



# 8<sup>th</sup> European Veterinary Immunology Workshop

4<sup>th</sup> – 6<sup>th</sup> September | Dublin, Ireland

## Poster Listing

## Theme: Comparative Immunology, Immunogenetics and Genomics

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### Canine *in vitro*-generated tumor-conditioned macrophages display an M2-skewed phenotype

Mikael Kerboeuf<sup>1</sup>, Anita Haug Haaland<sup>2</sup>, Lars Moe<sup>1</sup>, David Argyle<sup>3</sup>, Seda Ozaydin<sup>3</sup>, Maciej Parys<sup>3</sup>, Preben Boysen<sup>1</sup>

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### Use of flow cytometry in diagnosis of lymphoproliferative diseases in guinea pigs

Edita Jeklova<sup>1</sup>, Hana Stepanova<sup>1</sup>, Lenka Levá<sup>1</sup>, Vladimír Jekl<sup>2,3</sup>, Miso Skoric<sup>3</sup>, Jan Matiasovic<sup>1</sup>

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### Deciphering genetic factors of survival during PRRSV outbreaks

Maria Ballester<sup>1</sup>, Teodor Jové-Juncà<sup>1</sup>, Carles Hernández-Banqué<sup>1</sup>, Olga González-Rodríguez<sup>1</sup>, Lillianne Ganges<sup>2</sup>, Sofía Gol<sup>3</sup>, Marta Díaz<sup>3</sup>, Romi N. Pena<sup>4</sup>, Raquel Quintanilla<sup>1</sup>, Joaquim Tarrés<sup>1</sup>

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**Utilising cross-reactive transcription factor specific antibodies to extend the phenotyping of B cells in cattle**

Hayley Brown, Selma Schmidt, Abigail Hay, Michelle Thom, Theo Tsoleridis, Marie Di Placido, Wilhelm Gerner

The Pirbright Institute, Surrey, United Kingdom

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**Novel long non-coding RNAs in ileocecal valve samples from Holstein cattle naturally infected with *Mycobacterium avium* subsp. *paratuberculosis***

Marta Alonso-Hearn<sup>1</sup>, Gerard Badia-Bringué<sup>1</sup>, Victoria Asselstine<sup>2</sup>, Rosa Casais<sup>3</sup>, Ángela Cánovas<sup>2</sup>

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**Unveiling Intestinal Cell Diversity: A Comprehensive Atlas of Chicken Enteroids and Breed-Specific Variances in Broilers and Layers**

Jianxun Sun<sup>1</sup>, Dominika Borowska<sup>1</sup>, Daniel Macqueen<sup>1</sup>, Lonneke Vervelde<sup>2</sup>

<sup>1</sup>The Roslin Institute, Edinburgh, United Kingdom. <sup>2</sup>Royal GD Animal Health, Deventer, Netherlands

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**Leukogram of common bent-wing bats (*miniopterus schreibersii*) infested with hemosporidian parasites**

Kristina Spariosu<sup>1</sup>, Rados Knezevic<sup>1</sup>, Andriana Haramina<sup>1</sup>, Bojana Simic<sup>1</sup>, Sara Arsenijevic<sup>2</sup>, Milica Kovacevic Filipovic<sup>1</sup>, Jelena Burazerovic<sup>2</sup>

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**Comparative analysis of Equine MHC haplotypes in Austrian, German and Arabian horses using polymorphic microsatellites**

Abdullah Saleh A. Alkhamees, Jessika-M. V. Cavalleri, Sabine E. Hammer

University of Veterinary Medicine Vienna, Vienna, Austria

## Theme: Future Animal and One Health

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### **Peripheral Blood Immunophenotyping in 50 dogs: comparison between healthy dogs and dogs with mast cell tumors**

C Aluai-Cunha<sup>1,2</sup>, A Correia<sup>2,3</sup>, C Serra<sup>4,5</sup>, A Santos<sup>1,6</sup>

