



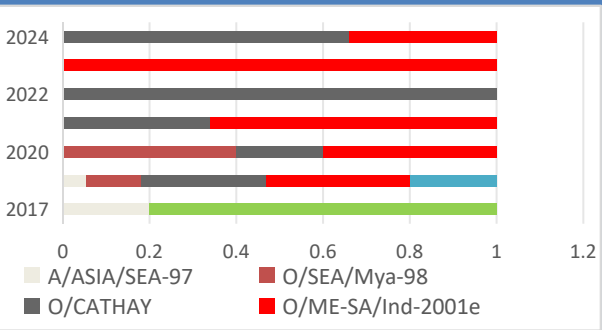
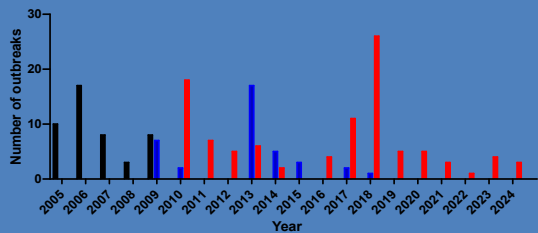
World Organisation
for Animal Health



Wen Dang, Jijun He
WOAH/China National Reference Laboratory for FMD

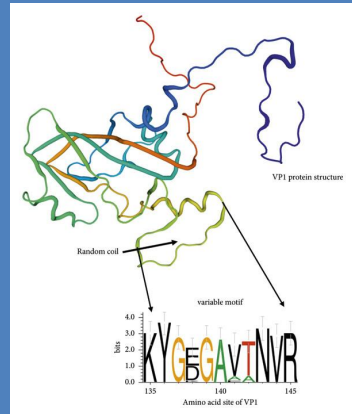
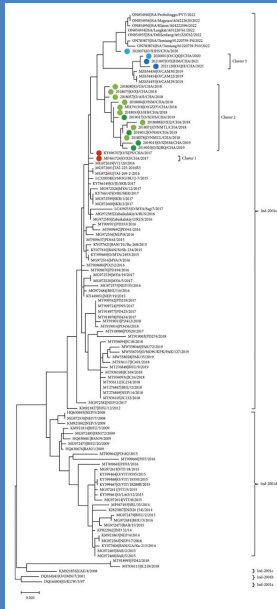
Epidemiology

O/ME-SA/Ind-2001e is more prevalent in China



- Number of outbreaks in China;
- Distribution of causative serotypes
- Distribution of causative strains;
- Conclusion: O/ME-SA/Ind-2001e is one of dominant strains in China.

O/ME-SA/Ind-2001e in China between 2017 and 2021

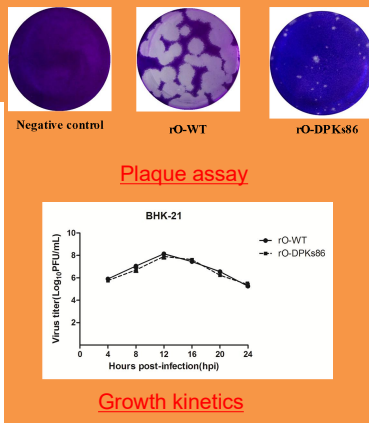
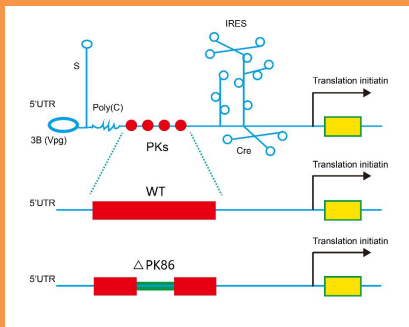


- Annual report of WOAH/China National Reference Laboratory for FMD;
- Zhang X, Ma W, Yang F, et al. Transbound Emerg Dis. 2023.

