



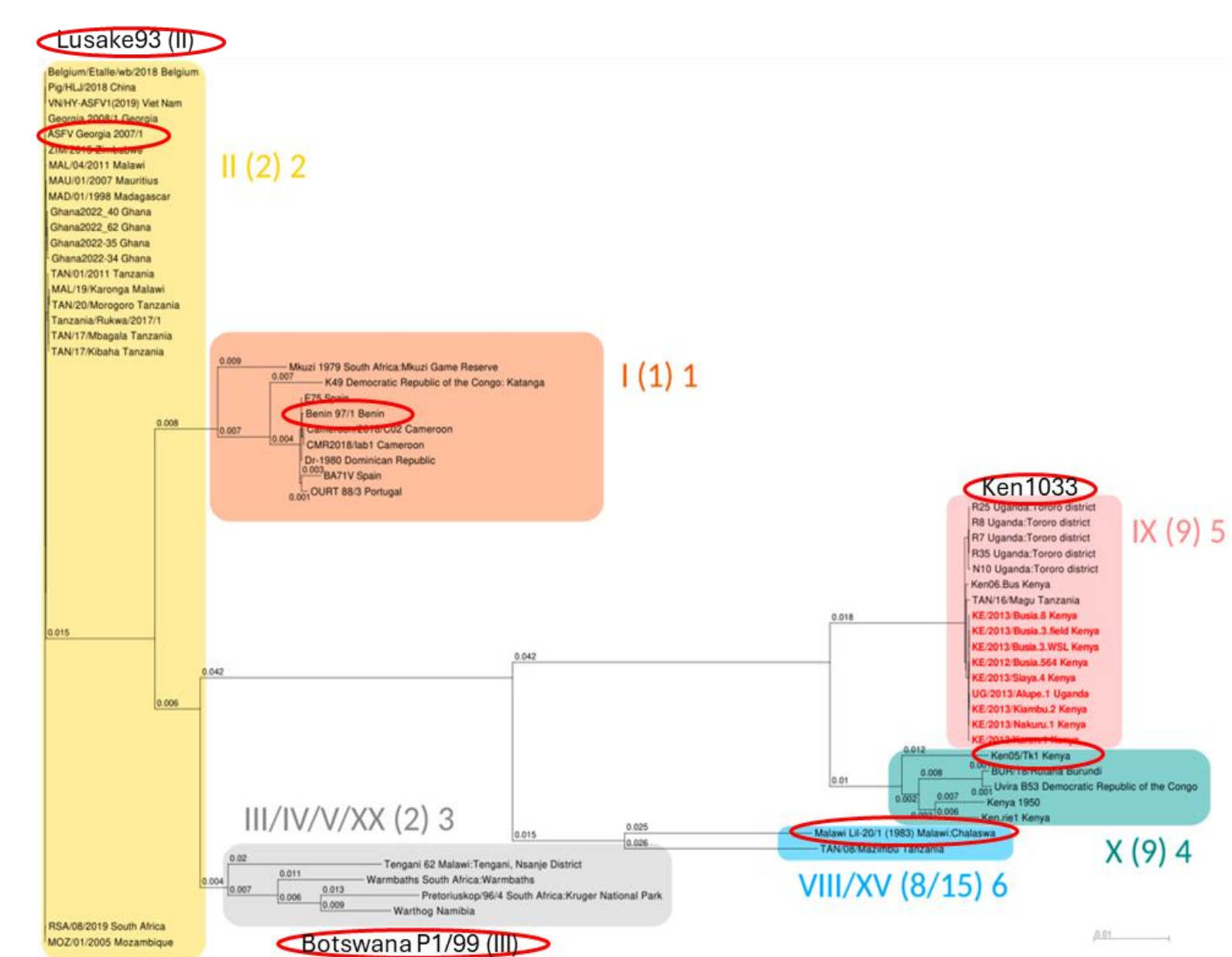
Pigs showing signs of African swine fever Source: Hanneke Hemmink

The challenge

- African swine fever virus (ASFV) causes an acute hemorrhagic disease with up to 100% mortality in infected pigs.
- In sub-Saharan Africa ASFV is endemic and multiple ASFV strains can circulate simultaneously
- Live-attenuated ASFV vaccines are generally effective against homologous ASFV strains
- Vaccines may not protect against more distant ASFV strains

Our innovative approach

- Characterise ASFV strains, including African strains
- Having tools to assess vaccine efficacy of ASFV vaccines for both the global and African market.



Phylogenetic tree of ASFV isolates based on whole genome multiple sequence alignment. ASFV strains for which a challenge model was developed are circled in red, (Adapted from Entfellner et al 2024)



African swine fever virus challenge models to test vaccine efficacy

- Challenge models established for 6 diverse ASFV strains (Genotype I, II, III, IX and X)
- Standardisation of animal experimental protocols (Clinical scoring, humane endpoint criteria and post-mortem lesion scoring).
- Standardisation of laboratory assays (qPCR, ELISA, IFN-γ ELISpot)
- Available to global academics and animal health companies.

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Outcomes

- Challenge models available to academics and animal health companies for use during the R&D stage of animal health product development
- Challenge models available to animal health companies for dossier development for product registration.

Next steps

- Outcome of animal experiments using the diverse ASFV challenge strains, could provide crucial information on the potential market of new ASFV vaccines, including the African market.

Funders & Partners



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