

Programme (as on 19 October 2023)

Thursday 16 November

Venue	Nari
09h00	Full day STAR-IDAZ MEETING () – closed event



Day 1 - Friday 17 November

VENUE	VENUE 1 – NDLOPFU	VENUE 2- INGWE/MHELEMBE		VENUE 3- NDAU/NARI
08h00	Setup of Venue	Registration for Workshop 1 opens	08h00	Setup of Venue
08h30		Workshop 1	08h30	
09h00		Pushing boundaries in veterinary immunology- A new era of NGS, with single cell sequencing and spatial transcriptomics (10X Bioinformatics)	09h00	
09h30			09h30	
10h00			10h00	
10h30		Refreshment Break (Workshop 1)	10h30	
11h00		Workshop 1 Continues	11h00	
11h30			11h30	
12h00			12h00	
12h30		Lunch (Workshop 1)	12h30	Registration for Workshop 2 opens
13h00	Novel approaches to the development of veterinary vaccines to control bacterial infections			
14h00	Registration for IVIS 2023 Opens & Poster Setup Commences	Not in use	12:30: Introduction and Aims 12.40: Importance of designing the vaccine TPP for translational research (Paul Wood, Monash University, Australia) 12.50: Outer membrane vesicles (OMVs) for bacterial vaccinology (Adam Cunningham, (BactiVac, UK) 13.00: Bacterial glycoconjugate vaccines (delivered by the panel) (Brendan Wren, LSHTM, UK) (pre-recorded) 13.10: Viral vectors for veterinary vaccinology (Michael Jarvis, The Vaccine Group, UK) (pre-recorded) 13.20: mRNA platforms for veterinary vaccinology (Helba Bredell, Afrigen, SA) 13.30: STAR-IDAZ vaccine roadmaps (Gary Entrican, University of Edinburgh, UK) 13.40: DISCONTTOOLS bacterial vaccines gaps (Johannes Charlier, Kreavet, Belgium)	
			13h50 Initial Q&A, format of breakout groups, Assembly and Discussions	
			14h10 Coffee/Networking/Opportunity for Initial Informal Feedback	
			14h30 Breakout Discussions	
			15h10 Rapporteur Summaries	
			15h40 Panel Discussion with Speakers and Chairs	
			16h10 Capture the Agreed Workshop Outcomes	
			16h30 Final Comments and Close	

17h00	Welcome and Opening (Prof. Sven Parsons, Afrivet & Dr Claire Rogel-Gaillard, INRAE)
17h15	Keynote: Avian Influenza: An African perspective (Prof. Celia Abolnik, University of Pretoria)
18h15	Keynote: What Innovative approaches and technologies would be applicable for vaccine development and production in Africa? (Prof. Baptiste Dungu, Design Biologix and University of Kinshasa)
19h30	Welcome Reception at the Safari Lodge Hotel (dresscode, smart casual)


Day 2 - Saturday 18 November

07h30 – 08h30 Registration and Arrival Coffee/Tea						
VENUE	VENUE 1 – NDLOPFU		VENUE 2- INGWE/MHELEMBE		VENUE 3- NDAU/NARI	
08h30	Session 1.1.1		Session 1.2.1		Session 1.3.1	
	INNATE IMMUNITY Chair:		IMMUNO-INFORMATICS Chair:		IMMUNOLOGY OF VIRAL DISEASES (1) Chair:	
	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title
08h30	Bettin, Leonie	(068) Contributions of porcine gamma-delta T cells to antiviral immunity: An investigation into Toll-like receptor expression and potential cytotoxic activity	Altwater-Hughes, Tess	(006) Bovine colostrum as a rich source of B-cells with an ultra-long complementarity determining region 3: Long-read sequencing of the colostrum B-cell receptor repertoire	Barone, Lucas	(225) Bovine viral diarrhoea virus (BVDV) preferentially infects arginase-producing bovine monocyte-derived macrophages.
08h48	Henriquez, Claudio	(095) Mechanisms behind extracellular trap production and release by equine neutrophils in response to different stimuli	Malgwi, Samson	(025) Reverse vaccinology approach in designing a multiepitope-based vaccine against <i>Babesia</i> from rhoptry-associated protein 1 (RAP-1) antigen	Nedumpun, Teerawut	(057) Cyclooxygenase (COX)-2 inhibitor inhibited porcine reproductive and respiratory syndrome virus (PRRSV) type 2-induced M2 macrophage polarization
09h06	Faber, Erika	(116) Virulent African horse sickness virus serotype 4 interferes with the innate immune response in horse peripheral blood mononuclear cells <i>in vitro</i>	Wattrang, Eva	(058) Single-cell RNA-seq mapping of chicken peripheral blood leukocytes	Summerfield, Artur	(072) A systems immunology approach to identify protective and detrimental innate and adaptive immune responses following ASFV infection of pigs
09h24	Wiarda, Jayne	(119) Single-cell RNA sequencing reveals CD4+ macrophages are cytotoxic, phagocytic, effector cells highly responsive to B cell-derived signals in the pig small intestine	Adeleke, Matthew A.	(162) Immuno-informatics analysis of antigens as candidate vaccines against <i>Eimeria</i> and <i>Toxoplasma</i> for chickens	Kaesler, Tobias	(107) Modified-live virus vaccination induces heterologous immunity against different type-2 PRRSV strains.

