



Conference of Research Workers in Animal Diseases

CRWAD 2025 - POSTER PRESENTATIONS

The onsite Poster Session will be held on **Monday, January 20th, 2025 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 will be rejected for display onsite.**

Topic	Poster	Presenter Last Name	Title	Authors
AFRICAN SWINE FEVER	P001	Marcone	Performance of an ASF real-time PCR assay on the Magnetic Induction Cycler (MIC) and QuantStudio 5 thermal cyclers	Kate Schumann, Danielle Marcone, Bailey Harach, Leslie Blakemore
	P002	Harach	Performance characteristics of real-time PCR master mixes for the detection of African swine fever virus	Bailey Harach, Danielle Marcone, Leslie Blakemore, Kate Schumann
	P003	Mani	Exploring the pathogenesis of newly emerged African swine fever virus in naturally infected pigs from India	Saminathan Mani, Karam Pal Singh, Sukdeb Nandi, Pavulraj Selvaraj, Arun Chatla, Cole Knuese, Jorge E. Osorio
	P004	Berninger	Comparison of library preparation methods for the sequencing of African Swine Fever Virus using Illumina Platform	Amy Berninger, Jim L. Pierce, Lizhe Xu, Roger W. Barrette, Patrick T. Ababio, Steven M. Lakin, Theophilus Odoom, Bonto Faburay, Vivian O'Donnell
	P005	Ohouko	Alternative searching in fighting against African swine fever disease in Benin: a pilot study	Okri F. H. Ohouko, Koffi Koudouvo, Victorien T. Dougnon, Jean R. Klotoe, Jacques Adouko, Arnaud Soha, Farougou Souaïbou, Issaka Youssao
	P006	Ohouko	First report of Genotype II for the African swine fever virus outbreak in Benin Republic in 2023	Okri F. H. Ohouko, Vivian O'Donnell, Edward Spinard, Mark Dinhobl, Amy Berningere, Lizhe Xub, Jacob Fenster, Manuel V. Borca, Bonto Faburay, Victorien T. Dougnon, Douglas P. Gladue
	P007	Woodruff	An analytical framework for prioritizing African swine fever disease surveillance in domestic and wild pigs	Mary J. Woodruff, Greg Franckwiak, Vienna R Brown, Dana Cole, Ryan S. Miller
	P008	Britto de Oliveira	Development of vectored subunit vaccine candidates for ASFV	Pablo S. Britto de Oliveira, Yonghai Li, Jessica C. G. Noll, Natasha N. Gaudreault, Leonardo C. Ribeiro, Diego G. Diel, Juergen A. Richt
	P009	Ramirez-Medina	Comparative study in domestic pigs between the recently emerged ASFV hybrid Vietnamese field strain rASFV I//II and the ASFV field strain Georgia 2010	Elizabeth Ramirez-Medina, Alyssa Valladares, Leeanna Burton, Leandro P. Sastre, Mark Dinhobl, Vivian K. O'Donnell, Manuel V. Borca

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ANTIMICROBIAL USE	P010	Glass	Applying association rule mining to analyze and compare genotypic and phenotypic indicators of multidrug resistance across the food supply chain	Joshua Glass, Gayatri Anil, Kristina Ceres, Laura Goodman, Casey Cazer,
	P011	Lunt	Overview of an ongoing Zoetis antimicrobial susceptibility surveillance program for major veterinary pathogens in the United States and Canada	Bryce L. Lunt, Lacie Gunnett, David J. Asper, Michael T. Sweeney, Véronique Moulin, Dipu Mohan Kumar, Abhijit Gurjar
	P012	Abouelkhair	Targeting calcium homeostasis is the leading pathway to control <i>Clostridioides difficile</i> infection	Ahmed Abouelkhair, Nader Abutaleb, Mohamed Seleem
	P013	Gow	Antimicrobial use in Canadian feedlots	Sheryl Gow, Tara Funk, Kayla Strong, Alyssa Butters, Dana Ramsay, Booker Calvin, Craig Dorin, Steve Hendrick, Sherry Hannon
	P014	Agga	Biochar broiler house amendment reduces contamination with extended spectrum beta-lactamase producing <i>E. coli</i>	Getahun Agga, Nanh C. Lovanh, Karamat R. Sistani
	P015	Kyung	In vitro Colistin pressure revealing antimicrobial adaptation strategies of animal derived <i>Klebsiella pneumoniae</i>	Su Min Kyung, Jun Ho Lee, Eun-Seo Lee, Xi-Rui Xiang, Han Sang YOO
	P016	Goncalves	Use of systemic ceftiofur and ampicillin in dairy cows: A randomized clinical trial	Juliano L. Goncalves, Amanda T.F. Silva, Karla Vasco, Shannon Manning, Lixin Zhang, Bo Norby, Rinosh Mani, Pamela L. Ruegg
	P017	Choi	A probiotic engineered for controlled release of antimicrobials targeting swine pathogens	In Young Choi, Jee-Hwan Oh, Jan Peter van Pijkeren
	P018	Alsabali	Evaluating colistin use in veterinary medicine: A narrative literature review	najla Alsabali
	P019	Lamichhane	Next-generation probiotics: Novel insights into controlling <i>Campylobacter</i> infection in humans and animals.	Bibek Lamichhane, Illhem Messaoudi, Yosra A. Helmy
	P020	Carter	Effects of antimicrobial treatments on the microbiome and resistome of brood mares	Hannah L. Carter, Cory A. Wolfe, Enrique Doster, Charlotte Pipkin, Hannah Looman, Jessica Looman, Gregg O. Veneklasen, John L. Pipkin, Maggie M. Murphy, Eryah Mora, Lee J. Pinnell, Paul S. Morley
P021	Dudley	Quantifying the effects of three different metaphylactic drugs on the prevalence of Pasteurellaceae throughout the feeding period.	Ethan Dudley, Robert Valeris-Chacin, John Dustin Loy, Rand Broadway, Kristin Hales	
AQUACULTURE	P022	Alarape	Prevalence, characterisation, and antibiotic profiles of <i>Vibrio cholerae</i> and <i>Vibrio parahaemolyticus</i> in African Catfish across selected Regions in Ibadan, Nigeria	Selim Alarape, Ismail Badmus, Olanike Adeyemo
	P023	Yaqub	Effect of icing on proximate composition and microbial quality of <i>Hypophthalmichthys molitrix</i> during frozen storage	Shelly.S. Yaqub
	P024	Oliver	Assessment of recirculating aquaculture for embryonic and larval culture for burbot (<i>Lota lota</i>)	Luke Oliver, Trevor Strickland, Ryan Maxwell, Veronica Myrsell, Spenser Stenmark, Joseph Evavold, Kenneth Cain
	P025	Rowley	Molecular mechanisms of interspecies interactions in mitigating vibriosis in bivalves	Arvie Grace Masibag, Rachel Cheney, Elise LePage, Ololade Gbadebo, Marta Gomez-Chiarri, David Rowley

