

European Collaboration in FMD



Kris De Clercq

50th Anniversary FAO World Reference Laboratory





DG RESEARCH
DG SANCO

CORDIS: Community Research & Development Information Service

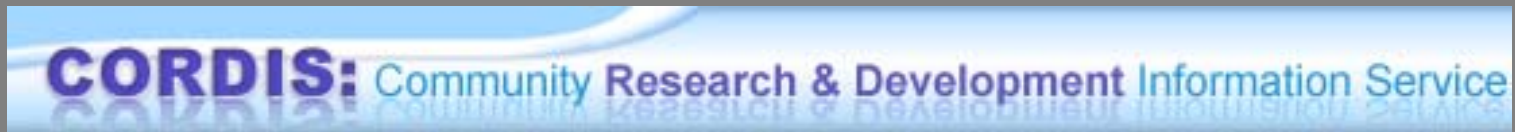
Network of excellence
Coordinating Actions
Strategic Research Projects



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DG RESEARCH
DG SANCO



WAT relationship

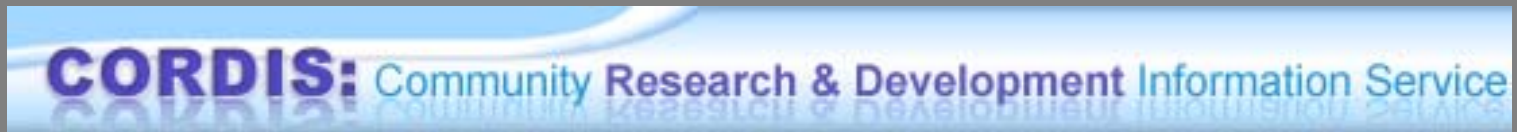
Working Apart Together
relationship



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Working Together
=
Key Performance Indicator



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EUFMD

1954: The Commission may establish temporary, special or standing committees to study and report on matters pertaining to the purpose of the Commission.



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EUFMD

A Standing Technical Committee was appointed by the Commission at its third session (1956) and was initially composed of veterinary administrators and leaders in FMD research.



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EUFMD

1957: Need for a Reference Laboratory

And need for a backbone for the RG

=

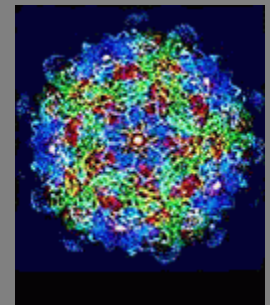
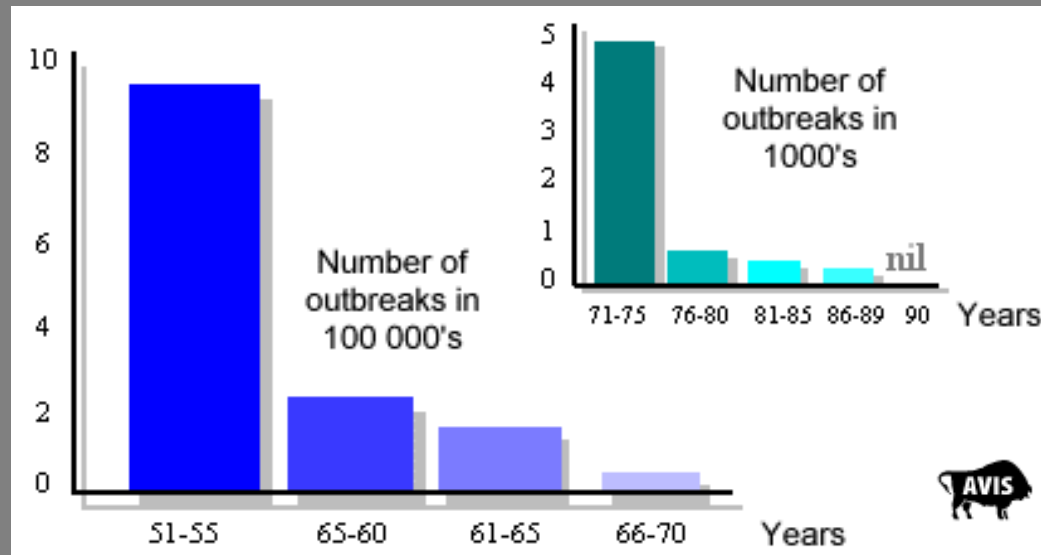
World Reference Laboratory for FMD