	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title
09h42	Loving, Crystal	(169) BCG induced innate training in neonatal and weaned pigs is dependent on route of administration			Di Placido, Marie	(146) Characterization of foot-and-mouth disease virus cross-serotypes reactive and neutralizing antibodies
10h00	Refreshment Break in Foyer					
10h30	Session 1.1.2		Session 1.2.2		Session 1.3.2	
	TISSUE-SPECIFIC IMMUNITY Chair:		ZOO NOSES Chair:		IMMUNOLOGY OF BACTERIAL DISEASES Chair:	
10h30	Chapuis, Ambre	(029) Characterization of bovine and ovine ileal organoids after polarity exchange.	Dorhoi, Anca	(041) Host adaptation of Lagos bat lyssavirus is driven by inhibition of type I interferon	Breser, Laura	(030) Chitosan hydrogel induces immune cell recruitment in the bovine mammary gland and increases cure rates of intramammary infections caused by <i>Staphylococcus</i> spp.
10h48	Jungersen, Gregers	(050) Induction of antigen-specific secretory IgA in small intestine of newborn piglets after parenteral immunization with retinoic acid-enhanced adjuvant	Freire, Teresa	(015) <i>Fasciola hepatica</i> infection in cattle alters the immunity induced by respiratory vaccine.	Berghaus, Londa	(156) The impact of age on vitamin D receptor expression, vitamin D metabolism and associated cytokines in ex vivo <i>Rhodococcus equi</i> infection of equine alveolar macrophages
11h06	Myslinska, Joanna	(088) Precision-cut lung slices (PCLS) as a platform to study <i>Mycoplasma hyopneumoniae</i> interactions with porcine lung tissue	Marti, Andrea	(108) Adaptation of Japanese encephalitis virus in pigs can enhance virulence, virus replication, viral shedding and innate immune responses	Dorhoi, Anca	(046) Modelling immune responses of cattle to mycobacteria using magnetic bioprinted granulomas
11h24	Crisci, Elisa	(128) The role of pathogens and anti-PRRSV immunity in the Porcine Respiratory Disease Complex	IMMUNOLOGY OF WILDLIFE AND EXOTICS		-	-
			Seguel, Mauricio	(081) Maternal care favours development of distinct immunotypes in a marine mammal.		
11h42	Loving, Crystal	(143) Detection B cell and antibody-secreting cell populations in pigs at RNA and protein levels	Steinbach, Falko	(176) Elephant Endotheliotropic Herpesvirus (EEHV) Vaccine and First in-Elephant, Proof-of-Concept Trial	-	-
12h00	POSTER SESSION 1					
13h00	Lunch in the Safari Lodge					
14h00	GOLD SPONSOR PRESENTATION: CSIRO					
14h15-15h15	Plenary 1 : Topic tbc (Dan Crowley, Cornell University)					

VENUE	VENUE 1 – NDLOPFU		VENUE 2- INGWE/MHELEMBE		VENUE 3- NDAU/NARI	
15h25	Session 1.1.3		Session 1.2.3		Session 1.3.3	
	ADAPTIVE IMMUNITY Chair:		IMMUNOLOGY OF PARASITE DISEASES Chair:		VACCINE DEVELOPMENT (1) Chair:	
15h25	Okagawa, Tomohiro	(019) PD-L1 blockade enhances T-cell response to vaccination in calves	Hiromi Okino, Cintia	(002) Improved mucosal response against hemonchosis related to β A allele of ovine beta-globin gene	Kerro Dego, Oudessa	(005) Efficacy of Novel Staphylococcal Surface Associated Protein Vaccines Against Staphylococcus aureus and non-aureus staphylococcal Mastitis in Dairy Cows
15h43	Crowley, Dan	(023) Diet and defenses: low affinity antibodies in bats are affected by food quality	Da Silva Costa, Monique	(007) Effects of experimental <i>Fasciola hepatica</i> infection on the long-term immune response of the foot and mouth disease vaccine	Lemmer, Yolandy	(036) Immunogenicity of a plant-produced African horse sickness polyvalent vaccine validated in IFNAR mice.
16h00	Refreshment Break					
16h15	Singh, Lekita	(031) A Single-cell Study of the Immunological Response of Quails Infected with Porcine Circovirus-like Particles	Wattrang, Eva	(049) Local immune responses to <i>Eimeria tenella</i> infection in immune chickens – a possible role for interferon- γ induced genes in the inhibition of parasite replication	Hope, Jayne	(042) Single-cell RNA-Seq Reveals Multiple Sub-Populations of Bovine Afferent Lymphatic Dendritic Cells Draining the Skin
16h33	Takeuchi, Hiroto	(063) Exploring the therapeutic potential of canine TGF- β decoy receptor for melanoma that reverses TGF- β 1-mediated immunosuppression	Oser, Larissa	(077) Dynamics of mucosal and systemic Th2 / Th1 effector T cells in response to tissue migrating <i>Ascaris suum</i> infections	Ashley, Emily	(043) Evaluation of a Live Attenuated Pseudorabies Virus-Vectored Nipah Virus Vaccine
16h51	Lauterkorn, Nira	(087) Transwell cultures of lymph node derived cells for the in vitro monitoring of adaptive immune responses in pigs	Hellman, Stina	(157) Equine organoid-derived monolayers as a novel <i>in vitro</i> model to study host-parasite interactions	Jungersen, Gregers	(051) Vaccine immunogenicity in pigs after immunization at different injection sites with liposome-based adjuvants containing specific immunomodulators
17h10	Close of Day2					
18h30	Boma Braai at Cattle Baron (only for guests who pre-registered)					