Topic	Poster	Presenter Last Name	Title	Authors
ARTIFICIAL INTELLIGENCE	P026	Arede	Time series and risk factor analysis of valley fever in Arizona: application of machine learning tools	D Arede
	P027	Baerwolf	Artificial intelligence enhanced automated prevalence estimation of digital dermatitis affected cattle at harvest	M. Baerwolf, M. Henige, F. Valle, D. Döpfer
	P028	Hosseini	Genomic selection for improved reproductive traits in dairy cattle	Seyed Mahdi Hosseini
	P029	Valle	Artificial Intelligence-assisted detection of water usage by sprinkler on a dairy farm	Fernando Valle, Kelly Anklam, Doerte Doepfer
BACTERIOLOGY	P030	Haluch	Typing of clinical <i>Pasteurella multocida</i> isolates from goats from the midwestern United States	Andrea Haluch, Karen LeCount, Tammy Anderson, Alan Hassall, Brenda Morningstar-Shaw, Amanda Kreuder
	P031	Logue	Characterizing the O-serogroups of Avian Pathogenic <i>E. coli</i> (APEC) associated with colibacillosis in Georgia poultry	Catherine Logue, Klao Runcharoon, Bella Garcia, Breck Peterson, Margaret Favro, Meaghan Young, Nicolle Lima Barbieri, Doug Waltman, Briget Flores, Emily Dinh
	P032	Maki	Response of <i>Escherichia coli</i> O157 to bovine bile under aerobic and anaerobic conditions	Joel J Maki, Randy Ortiz, Nathan Peroutka-Bigus, Crystal L Loving
	P033	Dambros Levitzki	Stimulation of phenotypic expression of macrolide resistance in <i>Rhodococcus equi</i> strains	E. D. Levitzki, E. Martins, A. L. R. S. Pereira, B. A. Ottobeli, K. P. da Costa, L. T. Gressler, L. Huber
	P034	Awosile	Antimicrobial susceptibility in bacteria from clinical samples of dogs from Texas	Saroj Gopali, Nancy Zimmerman, Marcelo Schmidt, Tianxi Ji, Babafela Awosile
	P035	Joseph	Cannabidiol reduces environmental stress tolerance and downregulates stress-response proteins in <i>Listeria monocytogenes</i>	Divya Joseph, Leya Susan Viju, Kumar Venkitanarayanan
	P036	Alneaemy	Prevalence of major bacterial pathogens in liver abscesses of beef-on-dairy cattle	H. Alneaemy, R.G. Amachawadi, H. Salih, T. Mahmood, R. Wilson, D. Woerner, T.G. Nagaraja
BIOSECURITY AND INFECTION CONTROL	P037	Lakew	Assessing the feasibility of test-and-cull and test-and-segregation approaches for the control of high-prevalence bovine tuberculosis in Ethiopian intensive dairy farms	Matios Lakew, Biniam Tadesse, Sreenidhi Srinivasan, Muluken Aschalew, Bekele Andarge, Dirshaye Kebede, Addisu Etifu, Tena Alemu, Bekele Yalew, Teferi Benti, Abebe Olani, Shubisa Abera, Wegene Bedada, Abebe Fromsa, Getnet Abie Mekonnen, Gizat Almag, Gobena Ameni, Hagos Ashenafi, Balako Gumi, Douwe Bakker, Vivek Kapur
	P038	Dean	Changes in risk tolerance: Behavioral dynamism in a biosecurity adoption game	Jackson Dean, Richmond S Baye, Eric Clark, Scott Turnbull, Samuel Rosenblatt, Johnbosco Osuagwu, Asim Zia, Scott Merrill, Julie Smith, Laurent Hebert-Dufresne, Nick Cheney
	P039	Weiderman	Safeguarding the future of academic research: Innovations in biosecurity and biosafety education for academic excellence	Rachael Weiderman, Laura Miller, Joseph Whitlock,
	P040	Flaherty	Enhancing biosecurity measures to protect Puerto Rico from emerging swine diseases	Kara E. Flaherty, B. Alexander Fonseca-Martinez, Juan F. Hernandez-Cuevas, Andreia G. Arruda

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BRD	P041	McDaneld	Characterization of the respiratory microbiome and virome associated with Bovine Respiratory Disease Complex	Tara McDaneld, Bernadette Earley, Sara Louise Cosby, Kerrie Duffy, Mark Mcgee, Larry Kuehn, Aspen Workman, Gavin Conant, Paul Cormican, Matthew McCabe, Catherine Duffy, Hannah Turkington, Kenneth Lemon, Michael J McMenamy, Victoria Smyth, Patrick John Collins, Paula Lagan, Veronica Casement, James Devlin, Timothy Smith
	P042	Hacker	Molecular epidemiology of field <i>Mannheimia haemolytica</i> isolates in beef cattle	Nicholas Hacker, Matthew Scott, Paul S. Morley, Lee Pinnell, Enrique Doster, Robert Valeris-Chacin
	P043	Linson	Gene network analysis of cattle co-infected with BVDV-2 and BHV-1 following vaccination and mineral treatment	Matthew Scott, Roberto Palomares, M'Lehne Linson, Erika Altamiranda, Alejandro Hoyos-Jaramillo, Joao Bittar, Adriana Rodriguez, Jose Urdaneta, Francesca Granberry
	P044	Jakes	The single-cell RNA sequencing of bovine airway cells demonstrates signatures of pneumonia and viral infection	Grace Jakes, Dylan Ammons, Randy Hunter, Ediane Silva, Steven Dow, Sarah Raabis
	P045	Prim	Effect of intranasal mineral administration on immune and clinical outcomes of dairy calves challenged with BHV-1	Jessica Prim, Manuel Chamorro, Jenna Stockler, Jessica Rush, Florencia Meyer, Thomas Passler, Roberto Palomares, Shollie Falkenberg
	P046	Dasari	Antimicrobial resistance profiles of <i>Mannheimia haemolytica</i> and <i>Pasteurella multocida</i> : Review of diagnostic laboratory data.	S.N. Dasari, R.G. Amachawadi, H. Wang, H. Kittana, M. M. Chengappa, T. G. Nagaraja
BRUCELLOSIS	P047	Ramishvili	Bacteriological investigation and biotyping of <i>Brucella</i> species isolated in Georgia from human and animal samples	Marine Ramishvili, Natalia Abazashvili, Marina Grdzelidze, Ketevan Sidamonidze, Paata Imnadze, Jeffrey Foster
	P048	Sidamonidze	Comprehensive whole genome sequencing and comparative analysis of <i>Brucella melitensis</i> and <i>Brucella abortus</i> isolates from humans and livestock in Georgia	Ketevan Sidamonidze, Jeff Foster, Paata Imnadze, Ekaterine Khmaladze, John Gillece
	P049	Kiiza	Cost-benefit analysis of an enhanced vaccination program to control brucellosis in cattle in different farming systems in Rwanda	D. Kiiza, G. Kiker, R. Serra, T. Denagamage, F. Maunsell, B. Benavides, J.A. Hernandez
	P050	Zhgenti	Zoonotic bacterial pathogens in bat samples in Georgia	Ekaterine Zhgenti, Lela Urushadze, Tea Tevdoradze, Gvantsa Brachveli, Ioseb Natradze, Andres Velasco-Villa
	P051	Olsen	Comparison of bison and elk to <i>Brucella</i> vaccination and experimental challenge with <i>Brucella abortus</i> strain 2308	Paola Boggiatto, Ellie Putz, Steven Olsen
	P052	Tsaguria	Characterization and molecular typing of <i>Brucella</i> strains isolated from humans and animals in Georgia 2020-2024	David Tsaguria, Ketevan Sidamonidze, John Gillece, Paata Imnadze, Jeff Foster
	P053	Makhatadze	Epizootic situation and laboratory studies of <i>Brucella</i> in Western Georgia	Nugzari Makhatadze
	P054	Serrani	Genomic characterization of <i>Brucella</i> species in Italy over a 10-year period (2011 - 2021)	Anna Janowicz, Fabrizio De Massis, Sara Serrani, Michela Toro, Alessandra Sferrella, Nausica D'Aurelio, Lisa Di Marcantonio, Eugenio Felicioni, Cecilia Villani, Teresa Romualdi, Anna Abass, Katuscia Zilli, Giuliano Garofolo

