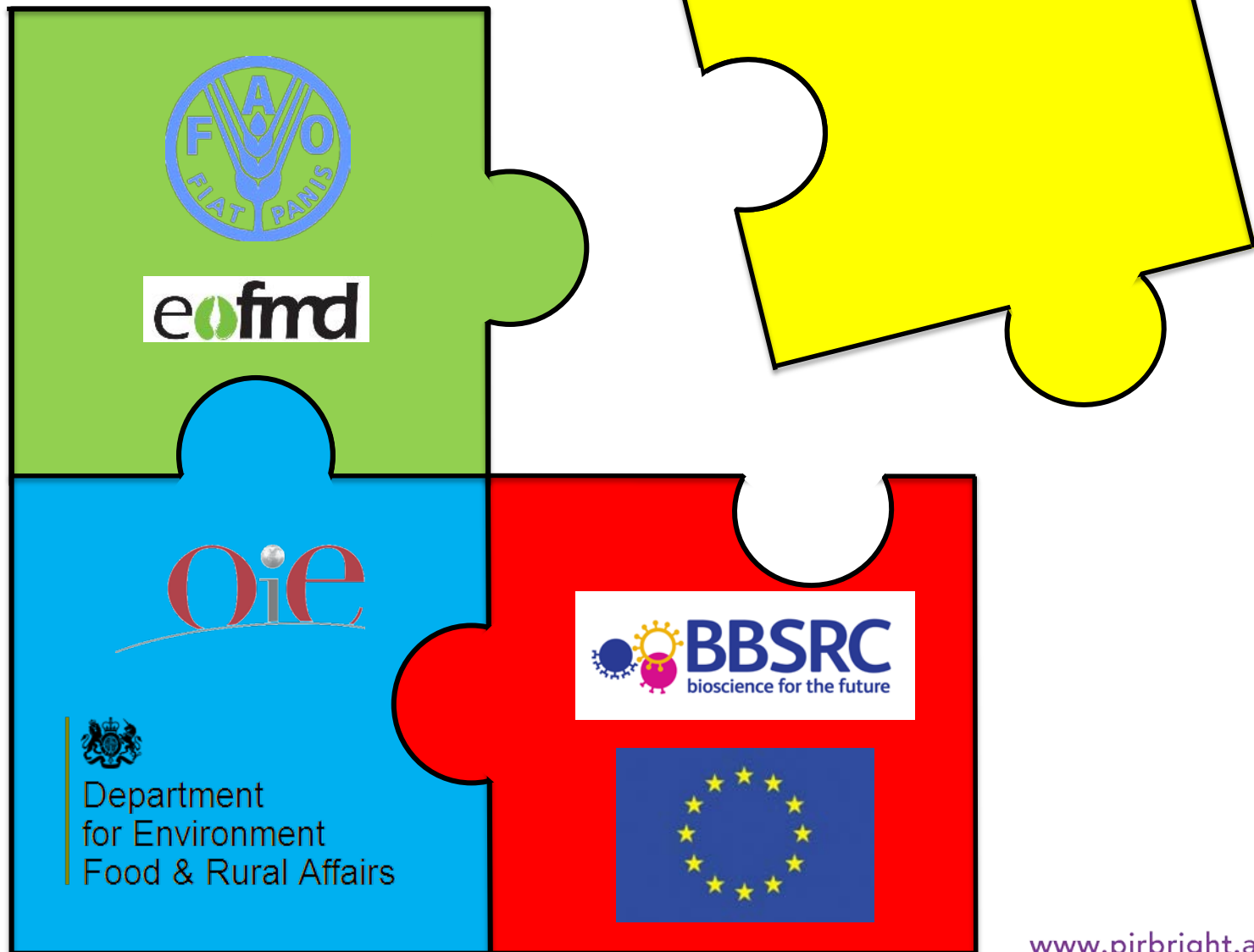
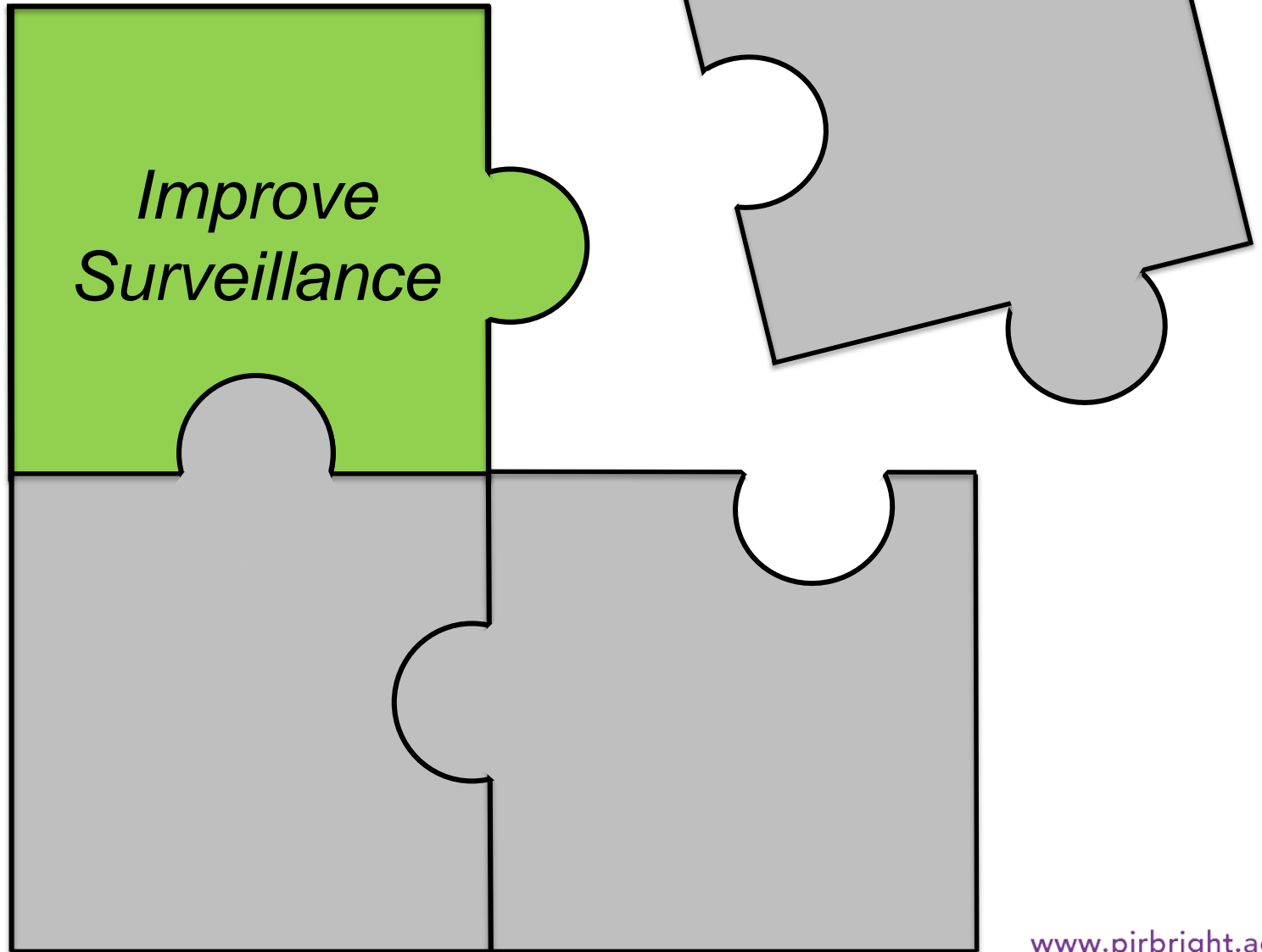