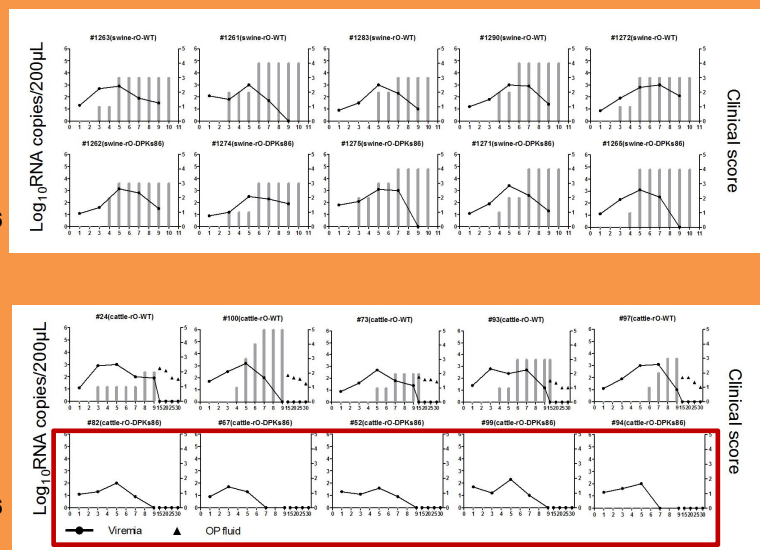
Basic research

FMDV pseudoknots (PKs): determinants for FMDV host tropism

- A strain O/CHA/7/2011 was used as backbone.
 1. Good infections in pigs and cattle;
 2. Intact PK regions;
 3. Intact 3A.



FMDV pseudoknots (PKs): determinants for FMDV host tropism



An 86-nt deletions in the PK regions seemingly could not affect virus replication in vitro.

- Zhu Z, Yang F, Cao W, et al. The Pseudoknot Region of the 5' Untranslated Region Is a Determinant of Viral Tropism and Virulence of Foot-and-Mouth Disease Virus. J Virol. 2019
- Zhang W, Li W, Yang Y, et al. RING finger protein 5 is a key anti-FMDV host factor through inhibition of virion assembly. PLoS Pathog. 2025.
- Xue Q, Ma K, Yang F, et al. Foot-and-mouth disease virus 2B protein antagonizes STING-induced antiviral activity by targeting YTHDF2. FASEB J. 2024.
- Li WW, Fan XX, Xu ZS, et al. BLK positively regulates TLR/IL-1R signaling by catalyzing TOLLIP phosphorylation. J Cell Biol. 2024.
- Li WW, Fan XX, Zhu ZX, et al. Tyrosine phosphorylation of IRF3 by BLK facilitates its sufficient activation and innate antiviral response. PLoS Pathog. 2023.
- Liu H, Xue Q, Yang F, et al. Foot-and-mouth disease virus VP1 degrades YTHDF2 through autophagy to regulate IRF3 activity for viral replication. Autophagy. 2024

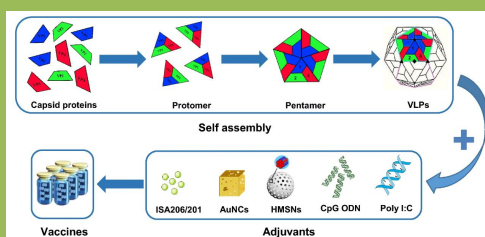
Vaccine development

FMD vaccines developed by LVRI and produced at CAVET

The company is an exclusive manufacturer to produce all different kinds of FMD vaccines which was authorized by MARA, China



FMD virus-like-particle (VLP) vaccines in LVRI



Three Class I new veterinary drug certificates

Contact information

- Prof. Haixue Zheng, Director General of LVRI, Head of WOAH/China National Reference Laboratory for FMD, zhenghaixue@caas.cn;
- Prof. Jijun He, Dean of Veterinary Clinical Service Center, Dean of WOAH/China National Reference Laboratory for FMD, LVRI, hejijun@caas.cn;
- Dr Wen Dang, WOAH/China National Reference Laboratory for FMD, dangwen@caas.cn.