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COMPANION ANIMAL HEALTH	P055	Hammer	Exploratory screening for micro-RNA biomarkers in canine multicentric lymphoma	Sabine E. Hammer, Stefanie Burger, Martin Hofer, Ilse Schwendenwein, Barbara C. Rütgen
	P056	Faisal	Molecular characterization of <i>Salmonella</i> infections in companion animals: A One Health perspective	Golam M. Faisal, Ajan Kabir, Bibek Lamichhane, Rosbelly Rios, Charlotte Vaillant, Elizabeth Isenhower, Sydney Epley, Tasmia Habib, Megan Romano, Melissa Morgan, Yosra. A. Helmy
	P057	Crystal	Canine infectious respiratory disease pathogens in shelter dogs	Crystal LeRoy, Tiffany Pulliam, Jennifer Banach, Ashutosh Verma, Rebecca Randall
	P058	Marino	Antimicrobial susceptibility of <i>Escherichia coli</i> from canine pyometra diagnostic samples, 2007-2024	Kassie Marino, Cassandra Guarino, Nicole Buote, Kurtis Sobkovich, Casey Cazer,
DIAGNOSTIC TESTING	P059	Naseer	Higher RT-qPCR Ct values in vaccine-like strains compared to wild-type strains in PRRSV ORF5 lung and serum samples	Rabsa Naseer, Michael A. Zeller, Phillip C. Gauger, Giovanni Trevisan
	P060	Ramasamy	A rapid and cost-effective field deployable diagnostic platform for detecting SARS-CoV-2 in white-tailed deer	Aneesh Kshirsagar, Anthony J. Politza, Santhamani Ramasamy, Lindsey C. LaBella, Kurt J. Vandegrift, Suresh V. Kuchipudi, Weihua Guan,
	P061	Elshafie	Adapting a targeted NGS panel for carnivore pathogen detection, including SARS-CoV-2, to the Oxford Nanopore MinION	Nelly Elshafie, Jobin J. Kattoor, Rebecca P. Wilkes
	P062	Koci	Development of modular multiplex RT-PCR assay to allow for a systems approach to poultry health	Matthew Koci, Natalie Roberts, Lauren Anderson, Tamara Pen
	P063	Abi Younes	Bayesian latent class models for evaluating detection of macrolide-resistant <i>M. haemolytica</i> : culture vs. sequencing	Jennifer Abi Younes, Lianne McLeod, Cheryl Waldner
	P064	Jackson	Clinical presentation and associated serologic and molecular test results in symptomatic equine tested during the Vesicular Stomatitis Virus outbreak in California (2023-2024)	Wendi A. Jackson, Beate Crossley
DISEASE PATHOGENESIS	P065	Asres	Comparative pathogenesis of Ethiopia/Habru/2014 Lineage-IV Peste des Petits Ruminants virus in goats and cattle	Fasil Aklilu, Hagos Ashenafi, Tesfu Kassa, Hassan Chaka, Demeke Sibhatu, Dereje Shegu, Abde Aliy, Redeat Belaineh, Menbere Kidane, Hagos Asgedom, Tesfaye Chibssa, Getnet Mekonnen, Asegedetch Sirak, Solomon Gebredufe, Claudia Schulz, Catherine M. Herzog, Vivek Kapur
	P066	Southey	Metabolomics analysis of the liver of pigs under metabolic and inflammatory distress	A.N. Gomez, B.R. Southey, S.L. Rodriguez-Zas
	P067	Klaeui	<i>Lawsonia intracellularis</i> infects fibroblasts more rapidly than epithelial cells in vitro	Caitlin Klaeui, Connie Gebhart, Milena Saqui-Salces,
	P068	Howe	Determining interactions between commensal <i>Corynebacterium</i> and pathogenic <i>Mannheimia</i>	S.M. Howe, J.G. Powell, E.B. Kegley, J. Zhao
	P069	Pace	Gestational diabetes mellitus alters mammary and hepatic protein expression in lactating rats	Alexandra Pace, Denina Simmons, Chloe C Josefson, Patricia Villamediana, Amy L Skibiel