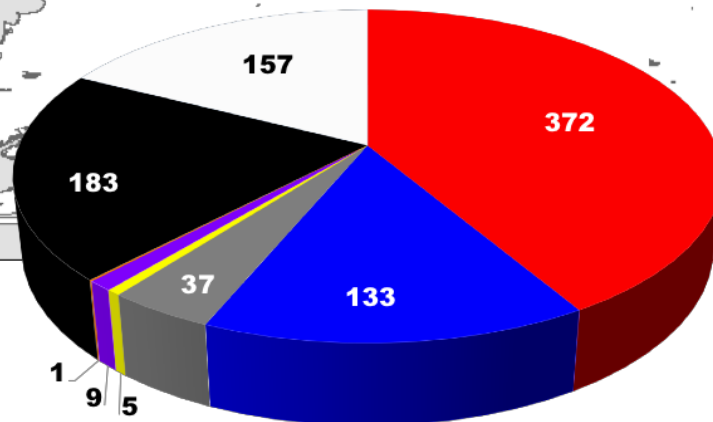
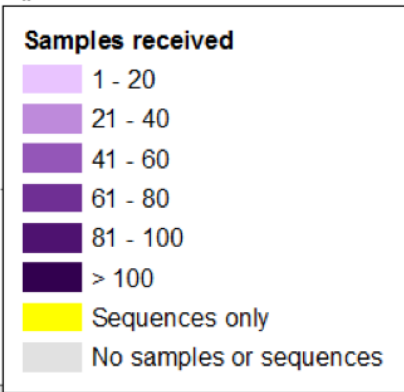
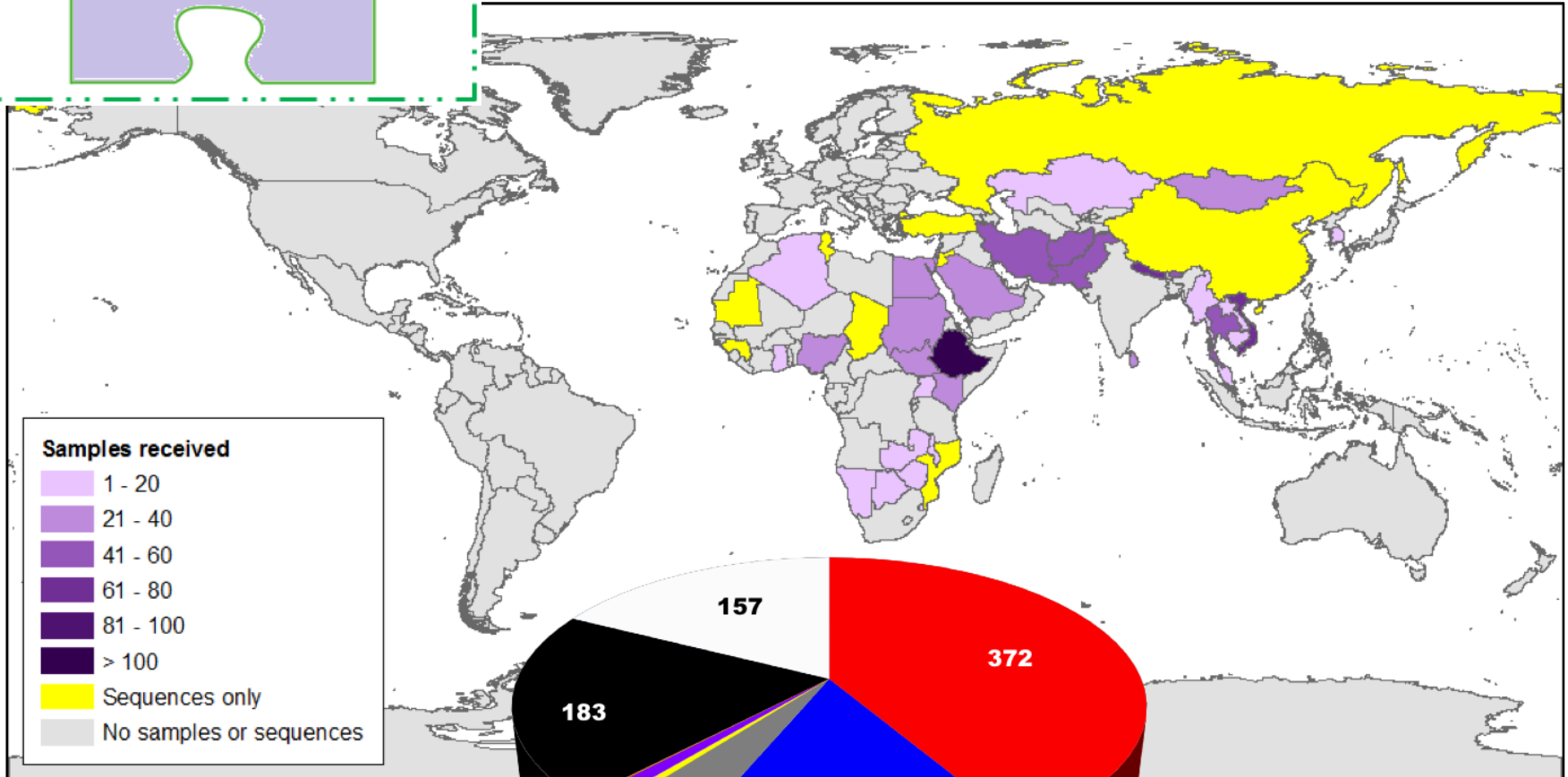
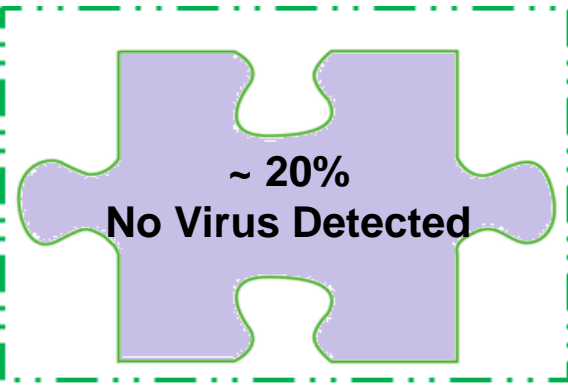
What are the current priorities for diagnostics?



What are the current priorities for diagnostic?



The Missing Piece



■ O ■ A ■ ASIA-1 ■ SAT 1 ■ SAT 2 ■ SAT 3 ■ FMDV GD ■ NVD



**Reported
FMD cases**

**Unsampled
and
unreported
FMD cases**

- **Lack of veterinary infrastructure**
- **Lack of incentives to report outbreaks**
- **Low priority of FMD**



Simpler and safer shipping methods



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for Environment
Food & Rural Affairs



Recovery of Viral RNA and Infectious Foot-and-Mouth Disease Virus from Positive Lateral-Flow Tests

Veronica L. Fowler, Bartłomiej M. Bankowski, Paul V. Barnett, Jemma Wadsworth, ...
Published: October 2016



Molecular and Cellular Probes
Volume 30, Issue 4, August 2016, Pages 225-230



Evaluation of FTA® card for the rescue of infectious foot-and-mouth disease virus by chemical transfection in cultured cells

Jitendra K. Biswal, Saravanan Subramaniam, Rajeev Ranjan, ...

