Istanbul, Türkiye

GFRA Scientific Meeting

October 21-23, 2025



Hosted by the Global Foot-and-Mouth Disease Research Alliance (GFRA)

GFRA Scientific Meeting 21st-23rd October 2025

Sheraton Istanbul City Center

Hacıahmet, Kurtuluş Deresi Cd. No:23, 34440 Beyoğlu/İstanbul, Türkiye

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Dear Delegate:

Foot-and-mouth disease remains one of the most formidable challenges to animal health and global food security. Despite decades of coordinated action, the virus continues to surprise us, moving across borders, re-emerging in places where it had been absent for years

As researchers, we know that every outbreak tells a story, of viral evolution, ecological change, and human decision-making. It also reveals what we still don't fully understand. These knowledge gaps are not weaknesses; they are the driving force behind our work. Each new finding brings us closer to smarter vaccines, faster diagnostics, and more resilient control strategies that can be sustained even in resource-limited settings.

The Global Foot-and-Mouth Disease Research Alliance (GFRA) was created to transform this collective effort into shared progress. Through open exchange, collaboration, and curiosity, we turn research into readiness. Lessons from other viral diseases enrich our understanding and keep us one step ahead.

This year, we meet in Istanbul, Türkiye. This amazing city that bridges continents, ideas, and histories. It is a fitting setting for our community, which brings together scientists, regulators, and industry partners from every corner of the world to bridge knowledge, innovation, and impact.

May this meeting spark new collaborations, challenge our assumptions, and inspire us to look beyond FMD to the broader goal of building healthier, safer, and more connected livestock systems for all.

Together, we learn. Together, we act. Together, we can make a lasting difference.

Alejandra Capozzo
GFRA Chief Executive Officer



GFRA 2025 Full Scientific Meeting Program

Day One: Tuesday 21st October Istanbul Grand Ballroom 1

Opening Section			
Opening Session			
8:30	Welcome from GFRA President & CEO	Alejandra Capozzo Frank Mwiine Can Cokcaliskan on behalf of Abdulnaci Bulut	
8:50	Regional Brief: Türkiye	Berik Tanrikulu	
9:00	Keynote: Dynamics of FMD in Türkiye and the West Eurasia region Followed by Q&A	Can Cokcaliskan	
9:30	Keynote: Global Update Followed by Q&A	Donald King	
10:00-10:45	Coffee Break		
	Session 1		
	Socioeconomics & Disease Co	ntrol	
10:45	Introduction	Wilna Vosloo & Donal Sammin	
10:50	Keynote: How can we use economics and social sciences to support FMD management? Followed by Q&A	Jonathan Rushton	
	Oral Presentations		
11:20	Quantifying the impacts of landscape ecology and environmental events on livestock contacts and their relevance for foot-and-mouth disease control in East Africa	Divine Ekwem	
11:30	Profound financial and welfare impacts of Foot- and-mouth disease: a case series in two dairy farms in Indonesia in June 2022	James Young	
11:40	Predictors of productivity within small-scale beef cattle enterprises in the foot-and-mouth disease (FMD) protection zone of South Africa	Kibambe Kiayima	
11:50	Decision tree analysis for evaluation of management practices to reduce FMD outbreaks in beef cattle replacements under the Egyptian conditions	Manar M. Farouk	
12:00-12:30	Discussion		
12:30-14:00	Lunch		



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GFRA Scientific Meeting Istanbul, Türkiye 21-23 October 2025