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	P070	Menghwar	Acapsular or asialic mutants of <i>Mannheimia haemolytica</i> are attenuated in a calf lung challenge model	Harish Menghwar, Fred M. Tatum, Anna GoldKamp, Brad Chriswell, Robert E. Briggs, Carly Kanipe, Eduardo Casas, Rohana P. Dassanayake
	P071	Fernandes	<i>Peromyscus deer</i> mice as an acute rodent model of leptospirosis	Ellie Putz, Claire Andreasen, Paola Boggiatto, Mitchell Palmer, Luis Fernandes, Bienvenido Tibbs-Cortes, Judith Stasko, Camila Hamond, Steven Olsen, Jarlath Nally
	P072	Rahe	Porcine astrovirus 4 as a cause of tracheitis and bronchitis in pigs	Michael Rahe, Jazz Stephens, Rachel Derscheid, Calvin Ko, Andrew Noel, Phil Gauger, Panchan Sitthicharoenchai, Jennifer Groeltz-Thrush, Rebecca DuBois, Danielle Haley, Alexandra Buckley
	P073	Contreras	Endotoxemia and the pathogenesis of lipolysis dysregulation in periparturient dairy cows	GA Contreras, AL Lock
	P074	Skow	Elucidating species-specific early adhesion mechanism of <i>Escherichia coli</i> O157:H7 <i>in vitro</i>	Caleb Skow, Melha Mellata,
	P075	Smith	X-ray fluorescence imaging of BALB/c mouse intestine after exposure to 8 Gy of gamma rays	Anthony Smith, Katrina Dobinda, Si Chen, Peter Zieba, Tatjana Paunesku, Zequn Sun, Gayle Woloschak
	P076	Lee	Experimental challenge of lactating dairy cattle with highly pathogenic avian influenza virus A/bovine/Ohio/B24OSU-342/2024	Carolyn Lee, Bryant Foreman, Hannah Cochran, Patricia Boley, Jennifer Schrock, Natalie Tarbuck, Olaitan Shekoni, Raksha Suresh, Sara Dolatyabi, Christina Sanders, Elizabeth Ohl, Kaitlynn Starr, Yehia Saif, Juliette Hanson, Renukaradhya Gourapura, Cody Warren, Andrew Bowman, Scott Kenney
	P077	de Assis Rocha	Pharmacokinetics of bumped-kinase inhibitor 1708 in horses for equine protozoal myeloencephalitis therapy	Izabela De Assis Rocha, Jenna McPeek, Steve Reed, Matthew Hulverson, Ryan Choi, Lynn Barrett, Samuel Arnold, Wesley Van Voorhis, Daniel Howe, Allen Page
EPIDEMIOLOGY	P078	Sargsyan	Preparedness and early detection of foot and mouth disease outbreaks in Armenia in 2022-2023	Liana S. Sargsyan, Tigran A. Andreasyan
	P079	Bajwa	Epidemiology and AMR patterns of Enterococcus in the US: Phenotypic and genotypic insights	Muhammad Rashid Bajwa, Rebecca Lee Smith
	P080	Rico	Data-driven herd-level standards for diagnosing omphalitis in dairy calves based on umbilical stump diameter	Alexandre Rico, Alda F.A. Pires, Noelia Silva-del-Rio
	P081	Shaukat	Herd-level prevalence of selected endemic infectious diseases dairy herds in Alberta, Canada	Waseem Shaukat, Ellen de Jong, Kayley McCubbin, Marit Biesheuvel, Frank van der Meer, Jeroen De Buck, Guillaume, David Hall, Kristen Kalbfleisch, John Kastelic, Karin Orsel, Herman Barkema
	P082	Areda	Analysis of risk factors for Valley Fever in Arizona: application of negative binomial model	D Areda
	P083	Gamage	Genomic characterization of equine rotavirus B circulating in central Kentucky	Chandika Gamage, Amy Amy, Jennifer Morrow, Ganwu Li, Come J. Thieulent, Udeni B. R. Balasuriya, Mariano Carossino
	P084	Sokacz	Bovine leukemia virus infection detection and dynamics in dairy youngstock	Madison E. Sokacz, Kelly R. B. Sporer, Bo Norby, Tasia M. Taxis

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	P085	McArt	Using time-dependent sensitivity analysis to help understand and manage dynamic ecological systems	Scott H. McArt, Wee Hao Ng, Stephen P. Ellner, Christopher R. Myers
	P086	Ma	Detection of influenza A virus antibodies in cattle in the US	Y. Lang, L. Shi, D. Gupta, S. Roy, C. Dai, A. Khalid, M. Zhang, Shuping zhang, R. Webby, W. Ma,
	P087	Locke	Understanding strengths and challenges in the surplus calf industry	Samantha Locke, Alejandra Arevalo, Sara Sequeira, Devon Wilson, Andreia Arruda, Jessica Pempek, Greg Habing
	P088	Holdo	<i>Serengeti wildebeest</i> exhibit lower fecal parasite burdens than two closely related resident ungulate species	Ricardo M Holdo, Jason E Donaldson, Basil Senso, T. Michael Anderson, Aidan Trentinus, Vanessa O Ezenwa
	P089	Golden	Prevalence and spread of antimicrobial resistant pathogens in backyard poultry farms	D. Reed Golden, Pankaj P. Gaonkar, Laura Huber, Brigid McCrea, Yagya Adhikari, Matthew Bailey, Kenneth Macklin
	P090	Edache	Do swine farms have a mosquito problem? Assessing mosquito abundance and diversity in US commercial swine farms	Stephen Edache, David Edache, Lauryn Mauler, Lee Cohnstaedt, Ashley Thackrah, Vanessa Horton, Dana Mitzel, Andrea Dixon, Natalia Cernicchiaro
	P091	Gilbertson	Seasonal white-tailed deer habitat use and implications for disease transmission	Marie L. J. Gilbertson, Alison C. Ketz, Matthew A. Hunsaker, Daniel P. Walsh, Daniel J. Storm, Wendy C. Turner
GENERAL HEALTH AND PHYSIOLOGY	P092	Liu	Advancing animal disease research with FarmGTE _x	George E. Liu
	P093	Southey	Effect of stressors on amygdala gene profiles in the pig	S. Bhamidi, B.R. Southey, S.L. Rodriguez-Zas
	P094	O'Brien	Validation of a food frequency questionnaire (FFQ) for use in dog nutrition research	Janice O'Brien, Audrey Ruple, Courtney Sexton
	P095	Skibieli	Immune and pulmonary responses to wildfire-PM2.5 exposure in dairy heifer calves	Delaney Sarantopoulos, Jenifer Cruickshank, Sierra Lepiane, Mostafa Kamyabi, Alexandra Pace, Juliana Ranches, Denise Konetchy, Pedram Rezamand, Amy Skibieli
	P096	Gerrard	Impact of porcine reproductive and respiratory syndrome virus challenge on amino acid metabolism in weaned pigs	Samuel D. Gerrard, Anthony J. Shafron, Ravi Yadav, Samer W. El-Kadi, Charles P. Najt
	P097	Arlauskaitė	The connection between rumination and lactose concentration in early-lactation dairy cows	Samanta Arlauskaitė, Ramūnas Antanaitis, Akvilė Girdauskaitė, Karina Džermeikaitė, Justina Krištolaitytė, Mindaugas Televičius, Dovilė Malašauskienė, Mingaudas Urbutis, Kotryna Tolkačiovaitė, Walter Baumgartner
	P098	Džermeikaitė	Monitoring the in-line milk fat-to-protein ratio in dairy cows during early lactation for assessing metabolic health and inflammatory status	Karina Džermeikaitė, Justina Krištolaitytė, Ramūnas Antanaitis, Samanta Arlauskaitė, Akvilė Girdauskaitė
	P099	De Massis	Hematological and biochemical analytes in free-ranging Marsican brown bears in the Central Apennines, Italy	Michela Toro, Leonardo Getuli, Giammarco Quaglia, Nausica D'Aurelio, Sara Serrani, Alessandra Sferrella, Daniele Giansante, Vincenza Di Pirro, Valentina Zenobio, Daria Di Sabatino, Leonardo Gentile, Fabrizio De Massis
	P100	Crevier	Pain control for elastration of newborn bull calves	Mariah M Crevier, Jeffrey A Rau, Jessica L Gordon, Derek B Haley
	P101	Rodriguez-Gallegos	An avian-specific bacteria for gut immune maturation of newly hatched conventional layer chickens	Jonathan Rodriguez-Gallegos, Jared Meinen-Jochum, Melha Mellata