Transboundary and Emerging Diseases

ORIGINAL ARTICLE | Free Access

Safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic

A. Romey, A. Relmy, K. Gorna, E. Laloy, S. Zientara, S. Blaise-Boisseau, L. Bakkali Kassimi
First published: 07 April 2017 | <https://doi.org/10.1111/tbed.12648>





Field tests for rapid detection

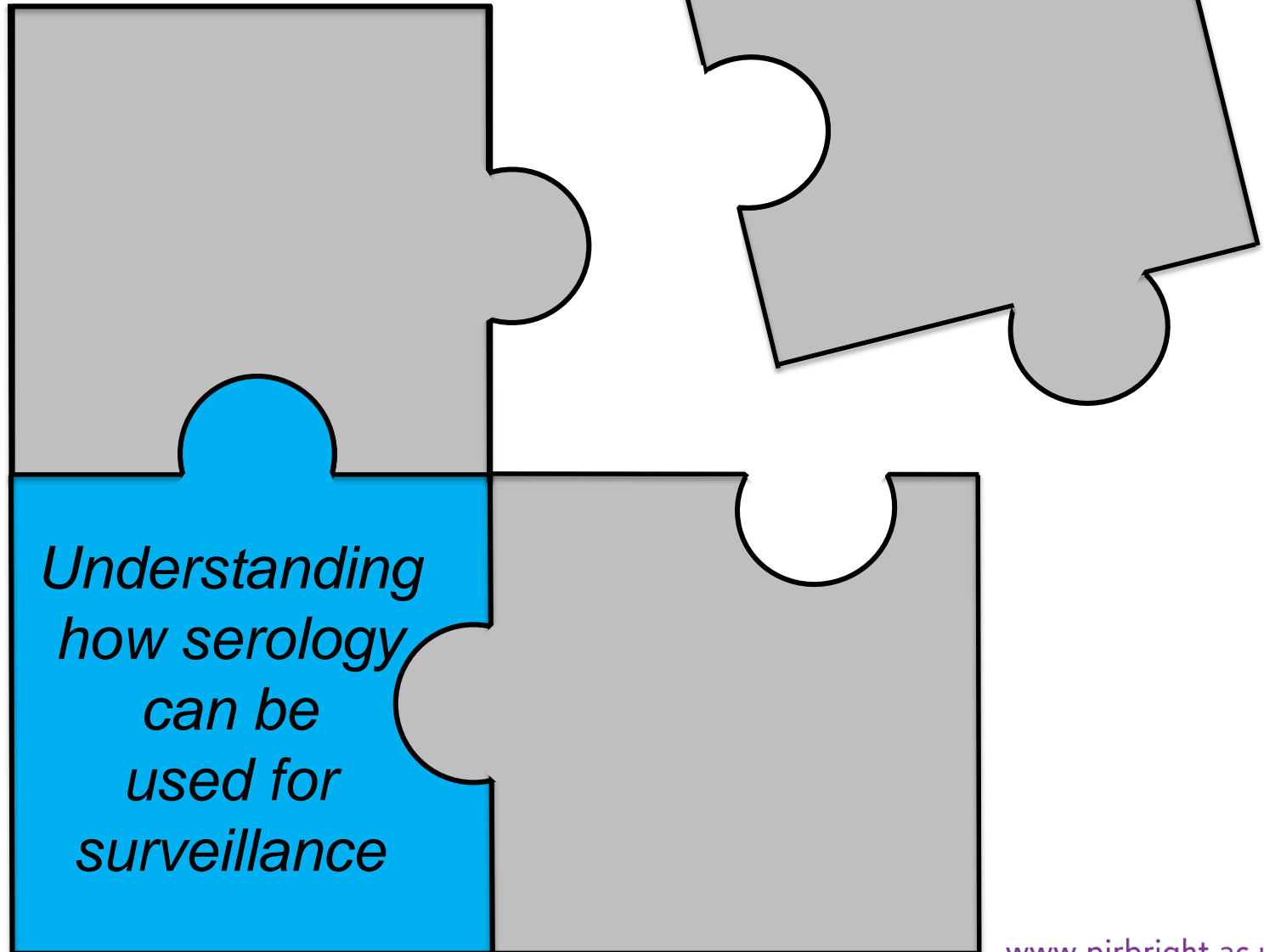



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Food & Rural Affairs

Partners:




What are the current priorities for diagnostic?





Field veterinarians arriving after outbreak

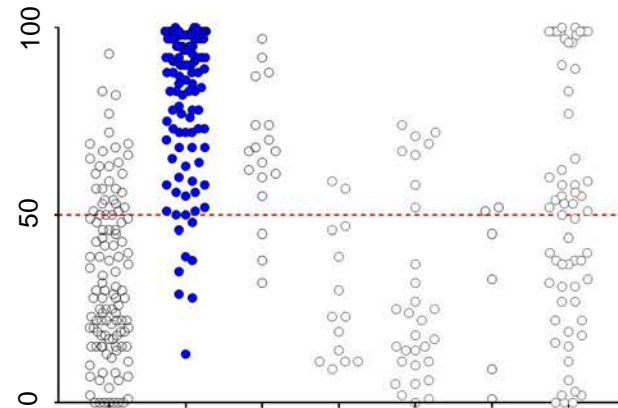
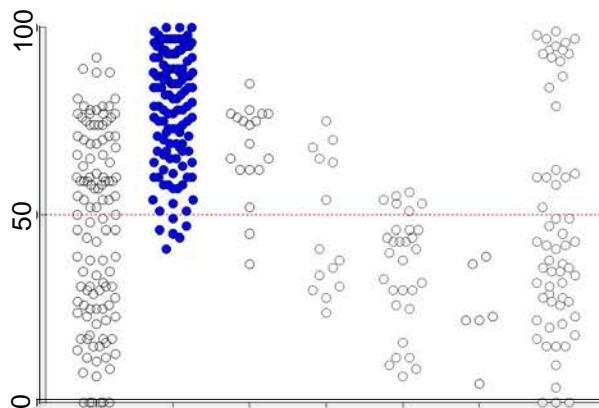
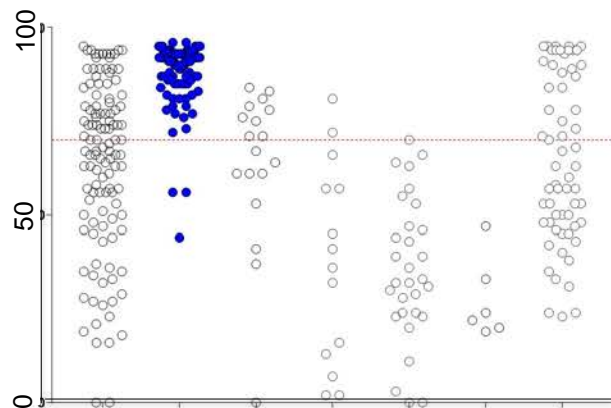
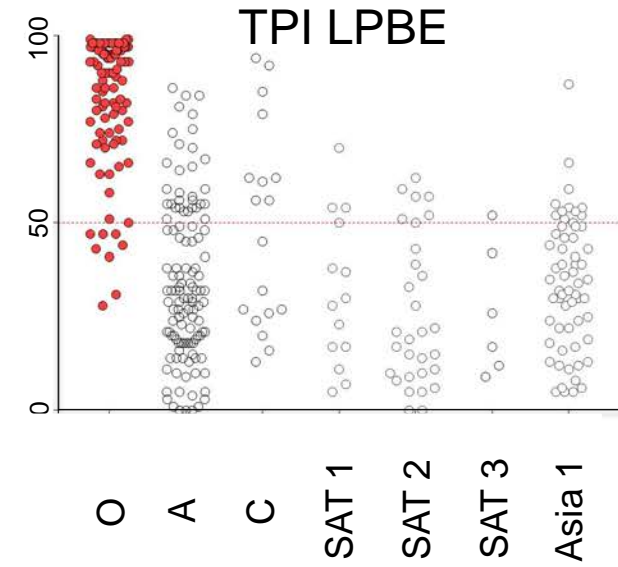
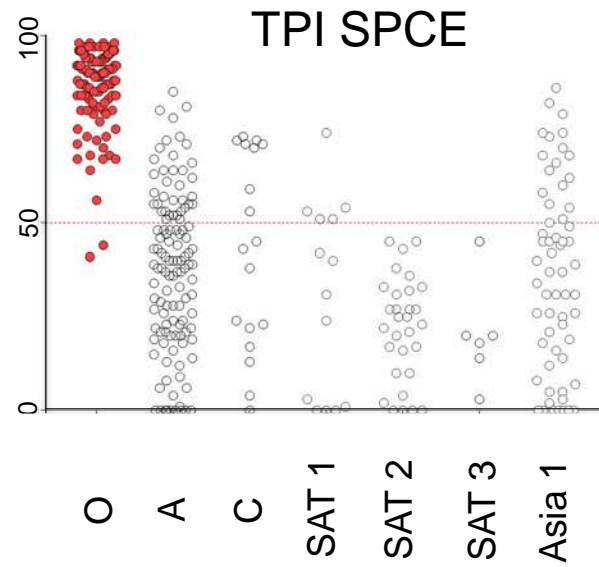
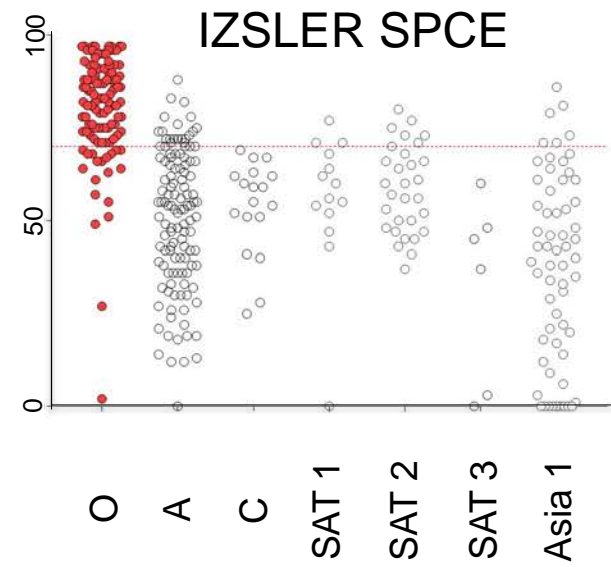