Day 3 – Sunday 19 November

07h30 – 08h30	Registration and Arrival Coffee/Tea			
VENUE	VENUE 1 – NDLOPFU		VENUE 2- INGWE/MHELEMBE	
08h30	Session 2.1.1		Session 2.2.1	
	WORKSHOP 3- IMMUNOLOGICAL TOOLKIT SESSION Chair: Jayne Hope		<div>From Bench to Market: Livestock Vaccine Development in and for low- and middle-income countries Facilitators: IDRC</div> <div></div>	
	Presenter	Abstract nr. and Title		
08h30	Hamid, Benjamin-Layla	(071) CD38 expression on porcine αβ-T-cell subsets and its role in T-cell activation		
08h40	Dry, Inga	(037) The Immunological Toolbox: Advancing veterinary immunology research through the generation of novel reagents		
08h50	Di Placido, Marie	(147) A customizable suite of methods to sequence and annotate cattle antibodies		
09h00	Entrican, Gary	Recombinant antibodies driving immunological research		
09h10	Hammond, John	The future of the Toolbox		
09h20	Round Table facilitated discussions			
09h50	Feedback from discussions via rapporteurs			
10h00	Refreshment Break			
10h30	Session 2.1.2		Session 2.2.2	
	WORKSHOP 4- VIC MHC Chair:		IMMUNODIAGNOSTICS Chair:	
	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title
10h30	Hammer, Sabine E.	(020) Comparative analysis of swine leukocyte antigen (SLA) gene diversity in Göttingen Minipigs	Khalid, Hamza	(012) Investigating the biomarker potential and development of lateral flow assays to detect host proteins for improved diagnosis of bovine tuberculosis
10h48	Robert, Jacques	(067) Role of nonpolymorphic MHC-I and innate-like T cells in resistance and tolerigenic neonatal immunity to mycobacteria	Sengun, Ezgi	(005) Revealing the sheep immune cell composition using multidimensional flow cytometry
11h06	Rogel-Gaillard, Claire	(129) A revised view of putative functional histocompatibility genes in the SLA complex	Marti, Eliane	(092) <i>Culicoides</i> salivary proteins expressed in insect cells are functional allergens for equine <i>Culicoides</i> hypersensitivity
11h24	Schwartz, John C.	(126) Haplotypic and allelic diversity of non-classical MHC class I in ruminants	Jansen van Vuren, Petrus	(124) Highly multiplexed serology and epitope discovery for viral veterinary diseases
11h42	Hammond, John	An update on species and tools on IPD-MHC	de Beer, Jeanni	(161) Identification of novel epitopes capable of differentiating between vaccine and field lumpy skin disease virus.
12h00	POSTER SESSION 2			
13h00	Lunch			
14h00	Plenary 2: Adaptive immunity: T and B cell biology” but will provide a more specific title closer to the time (<i>Dr Wilhelm Gerner, The Pirbright Institute</i>)			

15h00	Distinguished Veterinary Immunologist- Award & Presentation (<i>Dr Joan Lunney</i>)
16h00	Close of Day 3
16h30	Game Drive
18h30	Official Symposium Dinner under the African Sky (<i>dresscode casual and something warm for the cooler evenings</i>)



Day 4 – Monday 20 November

07h30 – 08h30	Registration and Arrival Coffee/Tea			
Venue	VENUE 1 – NDLOPFU		VENUE 2 - INGWE/MHELEMBE	
08h30	SESSION 3.1.1		SESSION 3.2.1	
	IMMUNOGENOMICS & RESISTANCE TO DISEASE Chair:		VACCINE DEVELOPMENT (2) Chair:	
	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title
08h30	Foucras, Gilles	(132) Inborn errors of immunity in domestic ruminants: lessons learned from two examples	Win, Shwe Yee	(065) In vitro evaluation of cysteine protease and ferritin 2 as vaccine antigens with broad efficacy across avian mites, poultry red mites, tropical fowl mites, and northern fowl mites
08h48	Kammerer, Robert	(160) Living with only two arms: The TRDC-knockout pigs lacking $\gamma\delta$ T cells	Devriendt, Bert	(091) Aminopeptidase N-mediated transport across the small intestinal epithelium drives gut immunity to oral vaccine antigens in pigs
	IMMUNE-REGULATION AND MODULATION			
09h06	Chitko-McKown, Carol	(062) Effect of probiotics in milk replacer on the microbiome of the lung in neonatal dairy calves	Gourapura, Renukaradhya	(120) Mannose-chitosan nanoparticle surface adsorbed inactivated influenza virus vaccine elicits cross-protective humoral immunity in pigs

	Presenter	Abstract nr. and Title	Presenter	Abstract nr. and Title
09h24	Riva, Federica	(079) Bovine colostrum supplementation in rabbit diet modulates gene expression of cytokines, gut vascular barrier and red-ox related molecules in the gut wall	Nesane, Mashudu	(221) Single dose new generation heartwater vaccine for smallholder farmers
09h42	-	-	Steinbach, Falko	(149) The ISG15 network is crucial and tightly regulated in the early protection of classical swine fever virus C strain vaccine
10h00	Refreshment Break			
10h30	Session 3.1.2		Session 3.2.2	
	COMPARATIVE IMMUNOLOGY Chair:		IMMUNOLOGY OF VIRAL DISEASES (2) Chair:	
10h30	Le Nours, Jerome	(013) Molecular insights into the family of MHC-like molecules (UTs) from marsupials	Silva, Ediane	(190) African Swine Fever: Cellular and Humoral Immune Response of pigs vaccinated with Live Attenuated Strain
10h48	Görrig, Samira Christin	(032) Pathogen recognition by bovine myeloid C-type lectin receptors	Rojas, José M	(208) Peste des petits ruminant's virus activates goat dendritic cells but impairs antigen presentation
11h06	Miller, Laura	(085) How do <i>Odocoileus virginianus</i> (white-tailed deer) weather SARS-CoV-2 infection?	Sevilla, Noemi	(209) Comprehensive immune profiling reveals that arbovirus infection activates immune checkpoints during acute t cell immunosuppression
11h24	Devriendt, Bert	(086) Transcriptional profiling of blood and liver Natural Killer cells reveals the presence of a novel liver Natural Killer cell subset in swine.	Louloudes-Lazaro, Andres	(222) Bluetongue virus disrupts the type-I interferon response by interfering with the cGAS pathway
11h42	Noble, Alistair	(090) Distinct effector functions mediated by Fc regions of bovine IgG subclasses and their interaction with Fc gamma receptors	-	-
12h00	POSTER SESSION 3			
13h00	Lunch			
14h00	Plenary 3: Immunogenetics : Immunogenomics and resistance to disease (Dr Michelle Baker, CSIRO)			
15h00	Keynote: Topic tbc (Prof. Mariela Segura, Université de Montréal)			
16h00	Body break (10 mins)			
16h10	Keynote: Veterinary Immunology: from knowledge to solutions (Dr Samuel Thevasagayam, Bill and Melinda Gates Foundation)			
17h00	Close of Symposium & Hand-over to 2025 IVIS hosts			