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### **Simultaneous flow cytometric assay for phagocytosis, viability, and ROS production in leukocytes of rainbow trout (*Oncorhynchus mykiss*)**

Maria Carmela Scatà, Teresina De Iorio, Francesco Grandoni, Giovanna De Matteis, Nicolò Tonachella, Arianna Martini, Fabrizio Capoccioni

CREA, Monterotondo, Italy

## Theme: Immune Models and Emerging Technologies

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### **Epitogen: Transformative Platform For Veterinary Diagnostics and Vaccines Development**

Ayham Alnabulsi

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### **Search for biomarkers replacing the rosette test in an immunosuppressed guinea pig model**

Hana Stepanova<sup>1</sup>, Edita Jeklova<sup>1</sup>, Lenka Leva<sup>1</sup>, Radek Machat<sup>1</sup>, Juraj Vronka<sup>2</sup>, Jan Matiasovic<sup>1</sup>

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### **In vitro lymph node cultures to monitor adaptive immune responses in pigs**

Nira Lauterkorn<sup>1</sup>, Samruddhi Deosthali<sup>1,2</sup>, Selma Schmidt<sup>1</sup>, Veronica Carr<sup>1</sup>, Elma Tchilian<sup>1</sup>, Wilhelm Gerner<sup>1</sup>

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### **LPS induces sphingolipids alteration in cow whole blood as observed after calving**

Elodie Lassalette<sup>1,2</sup>, Alix Pierron<sup>1,2</sup>, Blandine Gausseres<sup>1,2</sup>, Christian Tasca<sup>1,2</sup>, Gilles Foucras<sup>3,2</sup>, Philippe Guerre<sup>3,2</sup>

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**Caninization of rabbit antibody by CDRx platform**

RYM Ma, C Murray

Fusion Antibodies plc, Belfast, United Kingdom

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**Characterisation of immune responses in porcine precision-cut lymph node slices using TLR agonists and porcine circovirus 2**

Samruddhi Deosthali<sup>1,2</sup>, Wilhelm Gerner<sup>2</sup>, Dirk Werling<sup>1</sup>

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## Theme: Infection and Immunity

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### **Contribution of red blood cells to the antiviral immune response against Piscine orthoreovirus; the causative agent of heart and skeletal muscle inflammation in Atlantic salmon**

Thomais Tsoulia<sup>1,2</sup>, Arvind Sundaram<sup>1,3</sup>, Øystein Wessel<sup>4</sup>, Marit M Amundsen<sup>1</sup>, Stine Braaen<sup>4</sup>, Jorunn B Jorgensen<sup>2</sup>, Espen Rimstad<sup>4</sup>, Maria Dahle<sup>1,2</sup>

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### **IgG heavy chain glycosylation in Holstein-Friesian calves aged from one to four months**

R Knežević<sup>1</sup>, D Kosanović<sup>2</sup>, B Ristić<sup>2</sup>, M Vukadinović<sup>2</sup>, M Fajndović<sup>3</sup>, N Fratrić<sup>1</sup>, M Kovačević Filipović<sup>1</sup>, D Gvozdić<sup>1</sup>, V Ilić<sup>2</sup>

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### **In vitro characterisation of a genotype I African swine fever virus with genomic deletion isolated from Sardinian wild boar**

Giulia Franzoni<sup>1</sup>, Lorena Mura<sup>1</sup>, Tania Carta<sup>1,2</sup>, Susanna Zinellu<sup>1</sup>, Silvia Dei Giudici<sup>1</sup>, Annalisa Oggiano<sup>1</sup>

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**Vaccination with a *Lawsonia intracellularis* subunit vaccine mitigated some disease parameters but failed to affect shedding**

