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FIELD EVALUATION OF A SAFE AND COST-EFFECTIVE SHIPMENT OF FMDV SUSPECTED SAMPLES TO DIAGNOSTIC LABORATORIES USING LATERAL FLOW DEVICES

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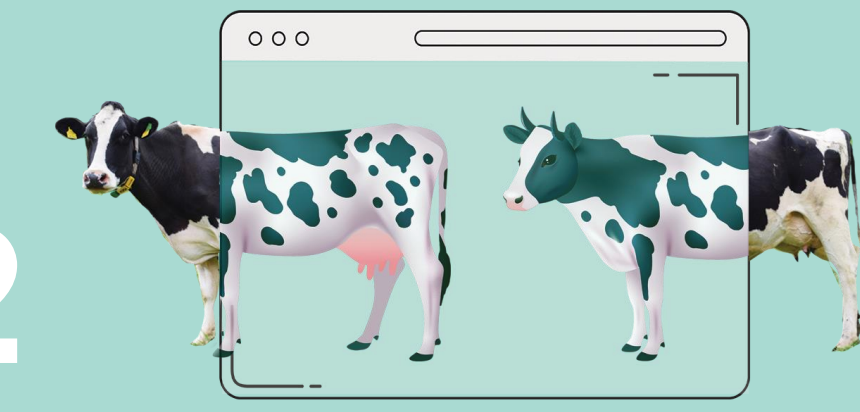
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Field evaluation of a safe and cost-effective shipment of FMDV suspected samples to diagnostic laboratories using lateral flow devices

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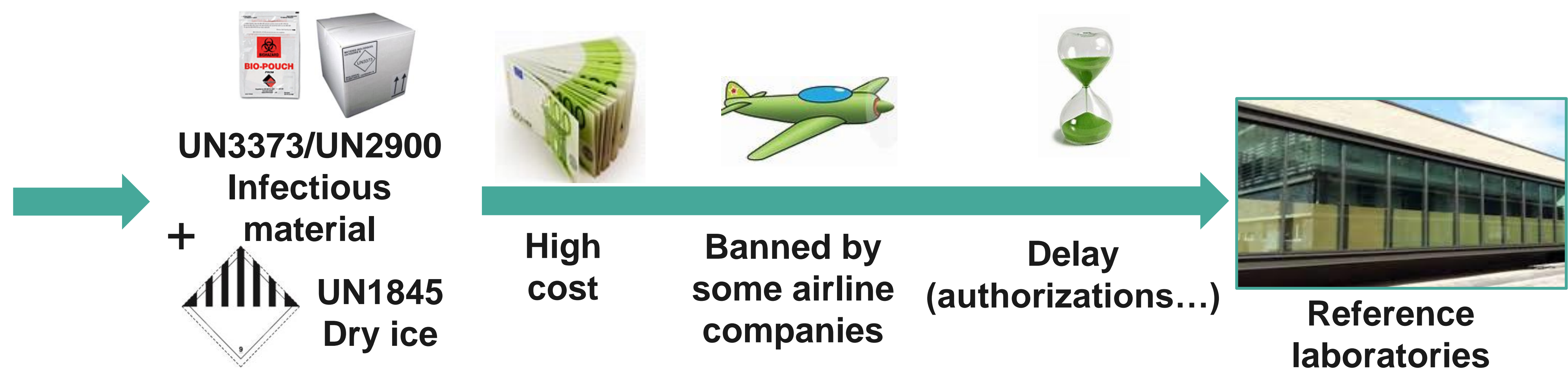
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INTRODUCTION

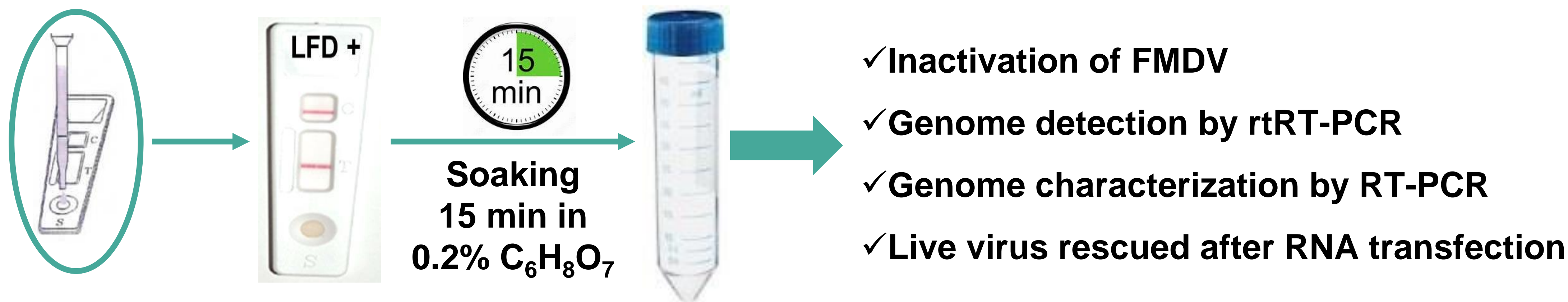
Context: Clinical suspicion



FMD?
Serotype?
Strain characterization?
Origin?