	Session 2	
	Vaccines I	
14:00	Introduction	Michael Eschbaumer & Susan Kerfua
14:05	Keynote: Novel Poliovirus Vaccines: Lessons for FMD? Followed by Q&A	Andrew Macadam
	Oral Presentations	
14:35	Immunological Features of Nucleoside-modified mRNAs Encoding FMDV VP1	Sercan Keskin
14:45	Evaluation of potency and duration of immunity elicited by a multivalent fmd vaccine for use in South Africa	Faith Peta
14:55	Development of in vitro tests for FMD vaccine quality using ELISA and Lateral Flow Device	Amina Yasmin
15:05	The Challenges of FMD Vaccine Development. How a manufacturer evaluates 'promising vaccine candidates'	Pascal Hudelet
15:15- 15:30	Discussion	
15:30-16:00	Coffee Break	
	Session 3	
	Vaccines II	
15:55	Introduction	Jacquelyn Horsington & Phaedra Eblé
	Oral Presentations	
16:00	Assessing FMD Vaccine Quality – moving beyond vaccine matching	Anna Ludi
16:10	An mRNA nanoparticle vaccine fully protects cattle against virulent FMD challenge	Michael Eschbaumer
16:20	Influence of Physiological and Environmental Factors on FMD Vaccine Effectiveness	Amélie Poulard
16:30	Development of a High-Potency Multivalent FMD Vaccine with Broad Immunological coverage Across Endemic Pools	Romina Scian
16:40-17:00	Discussion	
17:00-17:15	Break	
17:15-18:15	Poster Session A and Cocktail Hollistanbul Grand Ballroom 2	ur
18:15	Break for Evening	





Boehringer Ingelheim is a world leader in the field of Veterinary Public Health and has a dedicated department committed to combating Transboundary Animal Diseases (TADs). These diseases are managed at the state level, as they pose significant threats to humans, animals, and agricultural economies in both developed and developing countries.

The VPH department partners with governments, health authorities, non-governmental organizations, veterinarians, and farmers to prepare for disease outbreaks by providing outstanding products and services against TADs, including Foot-and-Mouth Disease (FMD), Rabies, and Bluetongue Virus (BTV). Boehringer Ingelheim holds the industry's largest portfolio of vaccine strains against these diseases.



For further information, please visit our website:



Life forward



Day Two: Wednesday 22nd October Istanbul Grand Ballroom 1

Session 1					
Immunology, Virology, Pathogenesis I					
8:30	Introduction Toby Tuthill & María Inés Gismondi				
8:35	Keynote: FMDV Recombination in Natural Host Species Followed by Q&A	Carolina Stenfeldt			
	Oral Presentations				
9:05	Foot-and-mouth disease virus diversity and recombination on dairy farms in Pakistan	lan Fish			
9:15	Evolution of FMDV quasispecies during acute infection through in vivo serial passages in adult mice	Roman David Gonzalez Mora			
9:25	Effect of Ruxolitinib on persistent Foot-and–Mouth Disease Virus (FMDV) infection in multilayered cells derived from bovine dorsal soft palate	Sandra Blaise-Boisseau			
9:35-9:50					
9:50 - 10:30	Coffee Break				
10:30-11:30	10:30-11:30 Poster Session B Istanbul Grand Ballroom 2				
11:30	Guest Speaker: GALVMed	Nina Henning			
	Session 2				
	Immunology, Virology, Pathoge	enesis II			
11:40	Introduction	Sandra Blaise-Boiseeau & Santina Grazioli			
	Oral Presentations				
11:45	Cattle antibodies identify a cross-serotype broadly neutralising foot-and-mouth disease virus epitope	Marie Di Placido			
11:55	Amino Acid Substitution at VP2-72 Drives Antigenic Diversity in Contemporary FMDV O/ME-SA/Ind-2001 Field Isolates in Asia	Rie Kawaguchi			
12:05	Field Evidence of Fasciola hepatica-Mediated Modulation of Antibody Responses to Foot-and-Mouth Disease Vaccination in Water Buffaloes	Alejandra Capozzo			
12:15	Using Non-Metric Multidimensional Scaling applied to VP1 sequences to classify Foot and Mouth Disease Virus	Stephen Addison			
12:25-12:45	Discussion				
12:45- 14:00	Lunch				



Biogénesis Bagó and FMD vaccines

Our focus on biotechnology allows us, to develop, manufacture, and commercialize world-class solutions that contribute to animal health. Our strength is built over more than 70 years of continuous innovation on FMD vaccines, a strong manufacturing capacity of highly purified and high potency vaccines.

At Biogénesis Bagó, we believe that providing world-class vaccines we contribute to control and eradicate the disease and overcome even the toughest Foot and Mouth challenges in the world.