Kezia Fourie<sup>1,2</sup>, Alison Jeffery<sup>1,3</sup>, Dylan Chand<sup>1</sup>, Pooja Choudhary<sup>1</sup>, Haoming Liu<sup>1,2</sup>, Donaldson Magloire<sup>1,2</sup>, Zahed Khatooni<sup>1</sup>, Emil Berberov<sup>1</sup>, Heather Wilson<sup>1,2</sup>

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Swine, Vaccine, Immunity

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**An avidity ELISA for bovine antibodies against *Salmonella* spp**

Marian Aalberts, Marjolein Sanders, Maarten Weber

Royal GD, Deventer, Netherlands

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**Conventional and regulatory bovine neutrophil respond differently to *Mycobacterium bovis* clinical strains**

M SAINT-VANNE, F CARRERAS, E DOZ-DEBLAUWE, P GERMON, N WINTER, A REMOT

INRAE, Nouzilly, France

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**Shaping host-pathogen immune responses with *M. bovis* BCG - from extracellular vesicles to trained immunity**

Chelsea Davis, Hafiz Hassan, Christine van der Grift, Akila Pathirannehalage, Oktawia Polak, Gabriella Sinclair, Bernardo Villarreal-Ramos, Glyn Hewinson, Amanda Gibson

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**Cellular responses in British domestic pigs that survive infection with the moderately virulent African swine fever virus strain Estonia2014**

Priscilla YL Tng<sup>1</sup>, Laila Al-Adwani<sup>1</sup>, Sandra Blome<sup>2</sup>, Christopher L Netherton<sup>1</sup>

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**The loss-of-function of SOCS2 increases the inflammatory response to *Staphylococcus aureus* infection**

L. Guzylack-piriou, B. Gausseres, C. Tasca, C. Hassel, G. Tabouret, G. Foucras

INRAE, Toulouse, France

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**A vaccine for treatment or prevention of verotoxin-producing *Escherichia coli* (VTEC) infection**

Rhys Bruce, Yueran Hou, Conor Quinn, Siobhán McClean

University College Dublin, Dublin, Ireland

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**Live attenuated and E2-based subunit vaccines against classical swine fever induce different dendritic cell and T cell responses, confirming effective protection by different mechanisms**

Elliot Steedman<sup>1,2</sup>, Jane Edwards<sup>3,1</sup>, Stephen McCleary<sup>1</sup>, Rebecca Strong<sup>1</sup>, Yusmel Sordo-Puga<sup>4</sup>, María Pilar Rodríguez-Moltó<sup>4</sup>, Helen Crooke<sup>1</sup>, [Falko Steinbach](#)<sup>1,2</sup>

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### **Impact of swine influenza virus on porcine reproductive and respiratory syndrome virus infection dynamics in alveolar macrophages**

J. Grevelinger<sup>1,2</sup>, O. Bourry<sup>2</sup>, A. Perrin<sup>1</sup>, C. Hervet<sup>1</sup>, L. Dubreil<sup>3</sup>, F. Meurens<sup>1,4</sup>, G. Simon<sup>2</sup>, N. Bertho<sup>1</sup>

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### **Microbiome-immune interactions in the bovine udder analyzed through a full production cycle**

Ian Woolsey, Anne Bakke Fylling, Vinicius da Silva Duarte, Alicja Monika Krysmann, Fiona Valerie Franklin-Alming, Davide Porcellato, Preben Boysen

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### **Exploring age related effects on the immune response of resistant Canaria Hair Breed lambs to *Teladorsagia circumcincta***

Cynthia Machin<sup>1</sup>, Tara Perez-Hernandez<sup>1</sup>, Julia N. Hernandez<sup>1</sup>, Yania Paz-Sanchez<sup>1</sup>, Zuleima Suarez-Gonzalez<sup>1</sup>, Yolanda Corripio-Miyar<sup>2</sup>, Harry W. Wright<sup>3</sup>, Tom N. McNeilly<sup>2</sup>, Alasdair J. Nisbet<sup>2</sup>, Stewart T.G. Burgess<sup>2</sup>, Jacqueline B. Matthews<sup>4</sup>, Jorge F. Gonzalez<sup>1</sup>

