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## Short Communication

### Molecular Diagnosis and Epidemiology of African Swine Fever Outbreaks in Tanzania

P.N. Wambura\*, J. Masambu and H. Msami

*Animal Diseases Research Institute, Dar Es Salaam, Tanzania*

\*Correspondence: E-mail: phil.Wambura@yahoo.com;

microbiology@suanet.ac.tz

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**Abbreviations:** ASF, African swine fever; ASFU, ASF virus; PCR, polymerase chain reaction; TAN, Tanzanian isolate

## INTRODUCTION

African swine fever (ASF) has a strategic importance for food security and household income in most developing countries including Tanzania. The disease is caused by *African swine fever virus* (ASFV), which is a unique and complex pathogen that infects both domestic and wild pigs, and soft-bodied argasid ticks. It is a large, enveloped and complex icosahedral double-stranded DNA virus. It is the only known DNA arbovirus and the sole member of the family *Asfarviridae* (Dixon *et al.*, 2000). Several serotypes of ASFV occur in Africa, and in sub-Saharan Africa the virus is maintained in a sylvatic cycle between warthogs and bush pigs, and argasid ticks of the genus *Ornithodoros moubata* (Plowright *et al.*, 1969).

The history of the existence of ASF in Tanzania is well documented by Loretu and colleagues (1988). From reports, it appears that ASF outbreaks occur in sporadic patterns appearing irregularly after intervals of several years. In the advent of the new millennium, Tanzania has experienced a series of ASF outbreaks after absence of the disease for a decade.

Tanzania has experienced a series of ASF outbreaks after absence of the disease for a decade. A major outbreak of ASF with high mortality occurred in Mbeya region in March 2001, in Kyela district. In May 2001 the outbreak of ASF was reported in Dar Es Salaam region, where Ilala and Temeke districts were affected. In late August 2003 an outbreak of ASF was reported in Arusha region, particularly in Arusha municipality and Arumeru district, where an 82% mortality rate was recorded. The recent outbreak was reported in Kigoma region in April 2004 involving Kasulu and Kigoma districts. In this outbreak, the mortality rate was 72%.

Following these outbreaks, relevant samples were collected and submitted to the national and regional reference laboratories for molecular biology studies. The objective of the present study was to identify specific fingerprints for each outbreak that occurred in Tanzania from 2001 to 2004.

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Authors

- P. N. Wambura <sup>(1)</sup>
- J. Masambu <sup>(1)</sup>
- H. Msami <sup>(1)</sup>

#### Author Affiliations

- 1. Animal Diseases Research Institute, Dar Es Salaam, Tanzania

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