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	P102	Loving	Single-nucleus transcriptomics delineates distinct cell types in porcine cecum and colon	Crystal L. Loving, Kristen A. Byrne, Sharu Paul Sharma
	P103	Nelson	Characterization of maternal and fetal vitamin D metabolism during pregnancy in Holstein cows	Madilyn Martin, Ahmad Fraz, Firmansyah Saputra, Jeniffer Laguna, Milerky Perdomo
	P104	Santos	Extracellular vesicles characterization from bovine colostrum	R. Santos, L. Kluppel, K. Holzapfel, S. Gade, U. Bickel, F. Rosa
IMMUNOLOGY	P105	Lunney	Investigation of fetal liver, heart, and thymus transcriptomes for prediction of reproductive failure	Kristen Walker, Alex Pasternak, Milan Royer, Angelica Van Goor, J.C.S. Harding, Joan Lunney
	P106	Mccracken	Validation of a rapid test to evaluate humoral immunity in Labrador retrievers	Fiona B. Mccracken, Sarah M. Dickerson, Jason W. Fowler, Patrick M. Skaggs, Claire L. Timlin, Craig N. Coon
	P107	Bordin	Enteral immunization with virulent and avirulent <i>R. equi</i> in newborn foals	Rafaela Klein, Bibiana da Silveira, Jocelyne Bray, Garrett Wehmeyer, Joanne Hardy, Noah Cohen, John C. Blazier, Angela Bordin
	P108	Leonard	Assessing the impact of a liposome-TLR agonist (LTC) on the mammary gland immune response in non-lactating Holstein dairy cows	Emily Leonard, Brian Crooker, Steve Dow, Luciano Caixeta
	P109	Pantha	Females with obesity suffer from more severe disease following Influenza A virus infection	Saurav Pantha, Saranya Vijayakumar, Shristy Budha Magar, Brian Wolfe, Tawfik Aboellail, Santosh Dhakal
	P110	Pantha	Sex differences in influenza vaccine-induced immunity and protection in mice with obesity	Saurav Pantha, Saranya Vijayakumar, Shristy Budha Magar, Brian Wolfe, Tawfik Aboellail, Santosh Dhakal
	P111	Owczarzak	Effect of isoprostane class on bovine monocyte-derived macrophage function under in vitro inflammatory challenge	Eric Owczarzak, Angel Abuelo
	P112	Driver	Single-cell RNA sequencing analysis of influenza virus-infected CD1D-deficient pigs	Weihong Gu, Darling Melany de Carvahlo madrid, Sadie Clements, Laurie Touchard, Nathan Bivens, Grant Zane, Mingyi Zhou, Kiho Lee, Joh Driver
	P113	Colombatti Olivieri	Reduction of reactive oxygen species production in bovine monocytes and neutrophils from cows with subclinical Johne's disease	Maria A. Colombatti Olivieri, John P. Bannantine
	P114	Wynn	Diversity and T-cell antigenic potentials of <i>Mycoplasma mycoides</i> subsp. <i>mycoides</i> vaccine candidates	Emily Wynn, Rohana Dassanayake, Daniel Nielsen, Eduardo Casas, Michael Clawson
	P115	Klein	C3b and C1q complement in foals: serum concentration and effects on killing of intracellular <i>Rhodococcus equi</i>	R. L. Klein, J. McCaskill, N. D. Cohen, B. P. da Silveira, A. I. Bordin
	P116	Borba	Anti-rotaviral antibody activity in mares and their foals after maternal vaccination with VP8 mRNA	K.E.R. Borba, N.M. Canaday, R.M. Legere, J.W. Skrobarczyk, S.S. Campbell, Z.W.T. Arnold, E. Cotton-Betteridge, C. Poveda, C. Mancino, F. Taraballi, M.F. Criscitiello, A.I. Bordin, L.R. Berghman, J.B.K. Pollet, N.D. Cohen
	P117	Wymore Brand	Dynamics of maternal systemic and mucosal influenza A antibody in swine	Meghan Wymore Brand, Bailey L. Arruda, Giovana Zanella, Amy L. Baker
	P118	Wiarda	PEDV infection alters gene expression in all cell types of porcine jejunal Peyer's patches: a single-cell study	Jayne Wiarda, Eraldo Zanella, Jianqiang Zhang, Samantha Hau, Alexandra Buckley

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	P120	Monson	Single-cell transcriptomics reveals marker genes for immune cell subtypes in turkey peripheral blood	Melissa S. Monson, Sharu Paul Sharma, Kristen A. Byrne, Crystal L. Loving
	P121	Byrne	Commercially available anti-human/-mouse monoclonal antibodies cross-reactive to agriculture and wildlife species	Kristen Byrne, Crystal Loving
	P122	Samuel	Gene expression profile of CD14+ monocytes and alveolar macrophages showing a trained immune phenotype upon BCG vaccination in weaned heifers	Beulah Esther Rani Samuel, Pengxin Yang, Christopher K Tuggle, Jodi L McGill
	P123	Castro Vargas	Dynamics of the CD25 marker in activated T-cell in calves and cows following <i>Salmonella</i> Dublin stimulation	Rafael Castro-Vargas, Angel Abuelo,
	P124	Telfer	Binding of WC1 SRCR domains from multiple species to <i>Mycobacterium</i> spp and <i>Leptospira</i> spp.	Janice C. Telfer, Oriana Attridge, Lauren Poirier, Owen Fanning
	P125	Wilson	Effects of cytochrome P450 pathway manipulation on inflammation in an in-vitro bovine mastitis model	Joe D. Wilson, Vengai Mavangira
	P126	Dauwen	Improving the ruminant immune response to bovine neonatal gastroenteritis through commensal bacterial modulation	R.B. Dauwen-Lile, T.C. Berry, J.L.C. Borgogna, C.J. Yeoman
MASTITIS	P127	Rivas Zarete	IgY-based immunomodulatory combo succeeds at tissular cure of <i>Staphylococcus aureus</i> mastitis in a mouse model	Jatna I. Rivas Zarete, Benjamin Adu-Addai
	P128	Adkins	Induced <i>Staphylococcus chromogenes</i> teat end colonization in dairy heifers	Pamela R. F. Adkins, Ben R. Byrd
	P129	Enger	Intramammary infection induces mammary epithelial cell death in heifer mammary glands during late gestation	B.D. Enger, M. X. S. Oliveira, P. H. Baker, K. M. Enger
	P130	Overgaard	Intramammary cholera toxin-based <i>Staphylococcus aureus</i> vaccine with subcutaneous boost shows safety, immunogenicity	Elise Overgaard, Haley A. Bridgewater, Nicholas K. Van Engen, Juliette K. Tinker,
	P131	Girdauskaitė	Changes in the components of milk in dairy cattle with subclinical mastitis	Ramūnas Antanaitis, Samanta Arlauskaitė, Mindaugas Televičius, Dovilė Malašauskienė, Mingaudas Urbutis, Karina Džermeikaitė, Justina Krištolaitytė, Akvilė Girdauskaitė
	P132	Lunt	Antimicrobial susceptibility of mastitis bacterial pathogens isolated from North American dairy cattle, 2011-2022	Bryce L. Lunt, Michael T. Sweeney, Lacie Gunnett, Dipu Mohan Kumar, Abhijit Gurjar, Véronique Moulin
	P133	Avais	Plant-derived Zinc oxide nanoparticles in combination with antibiotics generates synergistic effect against bovine mastitis pathogens	M. Avais, R. Aziz, Jawaria A. Khan
MICROBIO ME	P134	Stanton	MinION library preparation using recombinase polymerase amplification (RPA) for avian reovirus characterization	Vicente Avila-Reyes, Morgan L. Cunningham, Kelsey T. Young, Holly S. Sellers, James B. Stanton
	P135	Scott	Update on the molecular epidemiological assessment of beef cattle management systems	Bradly I. Ramirez, Hudson R. McAllister, Sarah F. Capik, Robert J. Valeris-Chacin, Kelsey M. Harvey, Brandi B. Karisch, Amelia R. Woolums, Paul S. Morley, Lee J. Pinnell, Matthew A. Scott