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**Inflammation associated biomarkers in serum as prognostic marker for disease progression in calves infected with bovine Respiratory Syncytial Virus**

Yannick Aarts<sup>1</sup>, Daphne van Haarlem<sup>2</sup>, Rene Achterberg<sup>3</sup>, Judith Bonsing<sup>3</sup>, Ali Youssef<sup>1</sup>, Norbert Stockhofe<sup>3</sup>, Christine Jansen<sup>2</sup>, [Rineke de Jong](#)<sup>3</sup>

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**Leukogram patterns and monocyte subtypes in blood collected from laying hens during erysipelas outbreaks**

[Eva Wattrang](#), Emma Östlund, Ellinor Jansson, Karin Lindgren, Helena Eriksson

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**Domain orientation in CLR-Fc fusion proteins affects ligand binding strength**

Miriam Hospodarz<sup>1</sup>, Swantje Fischer<sup>1</sup>, Bernd Lepenies<sup>1</sup>, [Guillaume Goyette-Desjardins](#)<sup>1,2</sup>

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**Dissecting the neutralising antibody response to porcine reproductive and respiratory syndrome virus to identify novel vaccine targets**

Jane C. Edwards<sup>1</sup>, Rory Fortes De Brito<sup>1</sup>, Jack W. P. Hayes<sup>1</sup>, Kostas Paschos<sup>2</sup>, Krunal Polra<sup>2</sup>, Ana Stoian<sup>3</sup>, Paula Curto<sup>3</sup>, Kristel Ramirez Valdez<sup>1</sup>, Marie di Placido<sup>1</sup>, Easha Vigneswaran<sup>1</sup>, Sana Abdul Majeed<sup>1</sup>, Lorenzo J Fraile<sup>3</sup>, Jonathan F Lovell<sup>4</sup>, Robin Shattock<sup>2</sup>, Raymond J Owens<sup>5,6</sup>, Simon P Graham<sup>1</sup>

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**Intradermal electroporation of naked mRNA vaccine elicits an antigen-specific protective immune response in animal models**

Sang-Myeong Lee<sup>1</sup>, So-Hyun Park<sup>1</sup>, Jin Hao<sup>1</sup>, Mina Kim<sup>2</sup>, Yeonhwa Kim<sup>1</sup>, Min-Seok Kim<sup>1</sup>, Jun-Yeong Lee<sup>1</sup>, Yong Jin Lee<sup>3</sup>, Eun Young Oh<sup>1</sup>

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**Effect of Single and Simultaneous Vaccination of rHVT-F(ND) and rHVT-H5(AI) on Immune Responses and Protection upon Challenge with Avian Orthoavulavirus-1**

Karen Martiny<sup>1</sup>, Yuan Liang<sup>1</sup>, Jens Peter Christensen<sup>1</sup>, Charlotte Kristiane Hjulsager<sup>2</sup>, Lars Erik Larsen<sup>1</sup>

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### **Comparative Immune Competence Analysis of Three Local Chicken Breeds**

L. Freier<sup>1</sup>, I. Tiemann<sup>2</sup>, J. Stuff<sup>2</sup>, S. Weigend<sup>3</sup>, M. Kuryshko<sup>4</sup>, D. Palme<sup>4</sup>, E. M. Abdelwhab<sup>4</sup>, U. Blohm<sup>1</sup>

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### **Development of a Systems Immunology Approach to Explore Factors Influencing Vaccination Response in Belgian Blue Cattle**