Day 5 – Tuesday 21 November

VENUE	VENUE 1 – NDAU/NARI	VENUE 2 - INGWE/MHELEMBE
08h30 – 10h00	Not in use	LVIF Full day wrap up session (closed event)
10h00 – 11h00	Brunch in the Safari Lodge	Refreshment Break (LVIF)
11h00 – 13h00	Workshop 5 Supporting early career researchers in veterinary immunology and vaccinology research (<i>International Veterinary Vaccinology Network (IVVN)</i>)	LVIF Full day wrap up session (closed event)
12h30 – 13h15	Close of Symposium	Lunch (LVIF)
13h15 – 15h00	Not in use	LVIF Full day wrap up session (closed event)
15h00 – 15h30		Refreshment Break (LVIF)
15h30 – 17h00		LVIF Full day wrap up session (closed event)

POSTERS

Day 2 – Saturday 18 November

Poster Session	Theme	Presenter	Title
1 – 12h15	Innate Immunity	Riva, Federica	(080) Different immune response against Gram positives and Gram negative mammary infection revealed by two dairy cow breeds.
1 – 12h15	Innate Immunity	Broere, Femke	(082) Characterization of polarization states of canine monocyte derived macrophages
1 – 12h15	Innate Immunity	Rodriguez, Natalia	(113) Immunological Response to Increased Intestinal permeability on Endurance Exercise Horses
1 – 12h15	Innate Immunity	Matis, Gabor	(123) The immunomodulatory action of the antimicrobial peptide IDR-1002 in a hepatic cell culture model of chicken origin
1 – 12h15	Innate Immunity	Foucras, Gilles	(133) Which factors modulate the bovine whole blood response to LPS: Nature vs Nurture?
1 – 12h15	Innate Immunity	Ardali, Razieh	(150) In vitro screening of immunostimulatory ligands for induction of trained immunity in porcine monocyte/macrophages
1 – 12h15	Innate Immunity	Ardali, Razieh	(152) Harnessing trained immunity to enhance resistance of piglets against infections
1 – 12h15	Innate Immunity	Loving, Crystal	(167) Altered cytokine production and gene expression by porcine monocytes following neonatal inoculation with bacillus Calmette-Guerin (BCG)
1 – 12h15	Innate Immunity	Becker, Sage	(171) Impact of butyrate on short-chain fatty acid receptor expression in porcine monocytes
1 – 12h15	Innate Immunity	Riva, Federica	(177) Canine amniotic fluid at birth: From a discarded sample to a potential diagnostic of neonatal maturity and health.
1 – 12h15	Innate Immunity	Franzoni, Giulia	(187) Heterogeneity of Phenotypic and Functional Changes to Porcine Monocyte-Derived Macrophages Triggered by Diverse Polarizing Factors In Vitro
1 – 12h15	Innate Immunity	Castillo, Amanda	(189) PMN support <i>Brucella</i> dispersal with reduced immune recognition
1 – 12h15	Adaptive Immunity	von Heyl, Theresa	(021) The knockout of $\alpha\beta$ T cells causes cytotoxic reactions in chicken – new insights into the functions of T cell subpopulations
1 – 12h15	Adaptive Immunity	Brunner, Milena	(022) Unravelling signals important for early chicken B-cell development
1 – 12h15	Adaptive Immunity	Maekawa, Naoya	(075) Immune checkpoint blockade for cancer immunotherapy in dogs: updated results from a clinical study using anti-PD-L1 antibody (c4G12)
1 – 12h15	Adaptive Immunity	Broere, Femke	(083) Cellular and Humoral immune responsiveness to inactivated <i>Leptospira interrogans</i> in dogs vaccinated with a tetravalent <i>Leptospira</i> vaccine
1 – 12h15	Adaptive Immunity	Fanning, Liam	(111) Immune biome of Bovine Colostrum
1 – 12h15	Adaptive Immunity	Schwartz, John C	(144) The influence of the germline antibody loci on the pig and warthog antibody repertoire
1 – 12h15	Adaptive Immunity	Perez-Filgueira, Mariano	(154) Increased antigenic broadness in the adaptive humoral immunity elicited by different Foot and Mouth Disease vaccine regimes against heterologous viral strains.
1 – 12h15	Adaptive Immunity	Mair, Kerstin	(159) Characterization of novel memory marker on porcine T cells