Cross-reactivity in ELISAs



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Food & Rural Affairs



Partners:



Istituto Zooprofilattico Sperimentale
della Lombardia e dell'Emilia Romagna

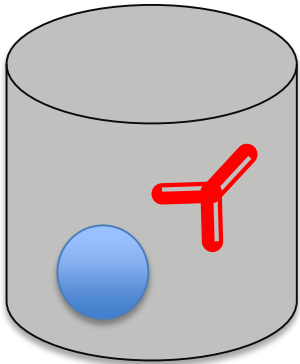


Next Generation ELISA kit

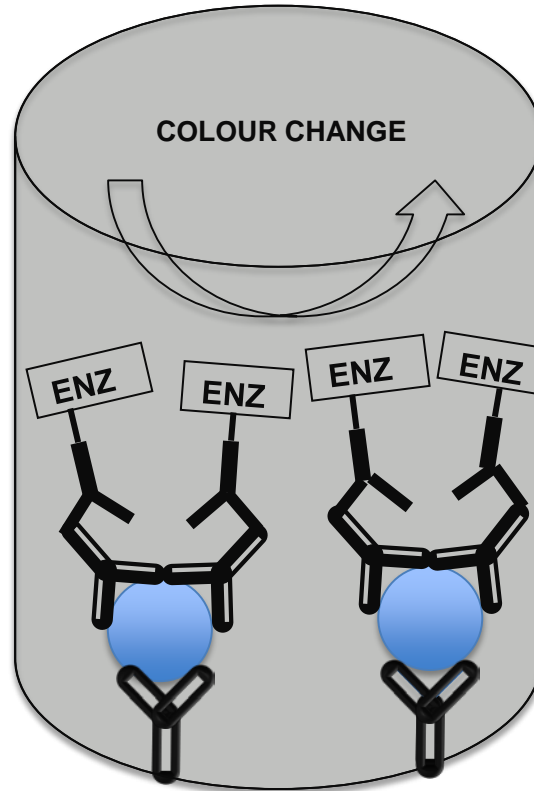
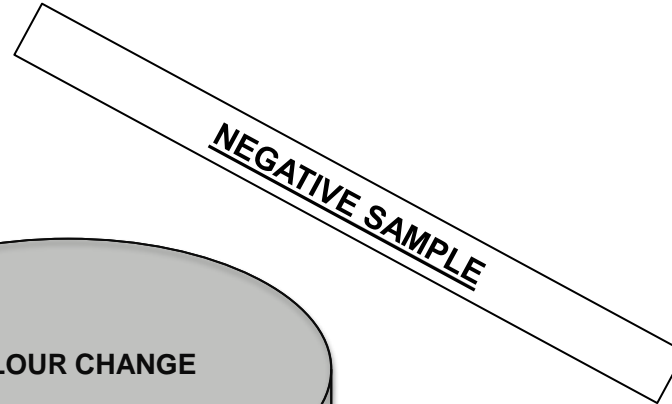


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Liquid Phase



No Match



Microtitre plate well

Substrate/Chromogen
Species specific horse radish peroxidase conjugate
Serotype specific guinea pig antibodies
Virus/antigen – serotype specific NO serotype specific antibodies
Capture- serotype specific rabbit antibodies



RESEARCH ARTICLE

Truncated Bovine Integrin Alpha-v/Beta-6 as a Universal Capture Ligand for FMD Diagnosis

Gareth Shimmon¹, Britta A. Wood¹, Alison Morris¹, Valerie Mioulet¹, Santina Grazioli², Emiliana Brocchi², Stephen Berryman¹, P. King¹, Alison Burman¹, Terry Jackson^{1*}

¹ The Pirbright Institute, Ash Rd, Pirbright, Surrey GU10 0EF, United Kingdom, ² Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, P.le V. Mantovani, 1, 41100 Parma, Italy