Célia Darimont<sup>1</sup>, Shifang Li<sup>1</sup>, Françoise Myster<sup>1</sup>, Justine Javaux<sup>1</sup>, Malyvanh Pathammavong<sup>1</sup>, Lijing Tang<sup>1</sup>, Jose-Luis Gualdrón<sup>2</sup>, Philippe Crepin<sup>2</sup>, Tom Druet<sup>1</sup>, Michel Georges<sup>1</sup>, Patrick Mayeres<sup>2</sup>, Carole Charlier<sup>1</sup>, Laurent Gillet<sup>1</sup>

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### **Oxidative burst responsiveness as immune and stress parameter - comparison of chemiluminescence measurements of neutrophils' ROS production in different mammalian species**

Laura Sadewater<sup>1,2</sup>, Marta Bonilla Gonzalez<sup>1,2</sup>, Nicole de Buhr<sup>2,1</sup>, Helena de La Torre Batista de Oliveira<sup>3</sup>, Sabine Kästner<sup>4</sup>, Marita Meurer<sup>1,2</sup>, Rebecca Spriewald<sup>5</sup>, Doris Höltig<sup>6</sup>, Katrin Wirz<sup>1</sup>, Lia Kristin Meiseberg<sup>2,7</sup>, Bernhard Ohnesorge<sup>7</sup>, Maren von Köckritz-Blickwede<sup>1,2</sup>

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Oxidative burst - Neutrophil Granulocytes - Chemiluminescence

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**Existing acute *Ascaris* infection suppresses immune response against *Salmonella* infection in an *Ascaris-Salmonella* co-infected porcine model**

Z.D. Musimbi, A. Midha, R. Hayani, R. Mugo, L. Oser, S. Hartmann

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**The impact of infection with the tissue-invasive intestinal nematode *Ascaris suum* on hepatic antiviral immunity**

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**Potential immunological biomarker for detection of *Mycobacterium bovis* infection in water buffalo: preliminary results**

Giulia Franzoni<sup>1</sup>, Anna Donniacuo<sup>2</sup>, Piera Mazzone<sup>3</sup>, Giovanna De Matteis<sup>4</sup>, Francesco Grandoni<sup>4</sup>, Lorena Schiavo<sup>2</sup>, Susanna Zinellu<sup>1</sup>, Silvia Dei Giudici<sup>1</sup>, Esterina De Carlo<sup>2</sup>, Giorgio Galiero<sup>2</sup>, Alessandra Martucciello<sup>2</sup>

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**Activation profile of bovine T cells in healthy, *Mycobacterium avium subsp. paratuberculosis* naturally infected and Paratuberculosis affected cattle after Avium and Johnin PPDs stimulation**

Martina Pellegrini<sup>1</sup>, Antonella Di Paolo<sup>1</sup>, Anna Fratto<sup>1</sup>, Laura Madeo<sup>1</sup>, Martina Torricelli<sup>1</sup>, Linda Petrucci<sup>1,2</sup>, Monica Cagiola<sup>1</sup>, Alessandra Martucciello<sup>3</sup>, Piera Mazzone<sup>1,4</sup>

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**CD20 as new marker to define porcine B-cell subsets**

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**PD-1 as marker for porcine follicular T-helper cells**

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**Vitamin D concentrations in cattle on farms with recurrent bovine tuberculosis and influence on immune gene and protein expression in response to tuberculin**

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## Theme: Mucosal Immunology and Vaccination

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### **Equine intestinal mucosal ‘kill zone’: characterization of the mucosal barrier of the small and large intestines and its reflection in feces**

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### **Evaluation of *Saccharomyces cerevisiae* as a platform for vaccination against mastitis**

Célya Danzelle, Patricia Cunha, Pablo Gomes Noletto, Florence B Gilbert, Kamila Reis Santos, Pierre Germon, Pascal Rainard, Rodrigo Prado Martins

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### **Bronchoalveolar T helper cell analysis to characterize equine asthma endotypes**

CL Schnabel<sup>1</sup>, M Karagulyan<sup>1</sup>, MC Jentsch<sup>1</sup>, A Keilhau<sup>1</sup>, AE Gressler<sup>2</sup>, B Wagner<sup>3</sup>, KL Lohmann<sup>4</sup>