Poster Session	Theme	Presenter	Title
1 – 12h15	Adaptive Immunity	Woziri, Abubakar	(185) Evaluation of haematological biomarkers of immune response in chickens following <i>in vivo</i> administration of inactivated Avian Influenza H5 vaccine
1 – 12h15	Immunology of viral diseases 1	Capozzo, Alejandra	(010) Avidity ELISA as an alternative to the Virus Neutralization Test to assess Foot-And-Mouth Disease vaccine-induced antibody responses in buffaloes (<i>Bubalus Bubalis</i>)
1 – 12h15	Immunology of viral diseases 1	Hiromi Okino, Cintia	(016) Essential oils able to completely inhibit the avian coronavirus replication.
1 – 12h15	Immunology of viral diseases 1	Nedumpun, Teerawut	(056) Different macrophage polarization patterns induced by porcine reproductive and respiratory syndrome viruses (PRRSV)
1 – 12h15	Immunology of viral diseases 1	Crisci, Elisa	(110) Predict and Protect against PRRSV (PreProPRRSV): Combining PRRSV forecasting technology with vaccine efficacy prediction to prevent PRRSV outbreak.
1 – 12h15	Immunology of bacterial diseases	Gottschalk, Marcelo	(098) IgM antibodies play a major role in the elimination of <i>Streptococcus suis</i> serotype 2
1 – 12h15	Immunology of bacterial diseases	Gottschalk, Marcelo	(099) <i>Streptococcus suis</i> surface-antigen recognition by antibodies and bacterial elimination is influenced by capsular polysaccharide structure
1 – 12h15	Immunology of parasite diseases	Hiromi Okino, Cintia	(028) Ovine resistance against <i>Haemonchus contortus</i> : Does a breed or a β -globin subtype feature?
1 – 12h15	Immunology of parasite diseases	Ndaba, Bongeka	(191) Evaluation of global immune responses in goats infected with <i>Haemonchus contortus</i> using RNA sequencing
1 – 12h15	Immunology of parasite diseases	Stutzer, Christian	(227) A Comparative immunological profile of <i>Babesia microti</i> infected BALB/c mice co-infested with <i>Ixodes ricinus</i> ticks and its effect on immunisation
1 – 12h15	Immunology of parasite diseases	Stutzer, Christian	(228) <i>In vivo</i> evaluation of <i>Ixodes ricinus</i> induced effects on T and B-cell maturation in the spleen and lymph nodes of BALB/c mice
1 – 12h15	Vaccine Development 1	Chiweshe, Stephen	(014) Comparison of immunogenicity of vaccine payloads delivered by 3 different viral vaccine vectors.
1 – 12h15	Vaccine Development 1	Beddoe, Travis	(039) The development of a subunit vaccine for the control of crocodilepox virus infection in farmed Australian saltwater crocodiles (<i>Crocodylus porosus</i>)
1 – 12h15	Immunoinformatics	Gambu, Asanda	(026) <i>In silico</i> prediction of CD4+ T cell and B cell epitopes targeting <i>H. contortus</i> vaccine antigens
1 – 12h15	Immunoinformatics	van der Byl, Cara	(114) <i>In silico</i> prediction of CD4 T cell and B cell epitopes of the peptidase and GTPase protein families of <i>Haemonchus contortus</i>
1 – 12h15	Immunoinformatics	Bambeni, Thandikhaya	(186) <i>In silico</i> analysis of GPI-anchored hypothetical proteins from <i>Babesia bovis</i> as potential vaccine candidates
1 – 12h15	Zoonoses	Ghielmetti, Giovanni	(139) <i>Mycobacterium tuberculosis</i> in a captive African Elephant: identification of mixed infection Using Whole Genome Sequence Data
1 – 12h15	Zoonoses	Martins de Camargo, Maristela	(164) Saliva as a non-invasive tool for monitoring microbial diversity and pathogens in wildlife
1 – 12h15	Zoonoses	Chege, Gerald	(168) The use of interferon-gamma releasing assays (IGRA) to improve the detection of tuberculosis in captive-bred non-human primates
1 – 12h15	Zoonoses	Nelson, Bukamba	(195) Isolation of bacteriophages against salmonella isolates from environmental water samples and gorilla feces collected from Bwindi impenetrable national park

Poster Session	Theme	Presenter	Title
1 – 12h15	Immunology of wildlife and exotics	Gumbo, Rachiel	(035) Cytokine release assay for the detection of <i>Mycobacterium bovis</i> infection in African Lions (<i>Panthera leo</i>), Cheetahs (<i>Acinonyx jubatus</i>) and Leopards (<i>Panthera pardus</i>)
1 – 12h15	Immunology of wildlife and exotics	Espejo, Camila	(158) Dexamethasone increases in vitro immune cell proliferation in response to M. bovis in African buffalo.
1 – 12h15	Immunology of wildlife and exotics	Sarker, Palash	(184) Strengths and Opportunities of One Health Approach for Rabies Control in the Jhalakhati District, Bangladesh, 2022
1 – 12h15	Immunology of wildlife and exotics	Kayigwe, Ahab	(213) Proteogenomic analysis reveals lncRNA-encoded immunopeptides in the devil facial tumour disease
1 – 12h15	Immunology of wildlife and exotics	Roberts, Laura C.	(226) Vaccination of African Penguins (<i>Spheniscus demersus</i>) against H5 high pathogenicity avian influenza: a comparison between an inactivated whole-virus vaccine and a plant-produced virus-like particle

Day 3 – Sunday 19 November

Poster Session	Theme	Presenter	Title
2 – 12h00	Immunodiagnosics	Hammer, Sabine E.	(034) Revisiting the correlation of <i>c-Kit</i> mutation status and treatment decisions in canine mast cell tumours
2 – 12h00	Immunodiagnosics	Chase, Chris	(134) Leukocyte dynamics in vaccinated and unvaccinated animals following dual challenge with Bovine Viral Diarrhea Virus-Mannheimia haemolytica model to compare vaccine efficacy in calves.
2 – 12h00	Immunodiagnosics	Dlamkile, Zinathi	(155) Development of a reverse transcription quantitative real-time PCR assay for the evaluation of a multivalent inactivated vaccine
2 – 12h00	Immunodiagnosics	Capozzo, Alejandra	(172) Assessment of serum IgG-avidity and IgG1 titres as predictors of heterologous protection against foot-and-mouth disease in vaccinated cattle
2 – 12h00	Immunodiagnosics	Marufu, Chris	(175) Comparative analysis of four diagnostic methods to detect <i>Fasciola</i> species in naturally infected slaughter dairy cattle
2 – 12h00	Immunodiagnosics	van der Heijden, Elise	(193) The MicroRNAome of Cattle Infected with <i>Mycobacterium bovis</i> : Towards the Characterization of Potential Novel Biomarkers
2 – 12h00	Immunodiagnosics	Moabelo, Khomotso	(076) Comparison of the Bionote NSP Ab ELISA and PrioCheck FMDV NS ELISA
2 – 12h00	MHC Workshop	Ho, Sam	(174) Nomenclature for Factors of the Swine Leukocyte Antigen (SLA) System - Update 2023
2 – 12h00	Toolkit	Dry, Inga	(017) Fc-tagged fusion proteins as tools to define veterinary cytokines and investigate immunological receptor/ligand interactions
2 – 12h00	Toolkit	Gourapura, Renukaradhya	(101) Generation and characterization of swine immune reagents for monitoring pig immune status and for biomedical research
2 – 12h00	Toolkit	Schmidt, Selma	(136) CD25, CD40L and CD69 as activation induced markers (AIMs) in porcine T cells
2 – 12h00	Toolkit	Di Placido, Marie	(148) Comparing flow cytometry and bulk transcriptomics with single cell gene expression to characterize cattle B cell subsets

