

Typing and serological surveillance of FMDV in the African buffaloes in Zambia

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How to cite this article:

Sikombe, T., Kasanga, C.J., Sinkala, Y., Simuunza, M., Muma, J., Dwarka, R. *et al.*, 2014, 'Typing and serological surveillance of FMDV in the African buffaloes in Zambia', *Onderstepoort Journal of Veterinary Research* 81(2) Art. #742, 1 page. <http://dx.doi.org/10.4102/ojvr.v81i2.742>

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Foot-and-mouth disease (FMD) is endemic in Zambia. Little is known of the epidemiology of FMD virus (FMDV) in the country and this has led to the continuous occurrence of FMD in southern Zambia. FMD severely impacts pastoral and agro-pastoral communities who are most reliant on livestock products for economy and food security. Southern Zambia is densely populated with livestock and wildlife, which are usually in contact almost throughout the year. The control of FMD in Zambia is mainly done strategically through vaccination, but this is complicated by the presence of buffaloes and traditional cattle farmers' practice of transhumance in areas harbouring wild animals. The current research aims at determining the infection status and FMD virus (FMDV) serotype(s) circulating in domesticated and wild animals in southern Zambia. A targeted cross-sectional study will be employed in this study. Sera and oesophageal-pharyngeal (OP) fluids will be obtained from cattle and buffaloes in selected areas of Zambia. Epidemiological data such as age, sex, health, and vaccination status of animals will be taken during sampling. Infection status will be determined by NSP-ELISA targeting the 3ABC region of FMDV genome. FMDV serotypes will be examined by LPB-ELISA and/or antigen ELISA on OP samples. This research has the potential to unravel the infection status and serotype(s) of circulating FMDV strains in Zambia. This information will be useful in designing a rational strategy of control of FMD in Zambia and the neighbouring countries.

Acknowledgements

This work was supported by the Wellcome Trust Grant WT087546MA to the Southern African Centre for Infectious Diseases & Surveillance (SACIDS).

Note: Proceedings of the 2nd One Health Conference in Africa. Jointly organised by the Southern African Centre for Infectious Disease Surveillance and the Tanzania National Institute for Medical Research, held at the Snow Crest Hotel in Arusha, Tanzania from 16th to 19th April 2013: <http://www.sacids.org/kms/frontend/index.php?m=119>.

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