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	P137	Zhang	Microbiome-mediated colonization resistance against necrotic enteritis	Jing Liu, Isabel Tobin, Joy Scaria, Lamont Susan, Glenn Zhang
	P138	Lugo-Mesa	Does the pooling of raw samples or DNA provide good representation of the microbial communities of the upper respiratory tract of cattle?	Valeria Lugo-Mesa, Cory Wolfe, Molly McClurg, Lee J. Pinnell, Paul S. Morley
	P139	Hazlett	Development of baits and a variant classification system for target-enriched metagenomic mapping of prevalent liver abscess taxa in the bovine gut	Kayla H. Hazlett, Enrique Doster, Robert Valeris-Chacin, Matthew A. Scott, Paul S. Morley, Lee J. Pinnell
	P140	Young	Resistome-enriched sequencing of pooled fecal samples from commingled and non-commingled pre-weaned piglets	Jared G. Young, Tara N. Gaire, Gerardo R. Diaz, Claire Mitchell, Serena May, Mark Schwartz, Randall Singer, Maria Pieters, Noelle R. Noyes
	P141	Awosile	Fecal microbiome of horses under different housing environments in West Texas	Md.Kaisar Rahman, Yamima Tasnim, Luis Morales, Mohamed Fokar, Chiquito Crasto, Babafela Awosile
	P142	Chitko-McKown	A comparison of temporal variation in bacterial diversity in the respiratory tracts of dairy calves receiving milk replacer alone or containing probiotics.	Carol G. Chitko-McKown, Jia W. Tan, Susan D. Eicher, Janice E. Kritchevsky, Keith A. Bryan, Aaron Dickey, Tara G. McDanel
ONE HEALTH / PUBLIC HEALTH	P143	Whitehead-Tillery	Genetic analysis of whole genome and plasmid sequences show spillover of antibiotic resistance genes in ESBL-producing Enterobacteriaceae in human and dog populations	Charles Whitehead-Tillery, Linda S. Mansfield
	P144	Areda	Pastoralists' perceptions of climate change and coping strategies in the Borana Range lands of Southern Ethiopia	M Bayssa, S Betsha, S Yigrem, D Areda
	P145	Tabynov	Camels as biosurveillance sentinels: Risk at the human-camel interface	Takhmina Argimbayeva, Dolyce Low, Liesbeth Frias, Kairat Tabynov, Lena Ch'ng, Sophie Borthwick, Maruf Kosumbekov, Ian Mendenhall, Yvonne Su, Alan Hitch, Zamira Omarova, Aslan Kerimbayev, Aziz Nakhanov, Shuhrat Jumaev, Mukhit Orynbayev, Gavin Smith,
	P146	Sexton	How does companionship loss impact cognitive decline in aging dogs?	Courtney Sexton, Kathryn Shannon, Audrey Ruple
	P147	Ninidze	Q fever passive surveillance in Georgia 2019-2023 overview	Lena Ninidze, Natia Kartskhia, Ioseb Menteshashvili, Tengiz Chaligava, Marina Donduashvili
	P148	Khargaladze	High Crimean-Congo Hemorrhagic Fever seroprevalence in cattle indicating possible long-term transmission in areas with recent identification of human cases in Georgia 2023	Tornike Khargaladze, Levan Liluashvili, Tengiz Chaligava, Lia Bekauri
	P149	Davies	Development of a One Health informatics framework in Ontario using a stakeholder-driven approach	H. Davies, L. Grant
	P150	Malania	Mapping anthrax affected areas and distribution ranges of wildlife in the South Caucasus	Ioseb Natradze, Vakhtang Martashvili, Tengiz Chaligava, Irma Burjanadze, Tamar Chichinadze, Lilit Avetisyan, Astghik Pepoyan,