With a lot of support from the UK



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EUFMD RG / WRL



Vaccine Quality



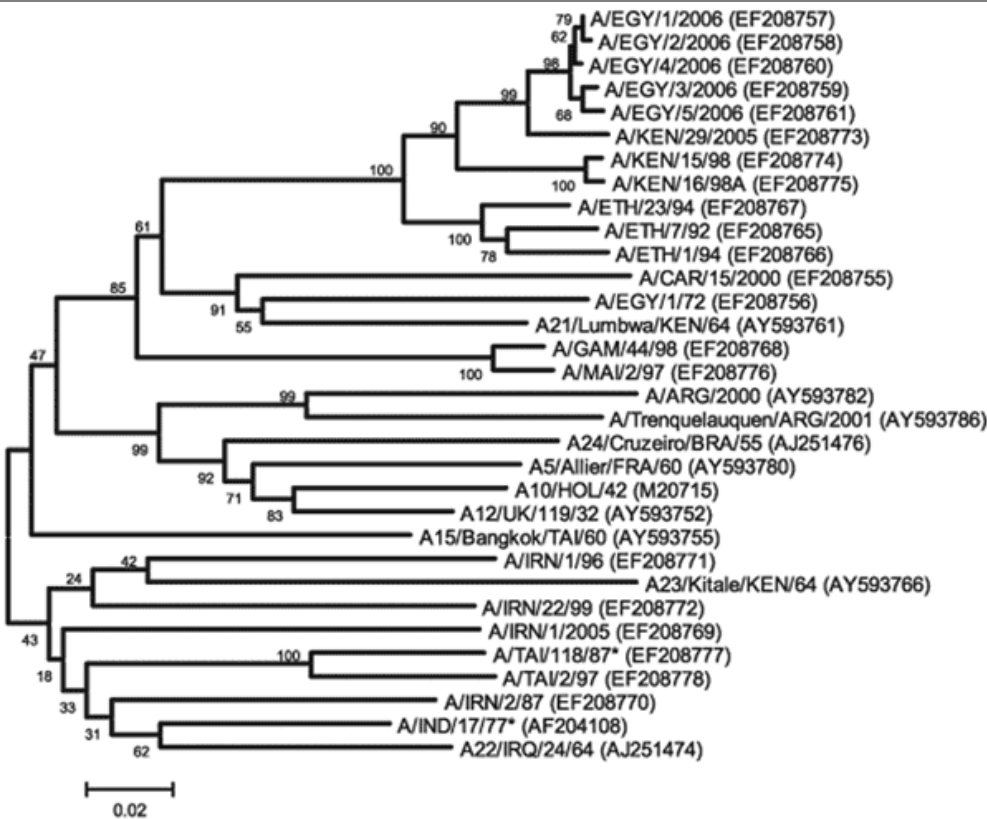
146S Quantity

146S Quality:
146S/12S

First series of Collaborative studies



Vaccine Matching



Foot-and-Mouth Disease Virus Serotype A in Egypt

Nick J. Knowles,* Jemma Wadsworth,*
Scott M. Reid,* Katherine G. Swabey,*
Alaa A. El-Kholy,† Adel Omar Abd El-Rahman,†
Hatem M. Soliman,† Katja Ebert,* Nigel P. Ferris,*
Geoffrey H. Hutchings,* Robert J. Statham,*
Donald P. King,* and David J. Paton*

**EMERGING
INFECTIOUS DISEASES®**

FMDV strain collection
Passive
Active

FMDV strain distribution



Vaccine Matching

r-value

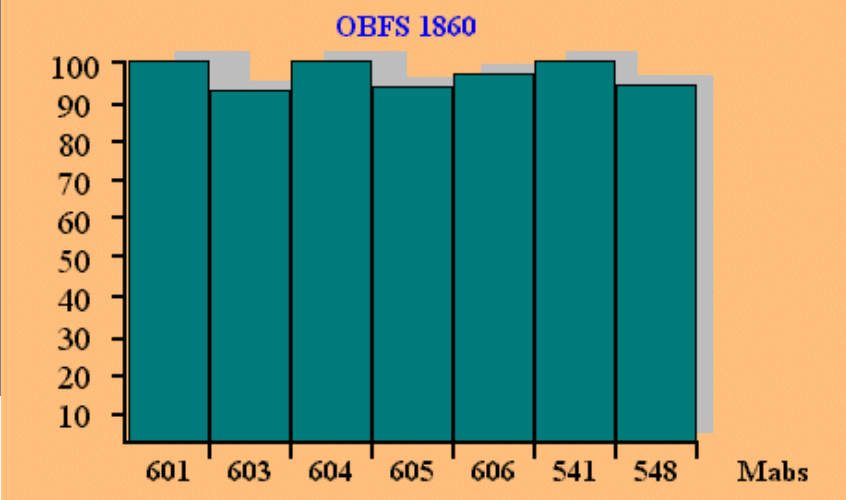
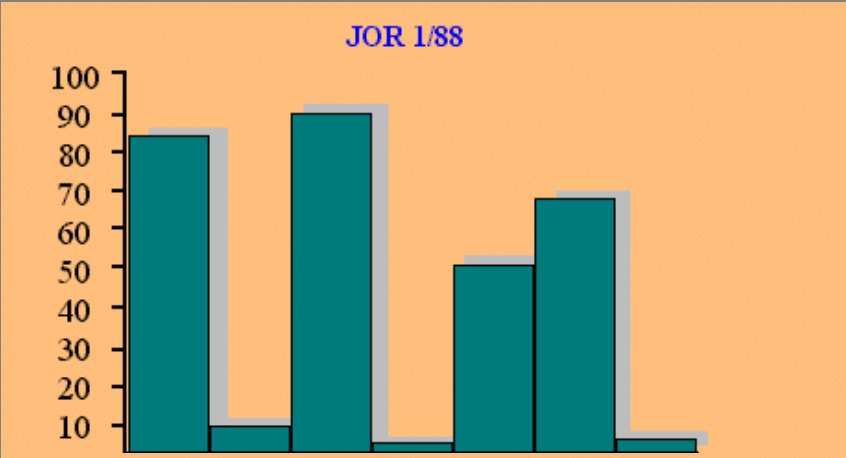