* terry.jackson@pirbright.ac.uk

gdom, 2 Istituto Zooprofilattico
cia, Italy

Abstract

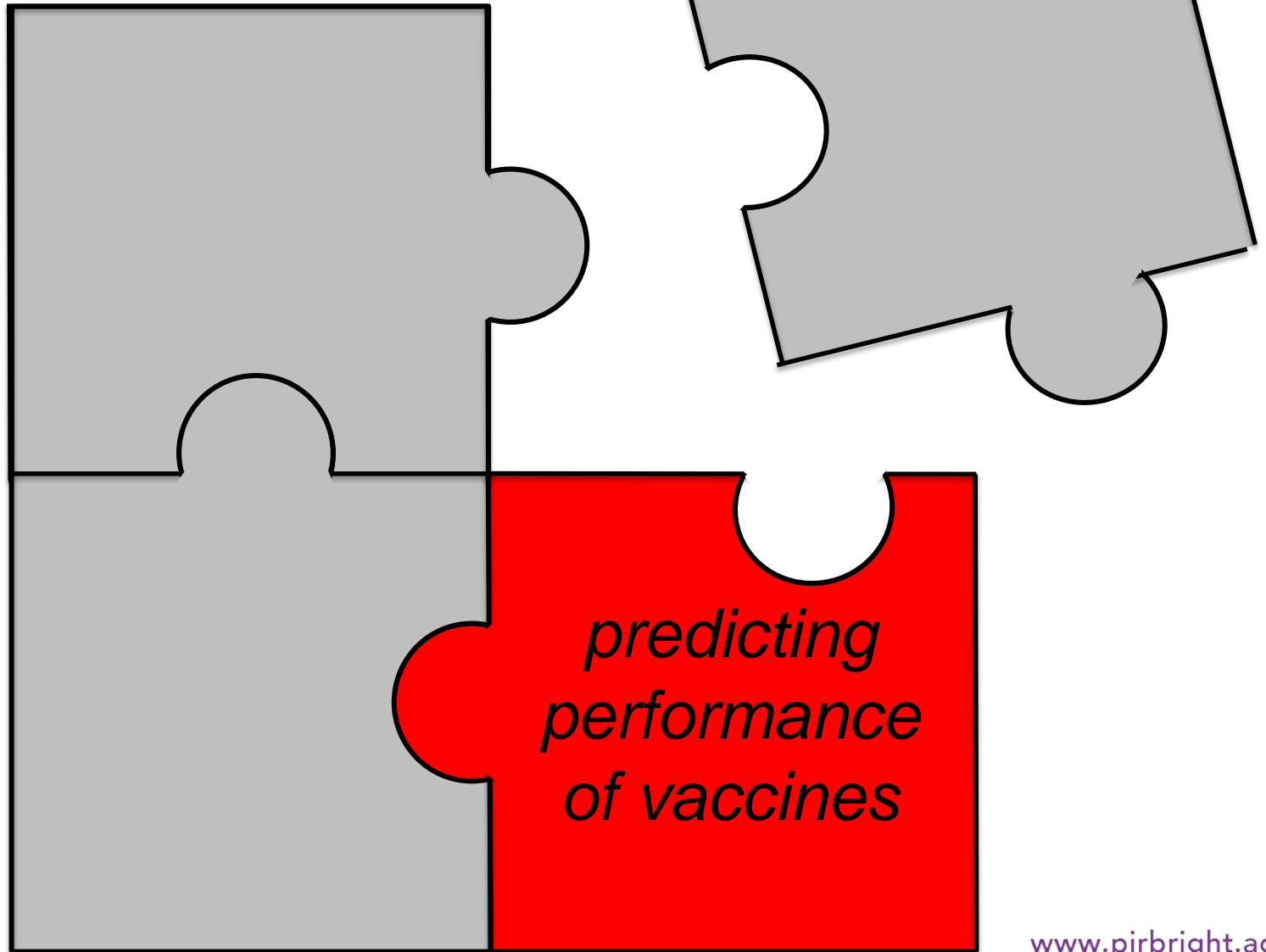
Fo

Navigation bar with icons for save, print, up, down, page 1 / 13, zoom in, zoom out, and a search icon.

Microtitre plate well

gions of the world and is one of the

What are the current priorities for diagnostic?





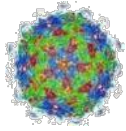
Well defined correlates of protection and good bioinformatics from sequencing are missing



FRIEDRICH-LOEFFLER-INSTITUT
FLI
Bundesforschungsinstitut für Tiergesundheit
Federal Research Institute for Animal Health

High potency vaccines induce protection against heterologous challenge with foot-and-mouth disease virus