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	P151	Uwagie-Ero	Pharmacological effects of D-3-O Methylchiroinositol isolated from stem bark of <i>Piliostigma thonningii</i> in diabetic mice.	Chinaka O Nwaehujor, Edwin A Uwagie-Ero, Onyedikachi A Adika
	P152	Cheng	Prevalence of the <i>Coxiella burnetii</i> in beef cattle surveyed by real-time PCR and ELISA testing	Eric Cheng, Stephen Waldron, Cori Ondrashek, Ellyn Mulcahy, Roman M. Pogranichniy, Gregg Hanzlicek, Jianfa Bai,
	P153	Dittmar	Effects of white-tailed deer-specific spike glycoprotein mutations on SARS-CoV-2 fusogenic activity	W. Dittmar, C.J. Thieulent, N. Gaudreault, U.B.R. Balasuriya, J.A. Richt, M. Carossino
	P154	Bradley	Evaluating dairy farming interests of K-12 and college students utilizing Virtual Reality as a tool	M. Bradley, E. Kim, P. Boscan, I. Fraire, M. Jones, C. Tornatzky, M. Vans, W. Jiang, S. Rao
	P155	Kramer	Using spatial models to understand potential overlap of wildlife susceptible to SARS-CoV-2	Gabrielle Johnson, Adrian Castellanos, Barbara A. Han, Andrew M. Kramer
	P156	Ramasamy	Serological investigation with multiple methods revealed no evidence of natural SARS-CoV-2 infection in US cattle	Santhamani Ramasamy, Meysoon Quraishi, Swastidipa Mukherjee, Sonalika Mahajan, Lindsey LaBella, Shubhada Chothe, Padmaja Jakka, Abhinay Gontu, Sougat Misra, Meera Surendran-Nair, Ruth H. Nissly, Suresh V. Kuchipudi
	P157	Petry	Blood transcriptomic profile of North American Elk challenged with SARS-CoV-2	Bruna Petry, Ellie J Putz, Kaitlyn M Sarlo Davila, Alexandra C Buckley, Eric D Cassmann, Steven C Olsen, Paola M Boggiatto, Mitchell V Palmer
	P158	Kim	Activity of protease inhibitors against bat coronaviruses of pandemic potential	Camila Amrein Almira, David George, Alexandria Zabiegala, William Groutas, Kyeong-Ok Chang, Yunjeong Kim
	P159	Lockwood	Leptospiral shedding and seroprevalence in shelter dogs: a repeat cross-sectional/pseudo-longitudinal study	R. Lockwood, A. Cruz, M. Gutierrez, H. Green, C. LeRoy, T. Pulliam, J. Banach, L. Wisnieski, M. Gemechu, D. Patnayak, H. Naikare, C. Jones, J. Morgan, A. Verma
	P160	Ferreira	SARS-CoV-2 surveillance reveals broad exposure in free-ranging white-tailed deer with Delta variants in Texas	F.C. Ferreira, C. Rodriguez, W. Tang, R. Almeida, S. Sittenauer, A. Alamia, T. Hensley, A. Roy, S. Hamer, G. Hamer
	P161	Evans	One health surveillance for carbapenem-resistant Enterobacterales	Madison Evans, Madison Harr, Helen Johnston, Christopher Czaja, Ingrid Hewitson, Karlie Hoetzer, Jennifer Driscoll, Joshua Daniels, Elaine Scallan Walter
PARASITOLOGY	P162	Flaherty	Parasite surveillance in pigs with access to outdoor non-concrete areas across Ohio and Indiana farms	Kara E. Flaherty, Abby K. Waldrop, Andreia G. Arruda, Antoinette E. Marsh, Talita P. Resende
	P163	Petersson	Anti-parasitic efficacy of Bacillus thuringiensis CryH18 and Cry14Ab in vivo against <i>Haemonchus contortus</i> in lambs	Elizabeth Kass, Kelly Flanagan, Nicholas Cazeault, Hanchen Li, Florentina Rus, Qian Ding, Ernesto Soto, Yasushi Kageyama, Akihito Kawahara, Austin Draper, Sridhar Vakalapudi, Martin K. Nielsen, Gary R. Ostroff, Raffi V. Aroian, Katherine H. Petersson
	P164	Jesudoss Chelladurai	Temporal changes in the GI trichostrongyle communities of North American bison using deep amplicon sequencing	Jeba R.J. Jesudoss Chelladurai, Theresa A. Quintana, Jameson Brennan, Jeff M. Martin
	P165	Dou	Molecular understanding of the role of cathepsin L-like proteases in the pathogenesis of <i>Histomonas meleagridis</i>	Alessandro J. Rocchi, Aaron Forga, Kasey Matusik, Billy M. Hargis, Danielle Graham, Zhicheng Dou

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	P167	Iduu	Mutation in Wzz(fepE) linked to altered O-Antigen biosynthesis and attenuated virulence in rough <i>Salmonella</i> Infantis variant	N.V. Iduu, S. Kitchens, S. Price, C. Wang
	P168	Xiaoli	Molecular clock analysis of a persistent strain of <i>Salmonella</i> Hadar (REPTDK01) linked to backyard poultry and commercial poultry	Lingzi Xiaoli, G. Sean Stapleton, Zachary Ellison, Kaitlin Tagg, Hattie Webb, Taylor Griswold, Lee Katz, Katharine Benedict, Jessica Chen
	P169	Fakhr	Detection of <i>Salmonella</i> in chicken rinsate as early as six hours of enrichment using ONT flongle sequencing	Anand B. Karki, Elise Delaporte, Hailey Hall, Suhani Sharma, Maya Sous, Mohamed K. Fakhr
	P170	Kenney	Genotypic and phenotypic antimicrobial resistance in cattle-associated <i>Salmonella</i> Dublin	Sophia Kenney, Kelli Maddock, Dayna Harhay, Erika Ganda
	P171	Kabir	Genomic characterization of <i>Salmonella</i> Mbandaka carrying the colistin resistance gene mcr-9 in horses	Ajan Kabir, Erdal Erol, Yosra A. Helmy
	P172	Hunt	Examining the differentiation and clustering of <i>Salmonella enterica</i> serovars based on relatedness of whole genome sequences	Brennen Hunt, Enrique Doster, Keith E. Belk, Brandy A. Burgess, Robert Valeris-Chacin, Cory A. Wolfe, Lee Pinnell, Paul S. Morley
	P173	Bentum	Genomic comparison of <i>Salmonella</i> Typhimurium and <i>Salmonella</i> Dublin isolates from bovine sources in the U.S.	Kingsley Emmanuel Bentum, Emmanuel Kuufire, Rejoice Nyarku, Viona Osei, Temesgen Samuel, Woubit Abebe
	P174	Sridhar	Prevalence of <i>Salmonella enterica</i> in beef-on-dairy cattle: Investigating management factors in calves and growers	H.B. Sridhar, R.G. Amachawadi, S.N. Dasari, H. Wang, T. Mahmood, H. Salih, H. Alneaemy, P.A. Lancaster, A.J. Tarpoff, P.R. Broadway, K.E. Hales, T. Barnhardt, M.E. Theurer, C.A. Cull, T.G. Nagaraja
TICK-BORNE DISEASES	P175	Danelyan	Crimean-Congo hemorrhagic fever seropositive cases among livestock in the Tavush Region of Armenia	Armen M. Danelyan, Pertsh G. Tumanyan, Ashkhen A. Hovhannisyan
	P176	Koku	Inhibiting <i>Anaplasma marginale</i> adhesion: Exploring Msp1a and Msp1b as potential targets for preventing bovine anaplasmosis	Roberta Koku, Susan M Noh
	P177	Gulbani	Vector borne diseases surveillance in Georgia	Ana Gulbani, Marina Donduashvili, Vasil Basiladze, Tengiz Chaligava
	P178	Bastos	Evaluation of the use of sub-immunodominant RAP-1 family antigens of <i>Babesia bovis</i> as subunit vaccine components	Manuel J. Rojas, Reginaldo G. Bastos, Jinna Navas, Heba F. Alzan, Jacob M. Laughery, Paul A. Lacy, Massaro W. Ueti, Carlos E. Suarez,
	P179	Gonzalez	Pathogen sharing in a diverse tick community found on wild birds and bird workers in South Texas (USA)	Julia Gonzalez, Mark Conway, Sarah A. Hamer
	P180	Chance	Surveillance for <i>Theileria orientalis</i> and the invasive tick <i>Haemaphysalis longicornis</i> in three Missouri beef herds	Rosalie Ierardi, Savannah Chance, Celeste Morris, Jacqueline Nunnelley, Solomon Odemuyiwa, Angela Royal, Loren Schultz, Zhenyu Shen, Jordyn Young, Ram Raghavan,
	P181	Brayton	<i>Anaplasma marginale</i> vaccine development	Kelly A. Brayton, Nicola E. Collins, Massaro W. Ueti, Jason M. Park