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### **Vaccination against paratuberculosis triggers trained immunity mechanisms that may induce protection against other pathogens**

Maitane Mugica, Elena Molina, Maddi Oyanguren, Mariví Geijo, Ainara Badiola, Joseba M Garrido, [Natalia Elguezabal](#)

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### ***Aspergillus fumigatus* in severe equine asthma – Antigen identification and serology to elucidate etiology?**

[MC Jentsch](#)<sup>1</sup>, A Keilhaue<sup>1</sup>, W Schrödl<sup>2</sup>, D Volke<sup>3</sup>, R Hoffmann<sup>3</sup>, S Kaiser-Thom<sup>4,5</sup>, V Gerber<sup>4</sup>, C Rhyner<sup>6,7</sup>, B Wagner<sup>8</sup>, S Lübke<sup>1</sup>, M Karagulyan<sup>1</sup>, C Arnold<sup>9</sup>, KL Lohmann<sup>9</sup>, CL Schnabel<sup>1</sup>

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**Increased *Aspergillus fumigatus*-binding IgG1 and IgA in bronchoalveolar lavage fluid in equine asthma – Not simply allergic?**

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**Allergen specific immunotherapy for equine insect bite hypersensitivity, a pilot study**

Julia Teresa Celis Moreno, Anouschka Middelkoop, Morindy Lambregts, Laura Gahler, Edwin Tijhaar

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**A new Montanide™ adjuvanted autogenous vaccine against bovine papillomatosis**

Giulio Severi, Silvia Cardaioli, Massimo Bugatti, Martina Pellegrini, Claudia Colabella, Giulia Vita, Chiara Ovidi, Antonella Di Paolo, Antonio De Giuseppe, Monica Cagiola

IZSUM "Togo Rosati", Perugia, Italy

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**Neonatal piglets can develop a protective immune response after vaccination with a *Streptococcus suis* bacterin but not with subunit-adjuvanted vaccines**

S Lopez-Serrano<sup>1,2</sup>, S Vreman<sup>3</sup>, J.M. Wells<sup>4</sup>, D Christensen<sup>5</sup>, T Ebensen<sup>6</sup>, M Vrieling<sup>3</sup>, J Segales<sup>1,7</sup>, V Aragon<sup>1,8</sup>, N Stockhofe-Zurwieden<sup>3</sup>

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**Equine sarcoidosis: a new vaccine for a novel vaccination approach - preliminary data**

Giulio Severi, Massimo Bugatti, Silvia Cardaioli, Martina Pellegrini, Claudia Colabella, Giulia Vita, Chiara Ovidi, Antonella Di Paolo, Antonio De Giuseppe, Monica Cagiola

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**Evaluation of MONTANIDE™ GR01, a new adjuvant for feed-based vaccines, on the immune response and protective efficacy against streptococcosis in Nile tilapia (*Oreochromis niloticus*)**

Nicolas Versillé<sup>1</sup>, Sarah Kharief<sup>1</sup>, Juliette Ben Arous<sup>1</sup>, Eakapol Wangkahart<sup>2</sup>

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**Potential of IgG from spray dried porcine plasma (SDPP) to bind pathogens associated with canine enteropathies**

Ilva Noa Stellingwerf<sup>1</sup>, Coen Govers<sup>1</sup>, Ronald Jan Corbee<sup>2</sup>, Guido Bosch<sup>1</sup>, Wouter Hendriks<sup>1,2</sup>, Joost van Neerven<sup>1</sup>

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**Protective effect against bovine neosporosis conferred by mucosal and subcutaneous immunisation with TLR agonists-adjuvanted *Neospora caninum* membrane antigens**