BIOAFTOGEN® FMD VACCINE

Worldwide presence



Over 35 licenses in more than 25 countries

First FMD vaccine to obtain the **EuFMD** pre-qualification

300 Million doses per year of manufacturing capacity

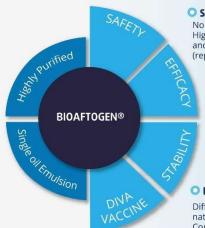
The evolution of animal health

BIOAFTOGEN®

World-Class FMD Vaccines







No post-vaccination reactions. High safety profile in all species and through all productive stages (reproduction, production, etc)

EFFICACY

Early onset and long duration of immunity. Broad cross-protection against circulating FMD viruses.

O STABILITY

Stable potency throughout the product's shelf-life (24 months)

O DIVA VACCINE

Differentiation of vaccinated from naturally infected animals. Key for Control and eradication programs.

High Potency vaccine > 32 PD50

BIOAFTOGEN® complete lineup of products designed to meet the specific needs of each market for controlling and eradicating Foot-and-Mouth Disease (FMD).



Antigen and Vaccine Bank

We provide Antigen and Vaccine Bank services to countries looking for practical and quick tools in case of foot-and-mouth disease emergencies. We have the expertise and capacity to produce, formulate and deliver large quantities of FMD vaccine doses around the world.



Broad immunological cross-reactivity

O/Cathay O/SEA/Mya-98 O/ME-SA/Ind2001e O/ME-SA/Ind2001d O/ME-SA/PanAsia O/ME-SA/SA-2018 O/ME-SA/PanAsia-2 O/EA-2 O/EA-3 O/EA-4

A/ASIA/Sea-97 A/ASIA/G-VII A/ASIA/Iran-05 A/AFRICA/G-IV A/AFRICA/G-I

ASIA1/ASIA/Sindh-08 ASIA1/ASIA/G-IX ASIA1/ASIA/G-VIII

SAT1/I SAT1/II SAT1/III SAT1/VII

SAT2/G-VII SAT2/G-XIV SAT2/G-V



Tested in FMD world references centers: 2010-2025

Scan the QR code to explore the cross-protection of BIOAFTOGEN® vaccine strains against field isolates from different serotypes and topotypes across the world.





Biogénesis Bagó



Session 3			
Diagnostics I			
14:00 Introduction Alejandra Capozzo & Anna Ludi			
	Oral Presentations		
14:05	Fighting FMD on the Frontlines: Lessons from Lateral Flow Device Testing in Indonesia	Nagendrakumar Singanallur Balasubramanian Presented by Wilna Vosloo	
14:15	Diagnosis of FMDV infection using mouth and nose swabs is fast and reliable	Phaedra Eblé	
14:25	Serological and Molecular Detection of Foot-and- Mouth Disease Virus in Livestock Markets of Nigeria: The Role of Nasal Swab Samples in Identifying Sub- clinical Infection	David Ehizibolo	
14:35	A simple approach for pen-side testing, to rapidly detect foot-and-mouth disease virus and Seneca Valley virus	Bryony Armson	
14:45	Stability of foot-and-mouth disease virus stored in cellulose-based FTA cards at different temperatures	Christopher Kasanga	
14:55-15:10	Discussion		
15:10-15:45 Coffee Break			
	Session 4		
	Diagnostics II		
15:45	Introduction	Melanie Chitray & Su-Mi Kim	
15:50	Keynote: Monoclonal antibodies for FMD diagnostics: still a strategic resource Followed by Q&A	Santina Grazioli	
	Oral Presentations		
16:20	Lyophilised PCR reagents to simplify nanopore sequencing of foot-and-mouth disease virus	Andrew Shaw	
16:30	Development and evaluation of a serotyping, real time rt-pcr assay for southern African territories (sat) serotypes of foot and mouth disease virus (fmdv)	Petronella Mosholombe	
16:40	Evaluation of a point-of-care molecular test to detect the presence of foot-and-mouth disease virus in milk	Shawn Babiuk	
16:50	Development evaluation of lineage specific assays to detect emerging lineages of concern	Amy Sowood	
17:00- 17:20	Discussion		
18:00	Depart for Gala Dinner		







