Capik, Robert Larson, Brad White, David Amrine, Brandi Karisch, Kelsey Harvey, Jane Parish, Amelia Woolums, Hudson McAllister, Vinicius Gouvea, <u>Matthew Scott</u> ,
	P107	Optimization of targeted enriched metagenomics protocol to obtain strain-level data for Mycoplasma bovis in respiratory samples from cattle	<u>Sal Lamsal</u> , Christopher Panaretos, Ethan Dudley, Lee Pinnell, Matthew Scott, John Richeson, Hatem Kittana, Paul S. Morley, Robert Valeris-Chacin
	P108	Effect of yeast supplementation on pro-inflammatory cytokines in steers inoculated with digital dermatitis	<u>Marlee Henige</u> , Kelly Anklam, Sair Ordaz Puga, Matthew Aviles, Summer Henschel, Julia Buettner, Ilkyu Yoon, George Dawson, Jeffrey Wheeler, Doerte Doepfer
	P109	Factors influencing Ontario dairy producers' management and care of down dairy cattle.	<u>J.E. Brindle</u> , D.L. Renaud, T. Duffield, D. Haley, C.B. Winder
	P110	Surveillance of Bovine Leukemia Virus prevalence in southeast Florida dairy herds	Monalisa Lima, Jessica Prim, Kristen Schmidt, Kristi Jones, Klips Galvao, Ricardo Chebel, Fiona Maunsell, Joao Bittar
	P111	Temporal identification of bovine leukemia virus in dairy youngstock and impact on milking herd prevalence	<u>Madison E. Sokacz</u> , Kelly R. B. Sporer, Paul Bartlett, Casey Droscha, Bo Norby, Tasia M. Taxis
	P112	Brucellosis surveillance in Georgia in 2020-2022 years	<u>Natia Kartskhia</u> , <u>Tengiz Chaligava</u> , Vladimer Baratashvili, Marina Donduashvili
	P113	Estimation of basic reproduction number (R0) and analysis of spatio-temporal clustering of bovine brucellosis in Costa Rica	Ronald Castillo, <u>Demelash Areda</u>
	P114	Mathematical modelling assessment of Salmonella Dublin transmission and control in Northeastern US heifer raisers	<u>Sebastián Llanos-Soto</u> , Martin Wiedmann, Aaron Adalja, Christopher J. Henry, Elisha Frye, Paolo Moroni, Renata Ivanek
	P115	Screening for lumpy skin disease (LSD) in high-risk areas of Armenia	Khachik Sargsyan, Satenik Kharatyan, Varduhi Hakobyan, Hasmik Elbakyan, Tigran Markosyan, <u>Tigranuhi Vardanyan</u>
	P116	Spatiotemporal dynamics of Bacillus anthracis infection transmission in northern Vietnam, 2022-2023	Van Khang Pham, C. Metrailler Morgan, Tan Luong Minh, Minh Hoa Luong, Thanh Hai Pham, Bich Ngoc Do, Jiranantasak Treenate, Thi Lan Huong Vu, Thanh Long Pham, Thi Mai Hung Tran, Nhu Duong Tran, Thuy Oanh Kim, H. Norris Michael, <u>Quang Thai Pham</u> , Thi Thu Ha Hoang, K. Blackburn Jason
	P117	Cancer prevalence and associated risk factors in Maricopa County, Arizona: A retrospective study	Chauncey Hart, <u>Demelash Areda</u>
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