L Pires<sup>1,2</sup>, E Pérez-Antón<sup>3</sup>, C Mendonça<sup>2,4</sup>, M Duarte-Araújo<sup>2,5</sup>, J Pimenta<sup>6,7</sup>, JP Barbas<sup>6,7</sup>, A Sequeira<sup>6</sup>, O Moreira<sup>6</sup>, C Cardoso<sup>1,2</sup>, M Castro<sup>1</sup>, P Almeida<sup>1,2</sup>, M Fragata-Miranda<sup>1</sup>, L Teixeira<sup>1,2</sup>, A Rocha<sup>2,4</sup>, M Vilanova<sup>1,2</sup>, A Correia<sup>1,2</sup>

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**Multi-antigenic vaccine strategies against *Rhipicephalus microplus* ticks**

Alexsander Moraes<sup>1</sup>, Andressa Fisch<sup>2,1</sup>, Natalia Serra Mendes<sup>1</sup>, Laysla de Campos Toledo Leite<sup>1</sup>, Pedro Henrique Aragão Barros<sup>3</sup>, Mayra Larissa Brunato<sup>1</sup>, Cristiane Maria Milanezi<sup>1</sup>, Luiz Gustavo Araujo Gardinassi<sup>1</sup>, Marcelo de Macedo Brigido<sup>3</sup>, Beatriz Rossetti Ferreira<sup>1</sup>

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**Porcine bronchoalveolar lavage contains a unique distribution of immune cell phenotypes**

Selma Schmidt, Basudev Paudyal, Sonia Villanueva-Hernández, Elma Tchilian, Wilhelm Gerner

The Pirbright Institute, Woking, United Kingdom

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**The combined effect of genetics, gut microbiota, and environment on immunity in laying hens**

Fany Blanc<sup>1</sup>, Alexandre Lecoeur<sup>1</sup>, David Gourichon<sup>2</sup>, Nathalie Meme<sup>2</sup>, Thierry Burlot<sup>3</sup>, Fanny Calenge<sup>1</sup>, Marie-Hélène Pinard van der Laan<sup>1</sup>

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**Immunization of neonate piglets**

Gitte Erbs<sup>1</sup>, Jeanne Toft Jakobsen<sup>1</sup>, Juan Bernardo Odasso<sup>1</sup>, Mick Bailey<sup>2</sup>, Gabriel Kristian Pedersen<sup>1</sup>, Gregers Jungersen<sup>1</sup>

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**Immunomodulatory effects of a probiotic alone and upon vaccination against *Mycobacterium avium* subsp. *paratuberculosis***

Maddi Oyanguren<sup>1</sup>, Elena Molina<sup>1</sup>, Maitane Mugica<sup>1</sup>, Rakel Arrazuria<sup>1</sup>, Bhargavi Gunapati<sup>2</sup>, Selvakumar Subbian<sup>2</sup>, Jose Luis Lavin<sup>3</sup>, Juan Anguita<sup>4,5</sup>, [Natalia Elguezabal](#)<sup>1</sup>

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**Yeast-based delivery for oral immunisation against *Eimeria tenella* in broiler chickens**

[José Jaramillo-Ortiz](#), Francesca Soutter, Dirk Werling, Damer Blake

The Royal Veterinary College, London, United Kingdom

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**The Contribution of Chicken Dendritic Cells to Vaccine-Mediated Immunity Against Infectious Bronchitis Virus**

Samantha Sives, Emma Armstrong, Dominika Borowska, Kris Hogan, [Kate Sutton](#)

The Roslin Institute, Edinburgh, United Kingdom



## Theme: Veterinary Immunology Communication and Teaching

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### Exploring Students' Perception of Vaccination in the Post-COVID Era

A Mandić<sup>1</sup>, A Ilić Božović<sup>1</sup>, K Spariosu<sup>1</sup>, R Knežević<sup>1</sup>, K Kotlaja<sup>1</sup>, N Mirilović<sup>2</sup>, M Kovačević Filipović<sup>1</sup>

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