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Day Three: Thursday 23rd October Istanbul Grand Ballroom 1

Introduction Session			
8:30	Overview of the WOAH/FAO FMD Laboratory Network	Don King	
Session 1			
	Epidemiology I		
8:40	Introduction	David Ehizibolo & Guillaume Girault	
8:45	Keynote: FMD in Buffalo Followed by Q&A	Anna Jolles & Bree Beechler	
	Oral Presentations		
9:15	A cross-sectional study of FMDV in African Buffalo in the Kruger National Park, South Africa: Diagnostic and Genetic characterization	Melanie Chitray	
9:25	Inferring Transmission Dynamics of Foot-and- Mouth Disease Virus: Who Infected Whom?	Ranjitha Huildore Bommanna	
9:35	Foot-and-mouth disease (FMD) outbreaks investigation in cattle: insights for FMD virus evolution in the southern highlands of Tanzania	Christopher Kasanga	
9:45	'Out of Africa' - incursions of exotic foot-and-mouth disease viruses into the Western Asia	Antonello Di Nardo	
9:55 – 10:10	Discussion		
10:10-10:40	Coffee Break		
	Session 2		
	Epidemiology II		
10:40	Introduction	Don King & Frank Mwiine	
	Oral Presentations		
10:45	Foot-and-mouth disease in small ruminants in North- western Pakistan	Syed Jamal Presented virtually	
10:55	Evolutionary Emergence of the A/ASIA/G-VII FMDV lineage in Western Asia	Ali Al-Rashed	
11:05	Does dose availability affect the optimal allocation of vaccines in settings of endemic Foot-and-Mouth Disease?	Glen Guyver-Fletcher	
11:15	FMD Outbreaks in Europe 2025	Michael Eschbaumer & Guillaume Girault	



11:30-12:00	Discussion		
12:00	Guest Speaker: Star-IDAZ	Jeremy Salt	
Closing Session			
12:10 – 12:30	Conclusion from GFRA's CEO	Alejandra Capozzo	
12:30-1:30	Lunch		











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Vote for the top three posters

Session A			
Title	Presenting Author	Poster No.	
Development of BSL-2 Compatible Neutralization Assays Platforms for FMDV Asia 1 serotype	Park, Sunghan	A1	
Using Non-Metric Multidimensional Scaling applied to VP1 sequences to classify Foot and Mouth Disease Virus.	Addison, Stephen	A2	
Exploring Foot and Mouth Disease Virus Proteins to Design Subunit Vaccine Using Immunoinformatics Approach	Akram, Qaiser	A3	
Creation of a bank of clinical samples collected from FMDV outbreaks in Anatolia, Türkiye, to evaluate candidate host genes as markers of FMDV persistence in cattle	Blaise-Boisseau, Sandra	A4	
In vitro assessment of the cellular and humoral immune response induced by a FMDV SAT2 ERITREA 98 vaccine in cattle against homologous and heterologous FMDV strains	Bultinck, Anne-Sophie	A5	
SEROPREVALENCE AND RISK-FACTORS FOR FOOT-AND-MOUTH DISEASE IN GOATS IN UGANDA FOLLOWING THE 2024 WIDESPREAD OUTBREAKS: A RISK-BASED SURVEY	Byamukama, Benedicto	A6	
Evaluation of FMDV type O field strains of lineages SEA-Mya98, ME-SA Ind 2001 and ME-SA Panasia, during 2019-2024 in Vietnam and its vaccine matching assessment with O1 Campos monovalent vaccine strain.	Castillo, Daira	A7	
Intersection of Foot and Mouth Disease and Xenotransplantation: A bioethical exposition of contemporary issues.	Chingarande, George Rugare	A8	
Seeking evidence of FMDV Recombination in Pigs	Deutschmann, Paul	A9	
DEVELOPMENT OF A NEW ISOTHERMAL ASSAY FOR THE ON- FIELD DETECTION OF FOOT-AND-MOUTH DISEASE VIRUS	Foglia, Efrem Alessandro	A10	
Assessment of transmission risk from persistently infected animals with foot-and-mouth disease in Thailand	Fukai, Katsuhiko	A11	
Analysis of differential replication of FMDV variants in cell cultures using subgenomic reporter replicons	Gismondi, Maria Ines	A12	
Monoclonal antibodies against FMDV type SAT 3: preliminary characterization and potential use in diagnostic assays	Grazioli, Santina	A13	