Poster Session	Theme	Presenter	Title
2 – 12h00	Teaching immunology	Oumouna, Mustapha	(214) African Vaccinology Network (AFVANET): an African network by African scientists
2 – 12h00	Tissue-specific immunity	Mackei, Máté	(151) Effects of chicoric acid on a primary hepatic co-culture of chicken origin treated with viral RNA analogue poly I:C

Day 4 – Monday 20 November

Poster Session	Theme	Presenter	Title
3 – 12h00	Immunology of viral diseases 2	Nefefe, Tshifhiwa	(145) Host immune response to FMDV SAT 1, 2 and 3 infections: Defining mechanisms of persistent infection in cattle.
3 – 12h00	Immunology of viral diseases 2	Mtimunye, Mpendulo	(188) Host immune response to FMDV SAT 1, 2 and 3 infections: Defining mechanisms of persistent infection in cattle.
3 – 12h00	Immunology of viral diseases 2	Yiltawe, Wungak	(212) Foot and Mouth Disease Vaccine Immunogenicity Study Among the Agro-Pastoralists In Plateau State, Nigeria
3 – 12h00	Vaccine Development 2	Wattegedera, Sean	(040) Induction of humoral and cellular responses to parapox virus-vectored antigen for vaccine development
3 – 12h00	Vaccine Development 2	Gottschalk, Marcelo	(047) Immune response against bacterins used to control <i>Streptococcus suis</i> infections in pigs
3 – 12h00	Vaccine Development 2	Gopakumar, Gayathri	(048) Clinical assessment and transcriptome analysis of host immune responses in a vaccination-challenge study using a glycoprotein G deletion mutant vaccine strain of infectious laryngotracheitis virus
3 – 12h00	Vaccine Development 2	Lacasta, Anna	(053) New advances in the development of a subunit vaccine targeting antibody production against African swine fever.
3 – 12h00	Vaccine Development 2	Oboge, Harriet	(055) Spontaneous Nanoliposome Antigen Particleization (SNAP) - a Novel Subunit Vaccine Technology for Livestock Vaccine Development
3 – 12h00	Vaccine Development 2	Corripio-Miyar, Yolanda	(059) Development of a novel recombinant subunit Q fever vaccine for ruminants
3 – 12h00	Vaccine Development 2	Cottingham, Ellen	(060) Virally-Vectored Immunocontraceptives for the Management of Feral Cats in Australia
3 – 12h00	Vaccine Development 2	Kolakowski, Jeannine	(070) Evidence of glycosylation in the schizont life cycle stage of <i>Theileria parva</i> parasites
3 – 12h00	Vaccine Development 2	Hiromi Okino, Cintia	(074) Transcriptomic profiling shows the induction of humoral and cellular response-related genes in pigs following vaccination with an Influenza A nanovaccine
3 – 12h00	Vaccine Development 2	Chege, Hannah	(078) Identification of new antigens as potential sub-unit vaccine candidates for ECF control
3 – 12h00	Vaccine Development 2	Jonsdottir, Sigridur	(093) Allergen specific immunotherapy (AIT) with <i>Culicoides</i> recombinant allergens resulted in decreased <i>in vitro</i> sulfidoleukotriene release in basophil activation test
3 – 12h00	Vaccine Development 2	Gottschalk, Marcelo	(097) Influence of maternal antibodies on the immune response of young piglets vaccinated with a <i>Streptococcus suis</i> serotype 2 bacterin
3 – 12h00	Vaccine Development 2	Li, Hao	(100) Immunogenicity and Protective Efficacy of Ag85A and truncation of PstS1 fusionprotein vaccines against tuberculosis
3 – 12h00	Vaccine Development 2	Borrego, Belen	(102) Safety and efficacy of the Rift valley fever live-attenuated vaccine candidate 40Fp8 in pregnant ewes