K.E. Brehm^a, N. Kumar^a, H.-H. Thulke^b, B. Haas^{a,*}



Field
Virus



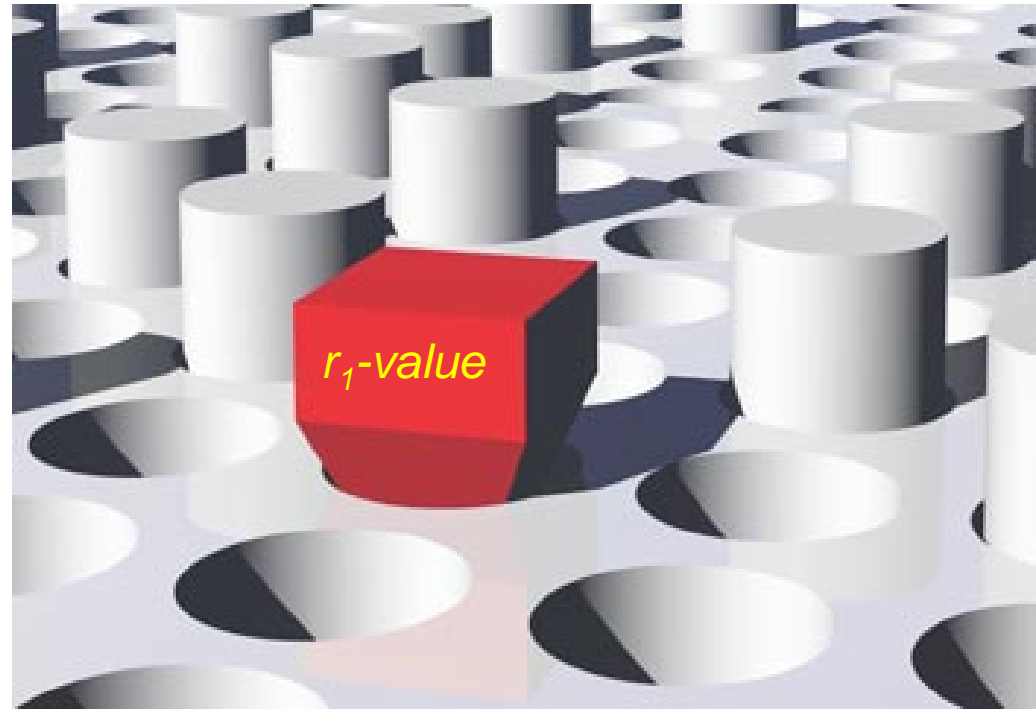
neutralise



Vaccine
Virus

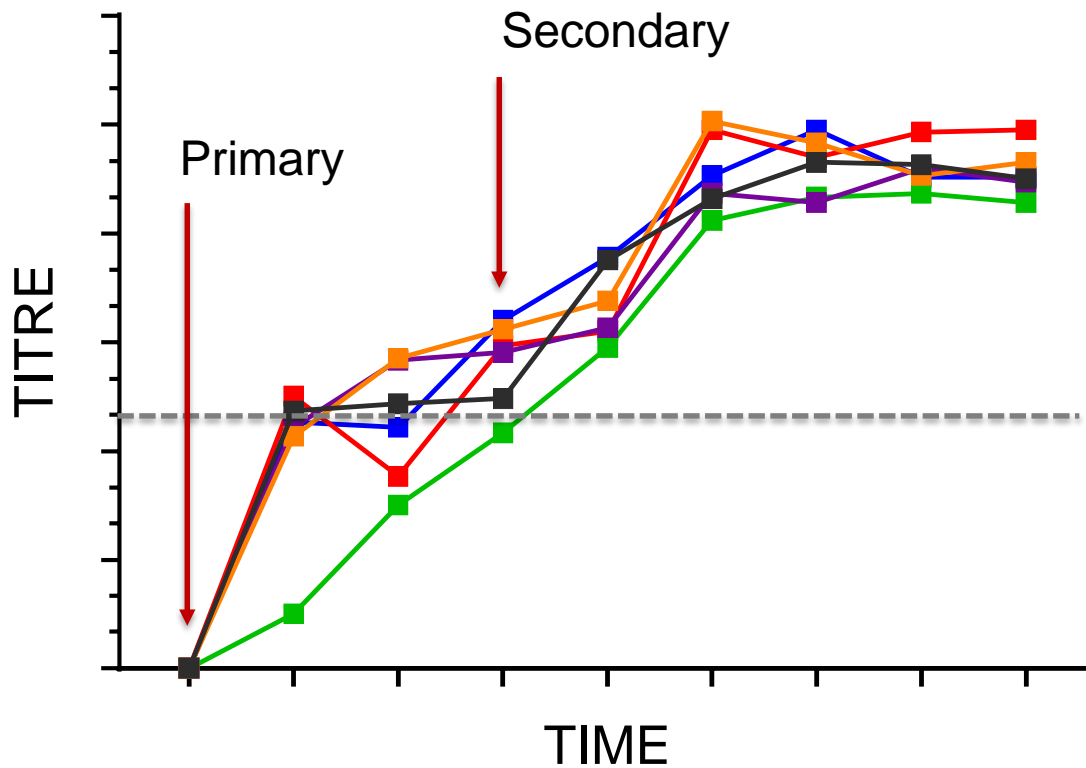


≥ 0.3





Well defined correlates of protection & good bioinformatics from sequencing are missing

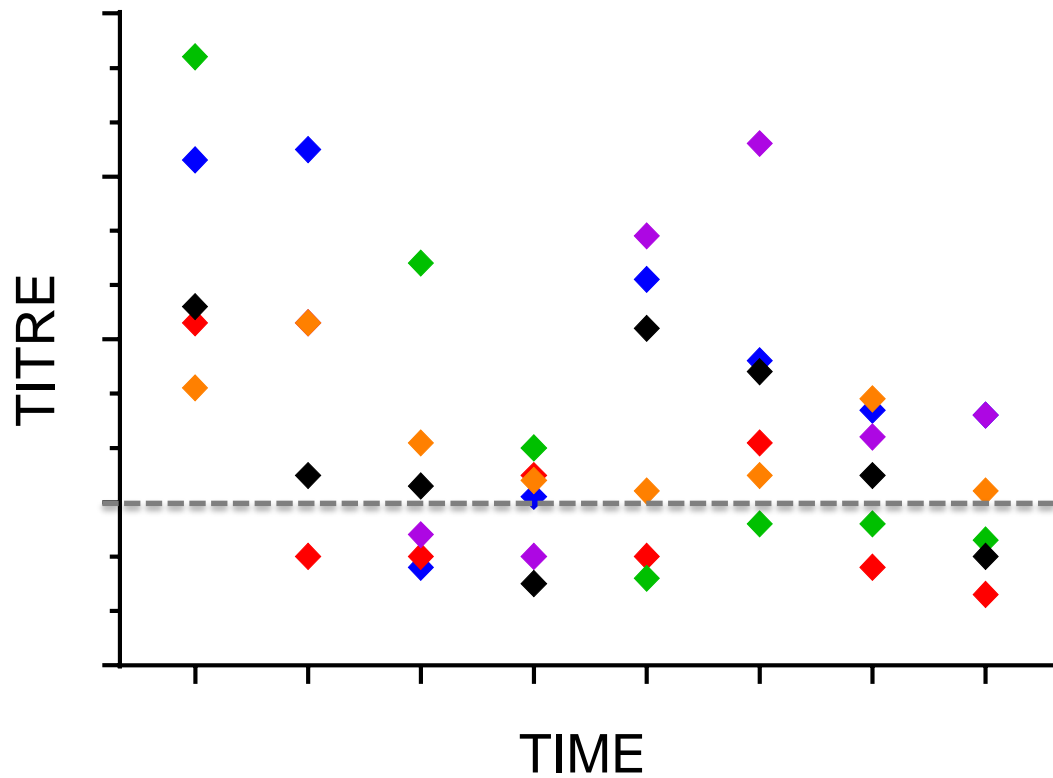


Partners:





Well defined correlates of protection & good bioinformatics from sequencing are missing

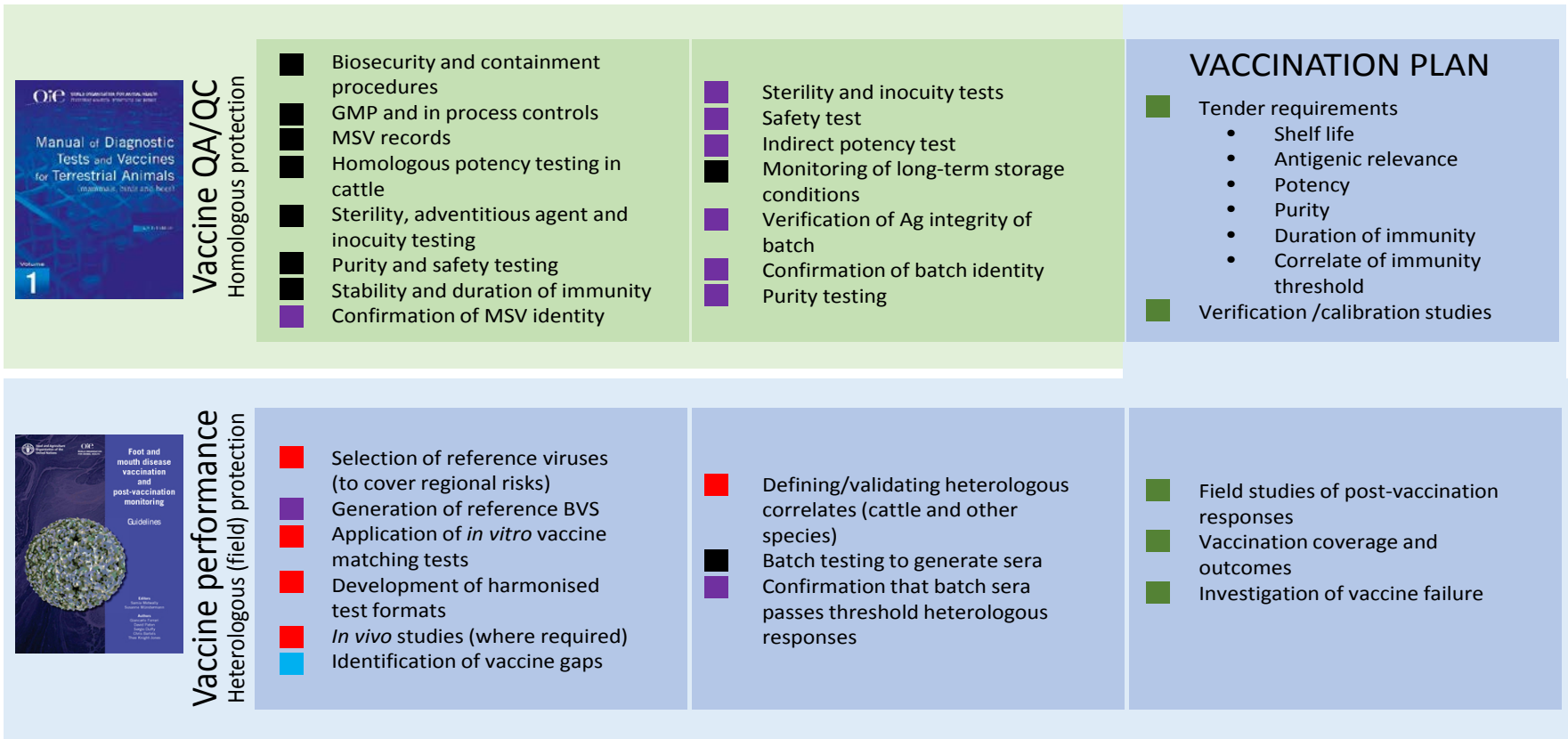


Partners:





FMDV vaccine QA/QC pipeline for Africa

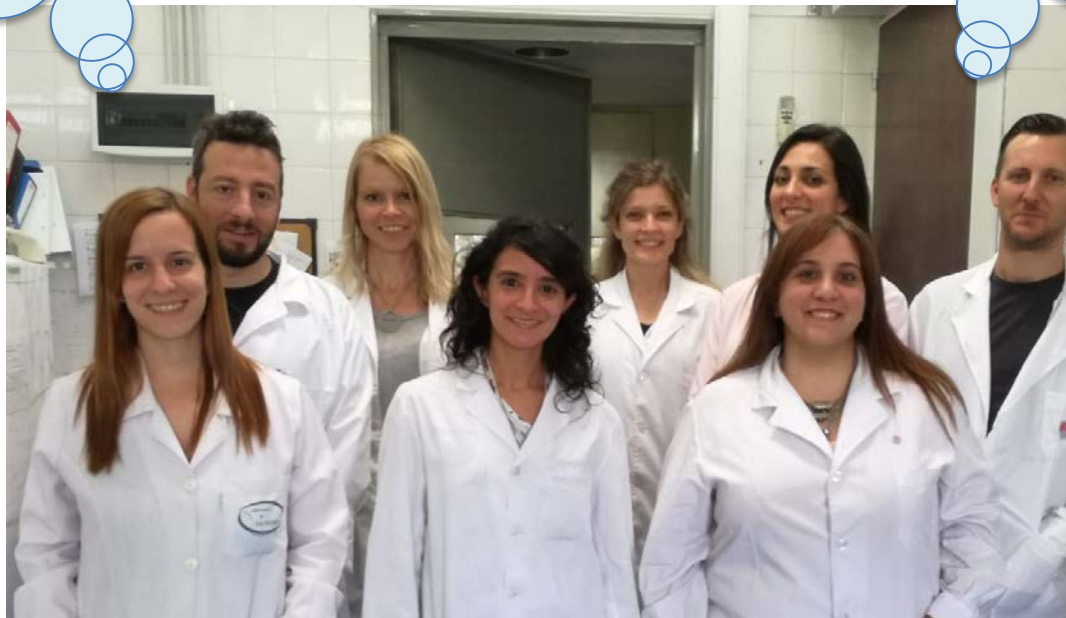
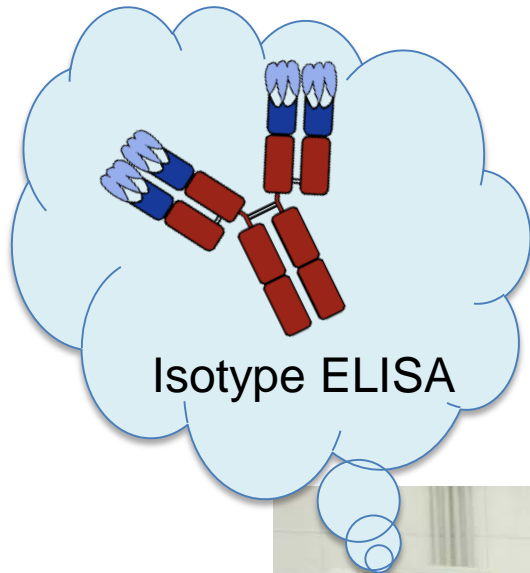


KEY

- Vx Producers (with audit at registration/purchase)
- AU-PANVAC (with assistance from WRLFMD)
- Vx producer (with supervision/audit by AU-PANVAC) – or AU-PANVAC
- Customer (with support from FMD Reference labs/AU-PANVAC – where needed)
- OIE/FAO FMD Lab Network



Alternative diagnostic tests for correlates of protection

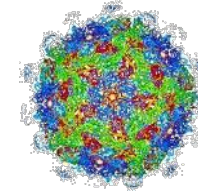


Partners:

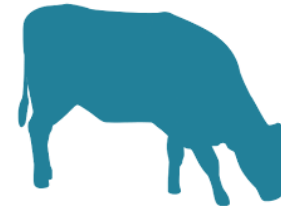
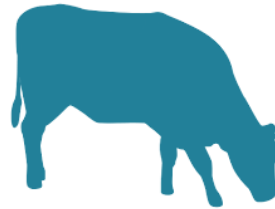




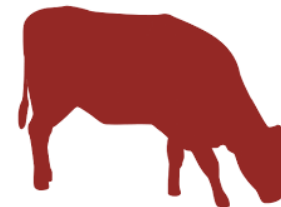
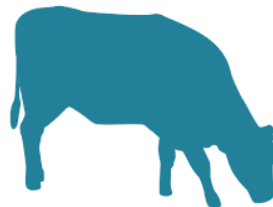
Heterologous challenge studies