Uncovering Surveillance and Vaccine Matching Gaps in Small Ruminants and Domestic Pigs: A 24-Year Review of FMDV in East Africa		A14
Foot and Mouth Disease virus-like particle produced in E.coli expression system is a potential antigens for novel vaccine	Kim, Bong Yoon	A15
AN UPDATE ON THE EPIDEMIOLOGY OF CIRCULATING FOOT-AND-MOUTH DISEASE VIRUS IN CAMEROON, CENTRAL AFRICAN ENDEMIC REGION	Lendzele, Sevidzem	A16
Mathematical Modelling of Foot and Mouth Disease Transmission in Beef herds under Endemic Conditions	M Farouk, Manar	A17
THERMAL STABILITY EVALUATION OF CDVac AFTOSA BIVALENT VACCINE IN CATTLE	Palacio, Nicolas	A18
Evaluation of Live-Attenuated Foot-and-Mouth Disease Vaccine Strains in Susceptible Animals	Park, Jong-Hyeon	A19
Effect of therapeutic diet on the modulation of acute phase proteins and cytokines in crossbred calves infected with footand-mouth disease virus (FMDV)	Patel, B H Manjunatha	A20
Use of microthreads for studying foot-and-mouth disease virus survival in aerosols	Perez Martin, Eva	A21
A novel approach to titrating serum antibodies against foot and mouth disease virus: Solid phase competitive ELISA using purified mammalian cell line integrin receptors	Ramasamy Periyasamy, Tamil Selvan	A22
Validation of a Portable Direct rRT-PCR CMOS Biosensor for Rapid On-Site Detection and Serotyping of Foot-and-Mouth Disease Virus in Clinical Samples	Ryoo, Soyoon	A23
Phylogenetic Analysis of O/ME-SA/Ind-2001e lineage Foot-and- Mouth Disease Virus in the 2025 Outbreak in the Republic of Korea	Ryoo, Soyoon	A24
ENHANCED ACTIVE SURVEILLANCE AND SEROTYPE PROFYLING FOR FOOT AND MOUTH DISEASE CONTROL IN 6 COUNTIES - KENYA.	Sambili, Peris	A25
Novel SAT 1/I Foot-and-Mouth Disease Vaccine Strain Confers Broad Cross- Immunity Against emergent Middle Eastern and African Isolates	Scian, Romina	A26



Operation of a Foot-and-Mouth Disease Serum Bank to	Seo, Hyun-Ji	A27
Standardize Serological Diagnosis in South Korea		
Efficiency of FMDV packaging correlates with genetic distance between genome and capsid	Tuthill, Toby	A28
Initial validation of a small animal model for potency assessment of FMD vaccines for batch release	Ramasamy Periyasamy, Tamil Selvan	A29

Session B			
Title	Presenting Author	Poster No.	
Continuous Post-Vaccination Evaluation in Industrial Dairy Farms	Abdollahi, Darab	B1	
Evaluation of a Tetravalent FMD Vaccine Produced for Eastern Africa	Aktas, Sinan	B2	
Epitope tags in FMDV 3A reveal microtubule-dependent merging of sites of replication and cell-type dependent superinfection exclusion.	Berryman, Stephen	B3	
Foot-and-Mouth disease is back in Europe in 2025: a focus on the cases in Hungary and Slovakia	Blaise-Boisseau, Sandra	B4	
Exploring the guinea pig model in the putative persistent phase of infection with foot-and-mouth disease virus	Bultinck, Anne-Sophie	B5	
Full set of new solutions for a rapid and reliable Foot and Mouth Virus detection : Double Antibody Sandwich ELISA, freeze dried RT-qPCR and Lateral flow device for point-of-care diagnosis	Comtet, Loïc	B6	
Development of a primary lamb kidney cell line towards propagation of foot and mouth disease.	Gaboiphiwe, Kitsiso	B7	
Porcine tonsil slices as a tool to study early FMDV-host interaction	Gerner, Wilhelm Presented by Toby Tuthill	B8	
Integrating Epidemiological and Sequencing Data for Epidemic Intelligence: Co-designing and Trialling a Hands-on, Capacity- building Workshop to Enhance Preparedness and Response to Transboundary Animal Diseases (TADs) in Endemic Settings	Gonzales, Lina	B9	
Competitive interactions within mixtures of infectious clones A01Lc and A01NLc: impact on FMDV lethality in mice	Gonzalez Mora, Roman David	B10	