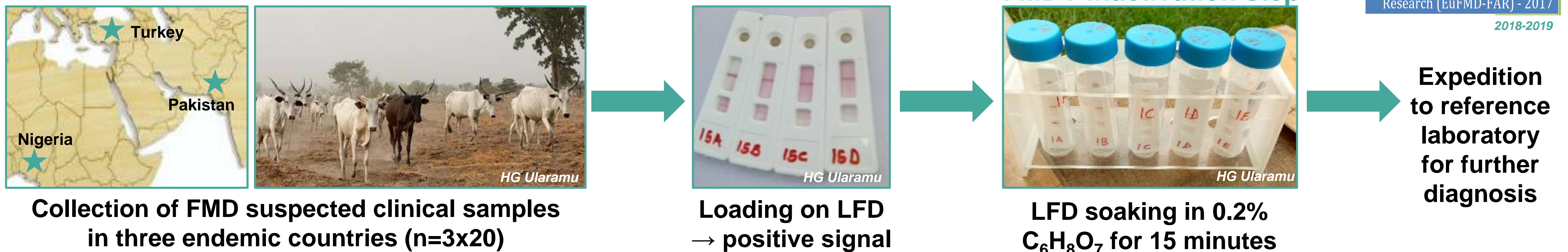
Evaluation of the inactivation protocol on archival samples



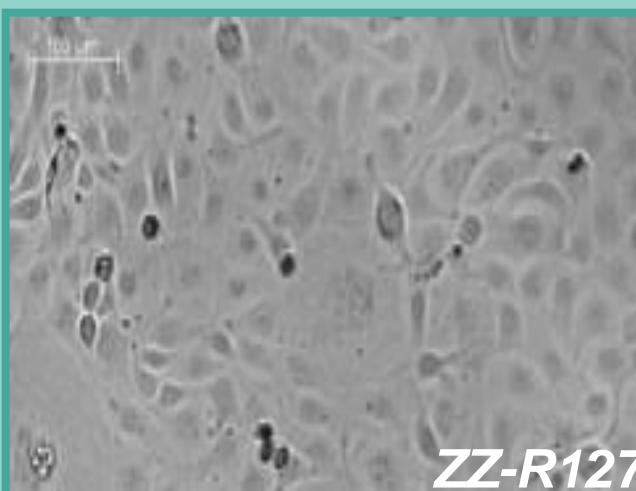
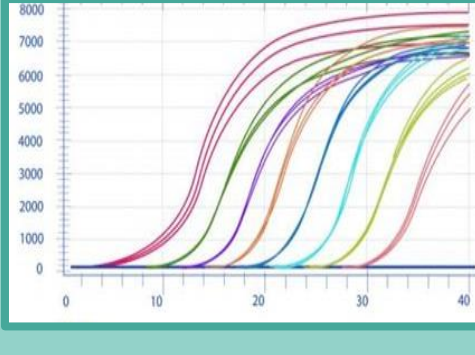
Transboundary and Emerging Diseases Feb. 2018
ORIGINAL ARTICLE
Safe and cost-effective protocol for shipment of samples from Foot-and-Mouth Disease suspected cases for laboratory diagnostic
eofmd
european commission for the control of foot-and-mouth disease
2013
EUFMD – Fund for Applied Research (EuFMD-FAR)
2014-2015