BTY cells before infection with FMD virus.



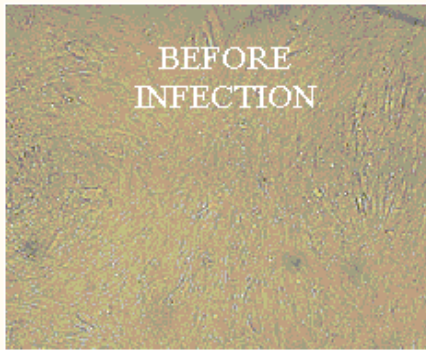
Complete destruction (CPE) of the epithelial cell population is apparent after infection with FMD virus.

MAb profiling

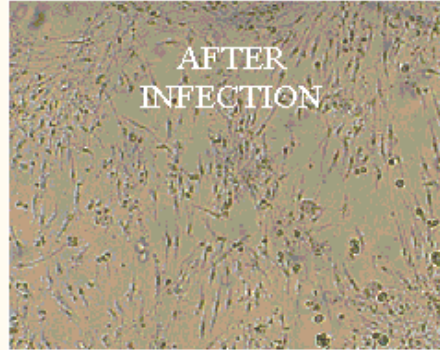


Rabbit/GP sera distribution

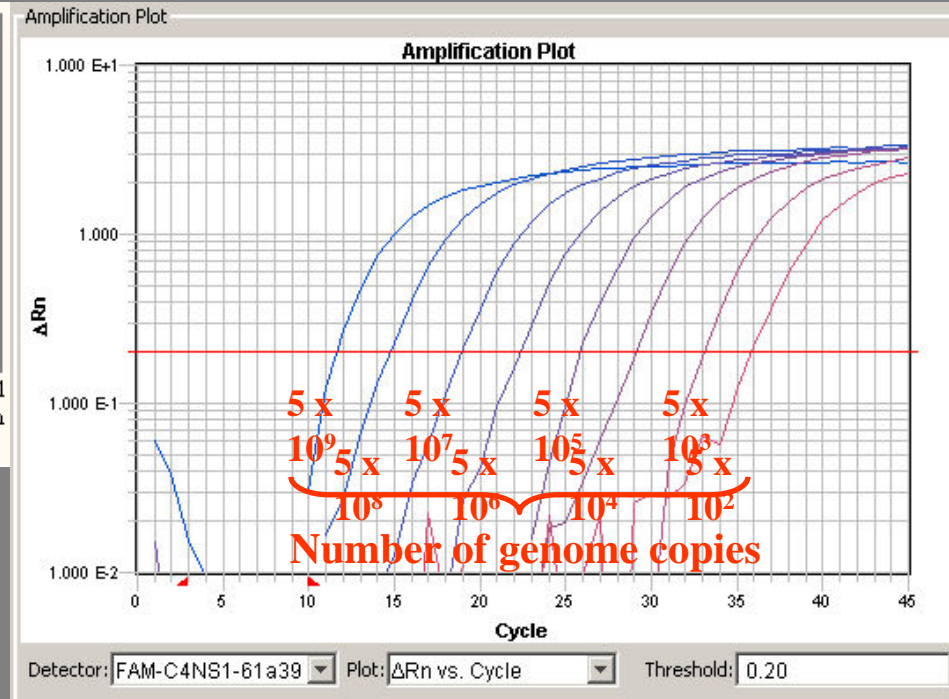
Collaborative studies: Diagnostics



BTY cells before infection with FMD virus.



Complete destruction (CPE) of the epithelial cell population is apparent after infection with FMD virus.