Poster Session	Theme	Presenter	Title
3 – 12h00	Vaccine Development 2	Gourapura, Renukaradhya	(103) Characterization of the efficacy of a split swine influenza A virus nasal vaccine formulated with a nanoparticle/STING agonist combination adjuvant in conventional pigs
3 – 12h00	Vaccine Development 2	Hayes, Jack	(104) Isolation of porcine reproductive and respiratory syndrome virus glycoprotein specific monoclonal antibodies from hyperimmune pigs
3 – 12h00	Vaccine Development 2	Chitray, Melanie	(105) Foot-and-mouth disease SAT specific virus peptide phage display libraries for the identification of epitopes
3 – 12h00	Vaccine Development 2	Crisci, Elisa	(109) Intranasal Ad5 influenza vaccine elicits hemagglutinin-specific antibody response in pregnant and lactating pigs.
3 – 12h00	Vaccine Development 2	Kaesler, Tobias	(117) The pig as a biomedical animal model to develop treatment and prevention strategies against <i>Chlamydia trachomatis</i>
3 – 12h00	Vaccine Development 2	Cox, Eric	(118) Human whole-cell / B-subunit oral cholera vaccines Duochol and Dukoral induce antibody responses in a porcine model.
3 – 12h00	Vaccine Development 2	Chase, Chris	(121) Protection of neonatal, colostrum-fed calves with a modified live, intranasal, tri-valent vaccine using an experimental challenge with virulent bovine respiratory syncytial virus
3 – 12h00	Vaccine Development 2	Fortes de Brito, Rory	(122) Assessment of immunogenicity and efficacy of an attenuated herpesvirus-based vector expressing highly conserved porcine reproductive and respiratory syndrome virus M and NSP5 proteins
3 – 12h00	Vaccine Development 2	Chitray, Melanie	(127) Construction of a FMDV-specific recombinant antibody phage-display bovine library for epitope identification and diagnostic reagents
3 – 12h00	Vaccine Development 2	Edwards, Jane	(137) Development of methods to isolate natural porcine antibodies that broadly neutralise porcine reproductive and respiratory syndrome viruses
3 – 12h00	Vaccine Development 2	Chabalgoity, Jose A.	(140) A transcriptional signature of effective vaccination in bovines to Foot-and-Mouth Virus Disease (FMDV)
3 – 12h00	Vaccine Development 2	Fisch, Andressa	(142) Applying phage display screening and next-generation sequencing to identify B-cell epitopes from tick salivary antigens
3 – 12h00	Vaccine Development 2	Young, Alan	(165) A USDA-licensed platform approach for the rapid generation and commercial deployment of bacterial subunit vaccines against emerging diseases.
3 – 12h00	Vaccine Development 2	Mosqueda, Juan	(197) Vaccination against the translationally controlled tumor protein (TCTP) of <i>Babesia bovis</i> reduces clinical disease, improves humoral immune response in cattle, and it is highly conserved in <i>Babesia</i> species
3 – 12h00	Vaccine Development 2	Maichomo, Monicah	(201) Early stages of developing a subunit bacterial vaccine against camel mastitis
3 – 12h00	Vaccine Development 2	O'Kennedy, Martha	(215) Assembling Newcastle disease virus-like particles in <i>Nicotiana benthamiana</i> plants as potential vaccine
3 – 12h00	Vaccine Development 2	O'Kennedy, Martha	(216) Efficacy of a plant-produced infectious bronchitis virus-like particle vaccine in specific pathogen-free chickens
3 – 12h00	Vaccine Development 2	Mulongu, Moses	(217) TAHSSL: A new R&D and Commercialization Platform at ILRI
3 – 12h00	Vaccine Development 2	Masembe, Charles	(219) No longer a regional problem: molecular evolution and transmission of African swine fever on the African continent
3 – 12h00	Vaccine Development 2	Wilda, Maximiliano	(223) Polysaccharide microparticles as carriers of a recombinant antigen against GnRH in oral vaccination in male rats.
3 – 12h00	Vaccine Development 2	Miller, Laura	(224) Validation of a Modified Live Virus (MLV) prototype of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) with replication-competent expression of porcine interferons (IFNs).
3 – 12h00	Vaccine Development 2	El Wahli, younès	(229) Protective Efficacy Evaluation of Four Inactivated Commercial Vaccines Against Low Pathogenic Avian Influenza H9N2 Virus Under Experimental Conditions in Broiler Chickens

Poster Session	Theme	Presenter	Title
3 – 12h00	Immune-regulation and modulation	Matthews, Megan Ceris	(069) Investigating the soil mycobacteriome to validate M. bovis tuberculin skin test results
3 – 12h00	Comparative Immunology	Divín, Daniel	(004) Cannabinoid receptor 2 evolutionary gene loss makes parrots more susceptible to neuroinflammation
3 – 12h00	Comparative Immunology	Hammer, Sabine E.	(033) Exploratory screening for miRNA biomarkers in canine multicentric lymphoma
3 – 12h00	Comparative Immunology	Hart, Kelsey	(166) Effects of hydrocortisone, ascorbic acid, and thiamine treatment on immune responses in healthy neonatal foals
3 – 12h00	Comparative Immunology	Mansilla, Florencia	(170) MDP-mediated chronic NOD2 stimulation confers protection against LPS challenge through M2b macrophage polarization in mice
3 – 12h00	Immunogenomics & resistance to disease	Morrison, Liam	(131) Continent-wide population genomics of the African buffalo (<i>Syncerus caffer</i>) indicates infectious disease as a significant selective pressure.
3 – 12h00	Immunogenomics & resistance to disease	Jaja, Ishmael	(179) Antibiotic resistance profile of Salmonella isolates obtained from meat in the Eastern Cape Province, South Africa

WORKSHOPS

1. Pushing boundaries in veterinary immunology - A new era of NGS, with single cell sequencing and spatial transcriptomics

- **Friday 17 November: 08h30 – 12h30**
- Contact: Chara Mansoor - Diagnostech
- Logo included in all material related the symposium/website
- 2 x free standing pull-up banners in venue during the welcome function
- Full/half page advertisement in final programme (sponsor to supply final print ready artwork in PDF format)
- 3 delegate passes to the day of the Workshop
- Acknowledgement on website and in final programme
- Logo in looped presentation in plenary venue

Redefining NGS, one cell at a time. Join us for a half day workshop at IVIS and learn how single cell sequencing is changing the future and leading to fundamental discoveries across multiple areas of biology, including oncology and immunology.

Every day, immunologists deepen our understanding of the immune system's intricate network of responses and interactions. Learn how single cell and spatial multiomics are empowering exciting new research into autoimmunity, immuno-oncology, vaccine development, and beyond.

Explore methods that let you uncover molecular insights, dissect cell-type differences, detect novel cell subtypes and biomarkers, define gene regulatory interactions, and decipher spatiotemporal gene expression patterns.

This workshop will be hosted by renowned researchers in veterinary immunology, Prof Christine Maritz-Oliver and Prof Crystal Loving, as well as supported by Diagnostech and 10x Genomics experts.