Homologous “traditional”
challenge study



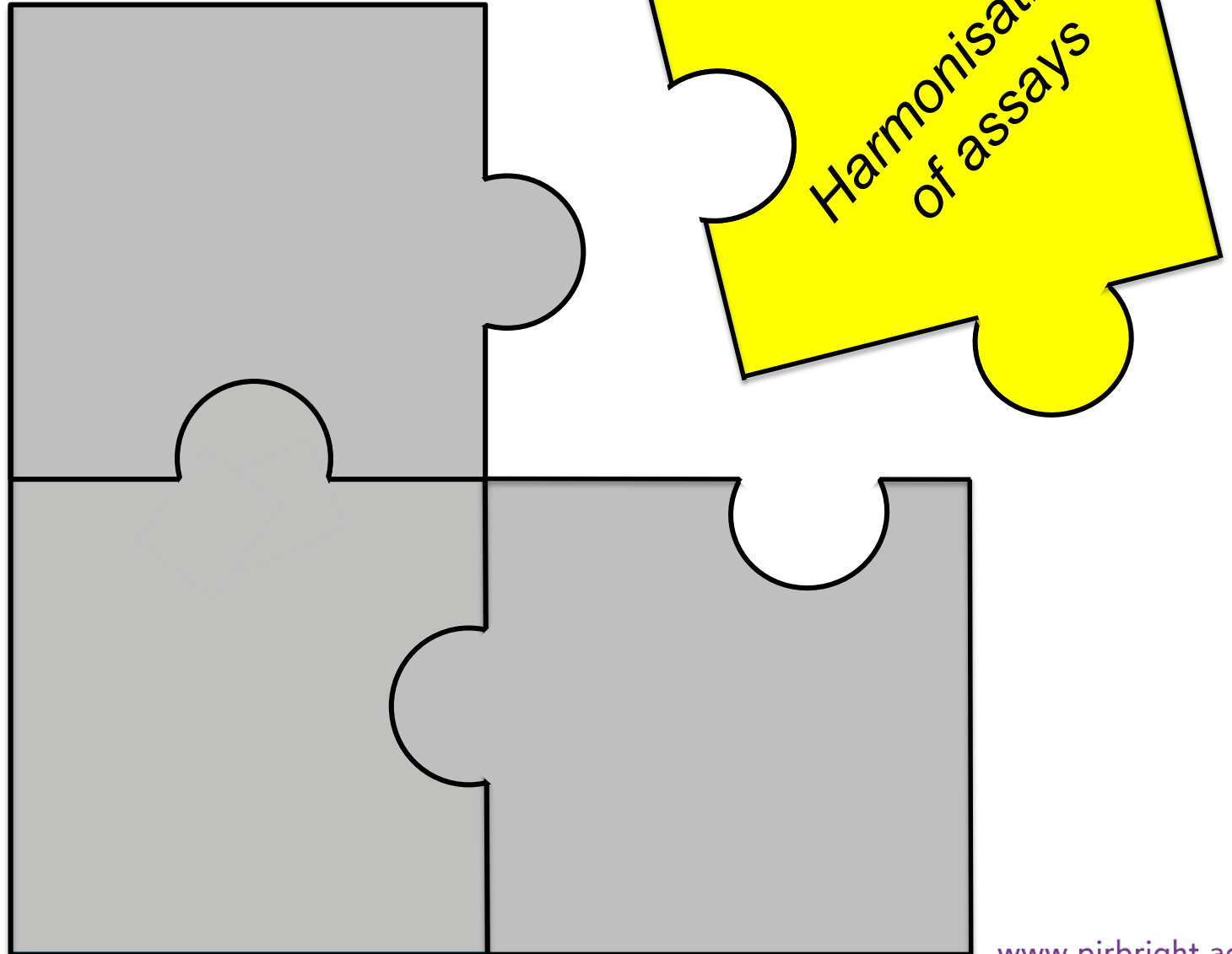
Heterologous
challenge study



Partners:



What are the current priorities for diagnostic?



The Missing Piece





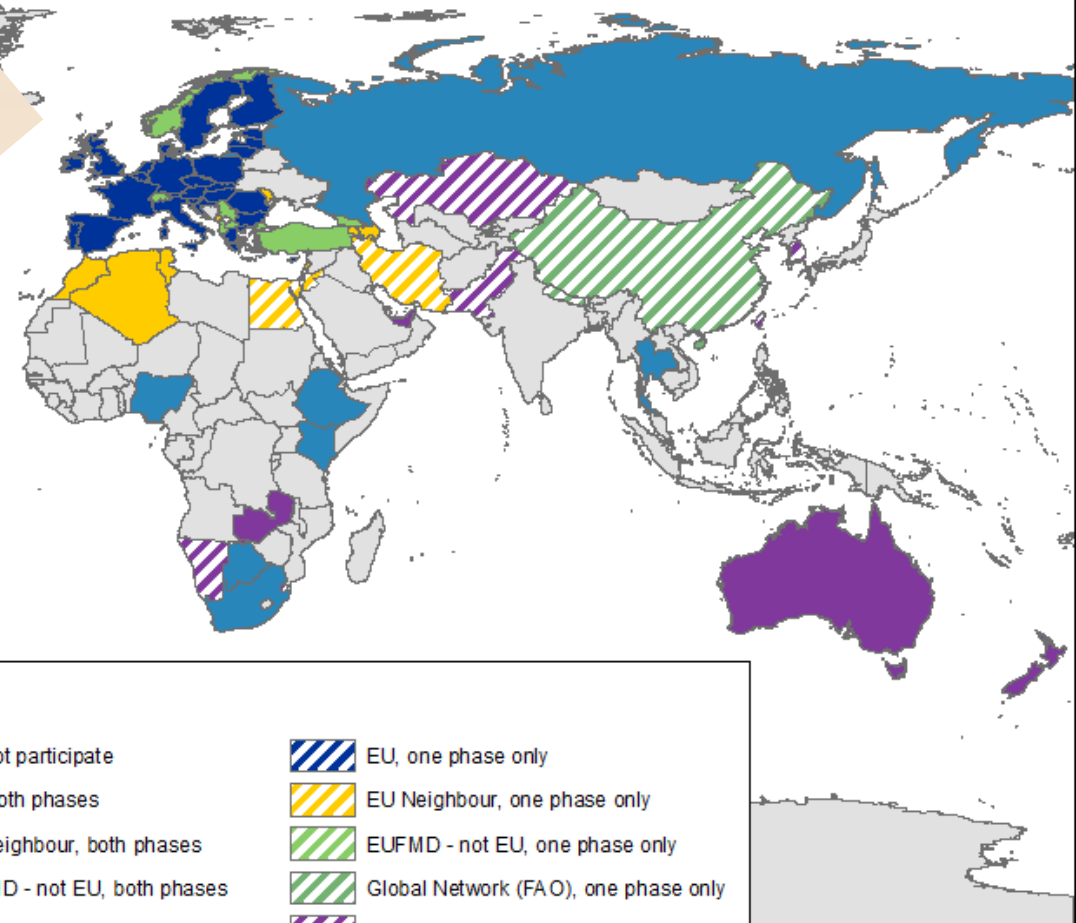
Harmonisation Exercises



FMD vaccine matching: inter-laboratory study for improved understanding of r_{12} values.

DRAFF

1 Tom Willems¹, Annel De Vleeschouwer^{1,2}, Mariano Perez-Fernandez⁷, Yanmin Li⁶, Anna-Luisa David¹, Ginevra Wiltsen⁴, Bob Statham¹, Bernd Hees^{5†}, Nora Matthies¹, Blanca Robiolo³, Claudia Beascochea Perez^{2†}, Eduardo Marader², Eliana Smitsaart⁸, José-La Torre^{6†}, Kris De Clercq^{1,4†}



74 countries in total

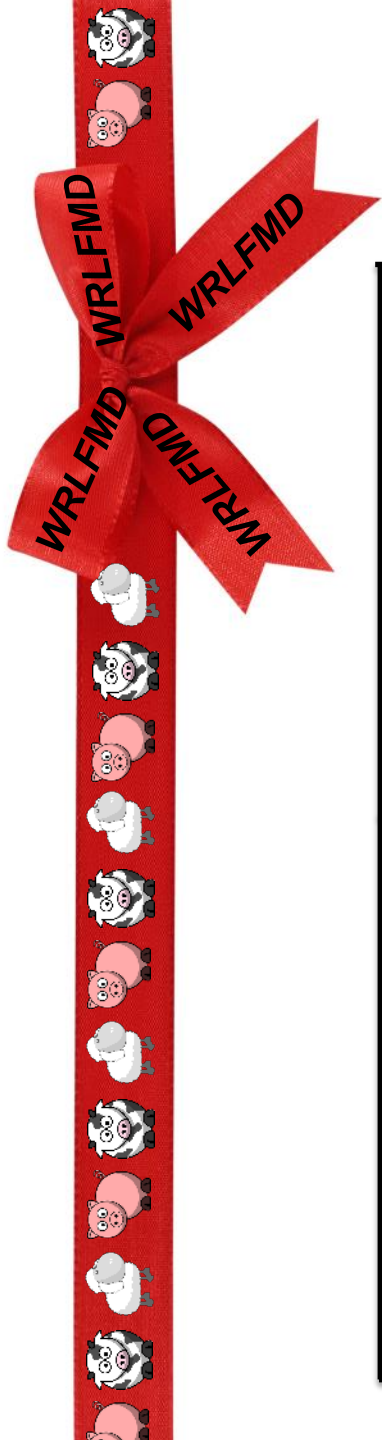
Legend

Did not participate	EU, one phase only
EU, both phases	EU Neighbour, one phase only
EU Neighbour, both phases	EUFMD - not EU, one phase only
EUFMD - not EU, both phases	Global Network (FAO), one phase only
Global Network (FAO), both phases	Self Funded, one phase only
Self Funded, both phases	

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Bryony Armson
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Beth Johns
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Lidia Lasecka

