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# **Foot-and-Mouth Disease Virus**

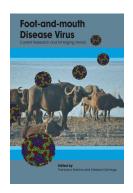
## **Current Research and Emerging Trends**

Edited by: Francisco Sobrino and Esteban Domingo
Centro de Biología Molecular Severo Ochoa (CSIC-UAM), Madrid, Spain

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Fifteen years after the devastating 2001 European foot-and-mouth disease (FMD) outbreak, the virus causing that shocking episode continues to pose a major threat to animal health worldwide. The development of more effective, sustainable and socially acceptable disease control measures remains a key task.

This volume provides essential scientific background on FMD and its etiological agent, FMD virus, as well as comprehensive, interdisciplinary and up-to-date information on basic research findings and applied developments contributing to FMD control. The eighteen chapters have been written by leading FMD researchers. Topics include genome organization, translation and replication, virus-coded proteinases, structure of virus particles, cell receptors and host range, the RNA polymerase, quasispecies dynamics and virus evolution, innate and acquired immune responses, and the clinical signs of FMD and its natural habitats. Further chapters deal with various aspects of disease control such as diagnosis, current and new vaccines, antivirals and models of epidemiology. The role of international organizations in FMD control and the impact of FMDV as a re-emergent virus are also addressed.

The book is required reading for everyone involved in FMD and is an important acquisition for all microbiology libraries.

Chapter 1. Introduction: Foot-and-mouth Disease: Much Progress But Still a Lot to Learn (David J. Rowlands)

**Chapter 2.** Genome Organisation, Translation and Replication of Foot-and-mouth Disease Virus RNA *(Encarnacion Martinez-Salas and Graham J. Belsham)* 

**Chapter 3.** Foot-and-mouth Disease Virus Proteinases and Polyprotein Processing (*Fiona Tulloch, Garry A. Luke and Martin D. Ryan*)

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Chapter 6. The RNA-dependent RNA Polymerase 3D: Structure and Fidelity (Cristina Ferrer-Orta and Nuria Verdaguer)

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Chapter 8. Clinical Signs and Pathology of Foot-and-mouth Disease (Charles Nfon, Oliver Lung, Carissa Embury-Hyatt and Soren Alexandersen)

**Chapter 9.** Natural Habitats in which Foot-and-mouth Disease Viruses are Maintained (Wilna Vosloo and Gavin R. Thomson)

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**Chapter 17**. The Role of International Organizations in the Control of Foot-and-mouth Disease (Bernard Vallat, Joseph Domenech and Alejandro A. Schudel)

**Chapter 18**. Overview of Foot-and-mouth Disease and its Impact as a Re-emergent Viral Infection (*Brian W.J. Mahy and Graham J. Belsham*)

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