We will cover topics like:

- *What is Single Cell Sequencing and why are we heading in this direction?*
- *What is the technology, and what are the limitations?*
- *How can you successfully design a project using these technologies, and get workable results to publish?*
- *Bioinformatics, computational difficulties and what to master early on*
- *Discussion with the experts*

2. Novel approaches to the development of anti-bacterial veterinary vaccines

- **Friday 17 November: 12h30 – 16h30**
- STAR-IDAZ (facilitators) Gary Entrican (Facilitator)
- Round tables 10 pax x 8

This workshop will review vaccine platform technologies that can be deployed for development of veterinary bacterial vaccines through short presentations by expert speakers followed by breakout discussions in small participant groups. The breakouts are designed to identify gaps in bacterial vaccine development and discuss how these gaps can be addressed using novel vaccine platform technologies. The focus will be on development of fit-for-purpose vaccines with a target product profile that meets the needs of the relevant end-users, including vaccines that will be deployed in LMICs. The outcomes of the individual group discussions will be presented back to the whole workshop delegation in a final Q&A session. The workshop findings will be summarised in a report that can be used to inform on future directions for veterinary bacterial vaccinology research.

This workshop is supported by UKRI BBSRC, STAR-IDAZ, The Methane Hub, Defra, IUIS VIC and the Vaccinology Networks IVVN, VALIDATE and BactiVac.

Draft Programme

- 12.30 -12.40:** Introduction and Aims (Chairs: Jayne Hope and Gary Entrican)
- 12.40 - 13.50:** Short Presentations on Vaccine Development and Vaccine Platform Technologies
- 12.40:** Paul Wood (Monash University, Australia): Importance of designing the vaccine TPP for translational research
- 12.50:** Adam Cunningham (BactiVac, UK): Outer membrane vesicles (OMVs) for bacterial vaccinology
- 13.00:** **Brendan Wren (LSHTM, UK): Bacterial glycoconjugate vaccines** (delivered by the panel)
- 13.10:** Michael Jarvis (The Vaccine Group, UK): Viral vectors for veterinary vaccinology
- 13.20:** Helba Bredell (Afrigen, SA): mRNA platforms for veterinary vaccinology
- 13.30:** Gary Entrican (University of Edinburgh, UK): STAR-IDAZ vaccine roadmaps
- 13.40:** Johannes Charlier (Kreavet, Belgium): DISCONTTOOLS bacterial vaccines gaps
- 13.50 – 14.10:** Initial Q&A, format of Breakout Groups, Assembly and Begin Discussions (All, Rapporteurs and Questions TBC*)
- 14.10 – 14.30:** Coffee/Networking/Opportunity for Initial Informal Feedback (All)
- 14.30 – 15.10:** Breakout Discussions (50min)
- 15.10 – 15.40:** Rapporteur Summaries (TBC, 5 min maximum/one slide each, estimated timings**)
- 15.40 – 16.10:** Panel Discussion with Speakers and Chairs
- 16.10 – 16.30:** Capture the Agreed Workshop Outcomes, Final Comments and Close (Chairs)

Expected Outcomes:

- Identify gaps in veterinary vaccinology for bacterial diseases
- Comments that inform on functionality of STAR-IDAZ roadmaps
- Highlight opportunities to address these gaps using novel vaccine platform technologies with a One Health approach
- Maintain awareness of the TPP at all stages of research to develop vaccines that meet end-user needs (especially for LMICs)
- Prepare an informed, positional report that informs funders and networks on areas for funding future research

3. Immunological Toolkit Session

- **Sunday 19 November: 08h30 – 10h00**
- Jayne Hope

The Immunological Toolkit session will provide an overview of ongoing work in reagent development and novel technologies and techniques. These will be followed by a discussion session to discuss future priorities and gap analyses in reagent and technology development.

Draft Programme

08h30: Hamid, Benjamin-Layla - (071) CD38 expression on porcine $\alpha\beta$ -T-cell subsets and its role in T-cell activation
 08h40: Dry, Inga - (037) The Immunological Toolbox: Advancing veterinary immunology research through the generation of novel reagents
 08h50: Di Placido, Marie - (147) A customizable suite of methods to sequence and annotate cattle antibodies
 09h00: Entrican, Gary - Recombinant antibodies driving immunological research
 09h10: Hammond, John - The future of the Toolbox
 09h20: Round Table facilitated discussions with pre-shared questions
 09h50: Feedback from discussions via rapporteurs

4. VIC MHC

- **Sunday 19 November: 10h30 – 12h00**
- John Hammond

Draft Programme

10h30: Hammer, Sabine E. - (020) Comparative analysis of swine leukocyte antigen (SLA) gene diversity in Göttingen Minipigs
 10h48: Robert, Jacques - (067) Role of nonpolymorphic MHC-I and innate-like T cells in resistance and tolerogenic neonatal immunity to mycobacteria
 11h06: Rogel-Gaillard, Claire - (129) A revised view of putative functional histocompatibility genes in the SLA complex
 11h24: Schwartz, John C - (126) Haplotypic and allelic diversity of non-classical MHC class I in ruminants

11h42: Hammond, John - An update on species and tools on IPD-MHC

5. Supporting early career researchers in veterinary immunology and vaccinology research

- **Tuesday 21 November : 11h00 – 15h00**
- Carly Hamilton (IVVN)

Draft Programme

“This workshop, hosted by the International Veterinary Vaccinology Network (IVVN), will focus on ways in which we can support early career researchers working in veterinary immunology and vaccinology research. The workshop will be facilitated by a group of IVVN ECR members who will present a white paper which outlines the challenges faced by early career researchers and potential solutions to mitigate these challenges. In addition, there will be presentations from representatives of Afrique One Aspire, Bill and Melinda Gates Foundation (BMGF), The African Academy of Sciences (AAS) and The African Research Universities Alliance (ARUA). All early career researchers, and those who are keen to support the next generation of veterinary immunologists and vaccinologists, are very welcome to join.”