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**Foot-and-mouth disease control in Africa – using new tools to tackle a neglected problem**

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FMD has been eradicated from most developed countries, but the disease is still endemic in most developing countries. The relatively low productivity of extensive livestock systems has led to assumptions of a lower impact of FMD in these settings. However, livestock owners consistently report severe impacts of recurring outbreaks of FMD. Recent participatory studies and more formal analyses suggest that endemic FMD has major consequences for rural livelihoods.

Despite the importance of FMD in the industrialised world, very few epidemiological studies have yet been conducted on endemic FMD in Africa and many basic questions remain about the regional distribution of viral antigenic diversity, and patterns of infection in traditional African livestock-keeping systems, particularly in unfenced rangelands and around the large wildlife protected-area systems of East Africa. With the advent of powerful new research tools and analytical approaches, many of which have been developed as a result of recent FMD outbreaks in Europe, opportunities are now available to carry out detailed epidemiological studies of FMD in Africa.

This presentation describes the approaches being used to study FMD in Tanzania, integrating antigenic and genetic mapping, risk factor identification, mathematical modelling of transmission dynamics, informatic approaches to understanding cross-reactivity and cross-protection, and socio-economic impact studies. The presentation will discuss how these results may be used to inform the design of FMD control measures, including vaccination, to mitigate impacts of FMD on livestock-keeping families and to support the development of the livestock industry in Tanzania.