Spatial and network-based risk factors for foot-and-mouth disease in Uganda: A decade of outbreak data 2016-2025	Hasahya, Emmanuel	B11
CONTINUED CIRCULATION OF FOOT-AND-MOUTH DISEASE VIRUS TOPOTYPES O/EA-3, A/AFRICA/G-IV AND SAT2/VII IN NIGERIA	Lefebvre, David	B12
Capsid Integrity and TLR7 Activation: Essential for Effective VLP-Based Foot-and-Mouth Disease Vaccines	Miraglia, María Cruz	B13
NEW-GENERATION VACCINES AGAINST FOOT-AND-MOUTH DISEASE VIRUS: STRATEGIES TO ENHANCE THE IMMUNOGENICITY OF RECOMBINANT EMPTY CAPSIDS	Molinari, Maria Paula	B14
Epidemiology and effectiveness of interventions for Foot and Mouth Disease in Africa: A systematic review and meta-analysis	Mwebe, Robert	B15
Foot-and-Mouth Disease Vaccination and Post-vaccination monitoring in Korea, 2024	Noh, Jinhyeong	B16
COMPARISON OF POTENCY CONTROL METHODS (IN-VIVO/IN- VITRO) OF FOOT-AND-MOUTH DISEASE TRIVALENT VACCINE IN SWINE		B17
Acute-phase dynamic of Senecavirus A infection in pigs inoculated with a Taiwanese isolate	Pan, Cheng-Ju	B18
Thermostable virus-like particles (VLP) of foot and mouth disease virus (FMDV) serotype O/IND/R2/1975: An alternate antigen in liquid phase blocking ELISA (LPBE) for titration of antibodies	Ramasamy Periyasamy, Tamil Selvan	B19
Solid phase competitive ELISA (SPCE) for screening anti-capsid antibodies to FMDV serotype O Indian vaccine strain: Comparison between polyclonal and monoclonal antibody assays	Ramasamy Periyasamy, Tamil Selvan	B20
First case of Foot-and-Mouth Disease virus (FMDV) in an Elephant from Cambodia	Ryoo, Soyoon	B21
ENHANCED ACTIVE SURVEILLANCE AND SEROTYPE PROFYLING FOR FOOT AND MOUTH DISEASE CONTROL IN 6 COUNTIES IN KENYA	Sambili, Peris	B22
Evaluation of different foot-and-mouth disease vaccination protocols in cattle in the Zambezi region of Namibia	Samuntu, Freddy	B23



Effective Early Immunization in Calves Achieved with a	Scian, Romina	B24
Commercial FMD Vaccine That Surpasses Maternal Immunity		
FIELD EVALUATION OF IMMUNE RESPONSE AGAINST A 0,5 ML	Scian, Romina	B25
FOOT-AND-MOUTH DISEASE VACCINE THROUGH A NEEDLE-		
FREE INJECTION DEVICE OR CONVENTIONAL NEEDLE		
Recent incursions of FMDV topotype O/EA-3 in Libya (2019-2025)	Trogu, Tiziana	B26
Epidemiological Survey of Foot and Mouth Disease (FMD) in	Vepkhvadze, Nino	B27
Georgia		
Comparative Multi-Omics Analysis of the Open Reading Frames	Woziri, Abubakar	B28
of Foot-and-Mouth Disease Virus Serotypes: Insights into Genetic	Presented by Susan Kerfua	
Heterogeneity, Evolution and Implications for Vaccine		
Development in Africa		



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