Ab assays / Virus-Ag-Genome



Biosecurity

SECURITY STANDARDS FOR FMD LABS:

General requirements

Authorization of laboratories in respect to FMD

Specific Requirements

- | | |
|---|-----------------------------|
| I. Management | II. Training |
| III. Laboratory Biosecurity | IV. Personnel |
| V. Facility Design | VI. Handling of FMD virus |
| VII. Air Handling – Live Virus Facilities | |
| VIII. Waste management | IX. Equipment and Materials |
| X. Decommissioning containment compartments for maintenance or renovation purposes. | |

Satellite Laboratories

EC Directive



Vaccine Production

**European Pharmacopoeia:
FMD Vaccine Monograph**

EMA: FMD Vaccine Position Paper



Platform for building Consortiums



FMD and CSF
Coordination Action



EUFMD

- **WP2 Global disease surveillance**
- **WP4 Vaccine reserves**
- **WP5 Diagnostics**
- **WP6 Laboratory preparedness: Workshop**
- **WP9 Central network resource: Stakeholders**



• **WP5 Diagnostics**

Workshop on Proficiency Testing Schemes

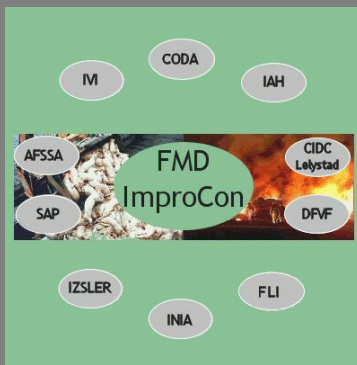
Guidelines

- Evaluation of Lab or Method
- Scope of PTS (Import-Export Testing / Vaccine efficacy testing)
- Criteria for lab conformity
- Statistical analysis
- Advisory board
- Reporting

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FMD Improving Control Vaccination to Live DIVA: NSP tests



ELSEVIER

ScienceDirect

Vaccine 24 (2006) 6966–6979

Vaccine

www.elsevier.com/locate/vaccine

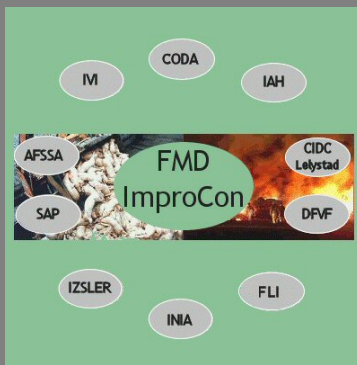
Comparative evaluation of six ELISAs for the detection of antibodies to the non-structural proteins of foot-and-mouth disease virus

E. Brocchi^{a,*}, I.E. Bergmann^b, A. Dekker^c, D.J. Paton^d, D.J. Sammin^e, M. Greiner^f, S. Grazioli^a, F. De Simone^a, H. Yadin^g, B. Haas^h, N. Bulutⁱ, V. Malirat^b, E. Neitzert^b, N. Goris^j, S. Parida^d, K. Sørensen^k, K. De Clercq^j

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FMD Improving Control Vaccination to Live **DIVA: NSP tests**



Available online at www.sciencedirect.com



Vaccine 24 (2006) 6503–6512



www.elsevier.com/locate/vaccine

Application of non-structural protein antibody tests in substantiating freedom from foot-and-mouth disease virus infection after emergency vaccination of cattle

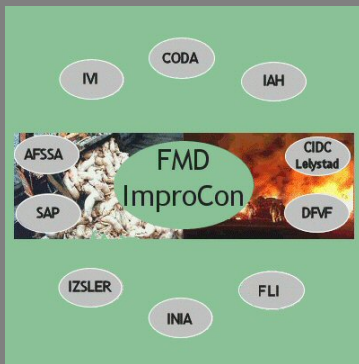
David J. Paton^{a,*}, Kris de Clercq^b, Matthias Greiner^c, Aldo Dekker^d, Emiliana Brocchi^e, Ingrid Bergmann^f, Donal J. Sammin^g, Simon Gubbins^a, Satya Parida^a



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FMD Improving Control Vaccination to Live DIVA: NSP tests

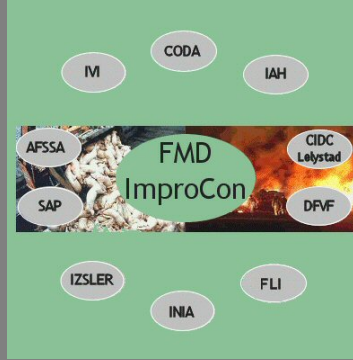
Workshop on the design and interpretation of post FMD- vaccination serosurveillance by NSP tests



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FMD and CSF
Coordination Action



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