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	P183	Jesudhasan	Electron beam (eBeam)-killed multivalent vaccines to control <i>Clostridium perfringens</i> and <i>Mycoplasma gallisepticum</i> in chickens	Palmy Jesudhasan, Annie Donoghue, Komala Arsi, Jeff Evans, Ali Nazmi, Suresh, D. Pillai, Joseph L. Purswell, Anna Assumpcao
	P184	Geary	Rationally designed <i>Mycoplasma gallisepticum</i> vaccine using a recombinant subunit approach.	Jeremy Miller, Rosemary Ozyck, Patrick Pagano, Esmeralda Hernandez, Megan Davis, Anton Karam, Jessica Malek, Arlind Mara, Edan Tulman, Steven Szczepanek, Steven Geary
	P185	Mwangi	Broadly protective bovine parainfluenza 3 virus and bovine viral diarrhea virus vaccine	Waithaka Mwangi, Huldah Sang, Tae Kim, Rakshith Kumar, Jayden McCall, Brandon Plattner, Katherine Bauer
	P186	Suresh	Mucosal adjuvants potentiate the efficacy of mannose conjugated chitosan nanoparticle-based oral <i>Salmonella</i> subunit vaccine in broilers	Raksha Suresh, Shekoni O Comfort, Sara Dolatyabi, Jennifer Schrock, Mithilesh Singh, Renukaradhya J Gourapura
	P187	Inzana	An in vivo-simulated vaccine to prevent bovine respiratory and other diseases due to <i>Histophilus somni</i>	Thomas Inzana, Dianjun Cao, Amelia Woolums, Theresa Merrilee, Bindu Subhadra, Emily Gareri, Kelsey Harvey
	P188	Gamage	MVA-vectored vaccines expressing equine rotavirus A VP7 elicit antibody responses with limited neutralization	Chandika Gamage, Diane Cryderman, Come J. Thieulent, Wellesley Dittmar, Udeni B. R. Balasuriya, M. Aldana Vissani, Viviana Parreño, Maria E. Barrandeguy, Mariano Carossino,
	P189	Spatz	Generation of avian paramyxovirus type 1 (AMPV-1) recombinants that protect against Marek's disease	Stephen Spatz, Lei He, Qingzhong Yu
	P190	Cardenas	Safe and broadly cross-protective live attenuated influenza virus vaccines for use in swine	Vanessa Mendieta-Reis, Matias Cardenas, Sasha Compton, Tavis Anderson, Amy Baker, Daniel Perez, Daniela Rajao
	P191	Dolatyabi	Probiotic Lactobacilli enhances cytokine production in broilers and acts as an adjuvant to oral <i>Salmonella</i> vaccine	Sara Dolatyabi, khaled Abdelaziz, Comfort Olaitan Shekoni, Raksha Suresh, Jennifer Schrock, Ronna Wood, Sudhir Yadav, Megan Tenney, James Sanko, Tonima Rahman, Renukaradhya J. Gourapura
	P192	Crisci	A pig model to investigate maternal passive immunity after influenza vaccine immunization	John Byrne, Diego Leal, Danielle Meritet, Michael Rahe, Tatiane TN Watanabe, Juliana B Ferreira, Christopher Beverly, Susan Johnson, Sean N Tucker, Stephanie Langel, Elisa Crisci
	P193	Kariyawasam	Developing a vaccine against spotty liver disease caused by <i>Campylobacter hepaticus</i> in commercial layer chickens	Subhashinie Kariyawasam, Chaitanya Gottapu, Lekshmi Edison, Thomas Denagamage, Gary Butcher
	P194	Clark	The International Veterinary Vaccinology Network - working together to develop vaccines for livestock diseases	Madeleine Clark, Simon Graham, Timothy Connelley
	P195	Ramamoorthy	Prevention of Porcine Circovirus Type 3 (PCV3) with directed suicidal vaccines	Wenjuan Fang, Md-Tariqul Islam, Augustina Arjarquah, Sheela Ramamoorthy
	P196	Masic	Use of reverse genetics system to develop first inactivated vaccine for cattle against HPAI H5N1 B3.13	Aleksandar Masic, Suman Mahan, Chelsea Waite, Evin Hildebrandt, David Asper, Mahesh Kumar
P197	Chowdhury	A Bovine Herpesvirus-vectored subunit Rift Valley Fever Virus vaccine is protective against RVFV in sheep	Shafiqul Chowdhury, Selvaraj Pavulraj, Rhett Stout, Ali Mazloun	

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	P200	Ostler	Characterizing de novo virus gene expression in cells transfected with BoHV-1 genomic DNA	Jeffery Ostler
	P201	Holthausen	Deletion viral genome diversity amongst Bovine Viral Diarrhea Virus (BVDV) 1a and 1b strains	David Holthausen, Darrell Bayles, John Neill, Rohana Dassanayake, Shollie Falkenberg, Harish Menghwar, Eduardo Casas
	P202	Baker	Investigating the effects of intramammary inoculation of bovine-origin H5N1 influenza in lactating ferrets	P.H. Baker, M.C. Moyer, C. Lee, S.P. Kenney, S.N. Langel
	P203	Kapczynski	Global phylogenetics of highly pathogenic avian influenza virus H5N1 - patterns of transmission between species and geography	Darrell Kapczynski, Samantha Lycett, Lu Lu, Will Harvey, Paul Digard
	P204	Zabiegala	Entry of SARS-CoV-2 Omicron variants into cells expressing human or animal ACE2 to assess host susceptibilities	Alexandria Zabiegala, Yunjeong Kim, Kyeong-Ok Chang
	P205	Kwon	Disruption of influenza A virus transmission in gene-edited pigs	Taeyong Kwon, Igor Morozov, Chester D. McDowell, Eu Lim Lyoo, Bianca L. Artiaga, Yonghai Li, Patricia Assato, Stephen N. White, Benjamin P. Beaton, Gustavo Delhon, Natasha N. Gaudreault, Juergen A. Richt
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	P207	Reddy	Role of Marek's disease virus encoded US3 serine/threonine protein kinase in replication and pathogenesis	Sanjay Reddy, Yifei Liao, James Cai, Blanca Lupiani
	P208	Morris	Seroprevalence of Cache Valley Virus in sheep population in the south-central Appalachian region	Preston H. Morris, Lauren Wisnieski, Samantha Smith, Kathryn Hall, Victoria J. Morris,
	P209	Nooruzzamann	Mechanisms underlying ACE2 based species susceptibility to SARS-CoV-2	Jessie Lee Cunningham, Mohammed Nooruzzaman, Diego G. Diel
	P210	Beddingfield	Bovine Respiratory Syncytial Virus infection challenge using different doses to study the range of clinical disease	Grace Beddingfield, Erin Blanchard, Cassandra Barber, Kenzie McAtee, Santiago Cornjeo Tonnelier, Merrilee Thoresen, Carrie Vance, Amelia Woolums, Florencia Meyer
	P211	Diel	Comparative transcriptomics during persistence infection of Senecavirus A	Salman Butt, Nicholas Vazquez, Maureen H.V. Fernandes, Diego G. Diel