MATERIALS & METHODS

Evaluation of the inactivation protocol on field samples

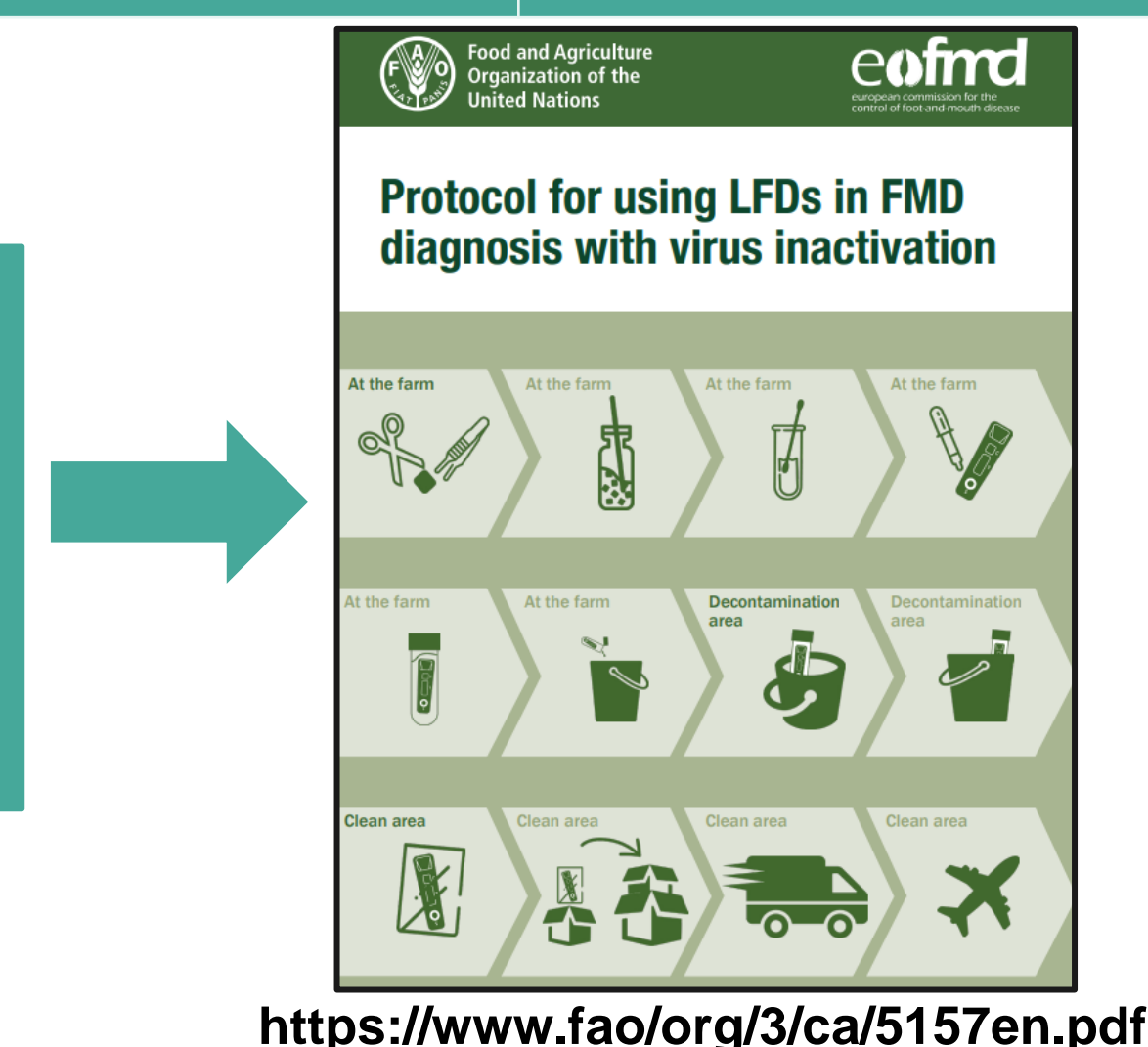


RESULTS & CONCLUSIONS

Sample origin	Number of sample	LFD result	Inactivation step	Result of viral isolation on cells after inactivation	Result of rtRT-PCR after inactivation (3D + IRES)	Result of genotyping by RT-PCR (VP1)	Live virus rescue after RNA transfection
Nigeria	N=20*	20 positive	15 min in 0,2% C ₆ H ₈ O ₇	No cytopathic effect after two passages 	Positive 	O-EA3 (n=12) SAT2/VII (n=3)	N=10
Turkey	N=20*	20 positive				O/ME-SA (n=19)	No
Pakistan	N=20*	20 positive				Asia-1/ASIA (n=4) O (n=6) A (n=5)	No
Experimental infection	N=6#	6 positive			Not done	Not done	Not done

*: epithelium tissues; #: vesicular fluid.

- ✓ Confirmation of the biosafety of the LFD-based viral inactivation protocol
- ✓ Detection and typing of FMDV genome by (rt)RT-PCR
- ✓ Complete characterization of FMDV strain involved, from live virus rescued by RNA transfection



<https://www.fao.org/3/ca/5157en.pdf>

A safe and low cost way to submit FMD samples to reference laboratories, directly applicable in the field