

1. INTRODUCTION

The aim of this bibliographic review is to provide an update on the current situation of African Swine Fever (ASF) worldwide, discussing its main epidemiological and pathogenic aspects. ASF is a **highly contagious hemorrhagic disease** that affects both **domestic and wild pigs**. This OIE-notifiable disease is considered one of the most important transboundary illnesses in pigs. For many years ASF has remained **endemic in Sardinia and Southern Africa**. However, only a few years ago it was **re-introduced in Europe** once again through the Caucasus.

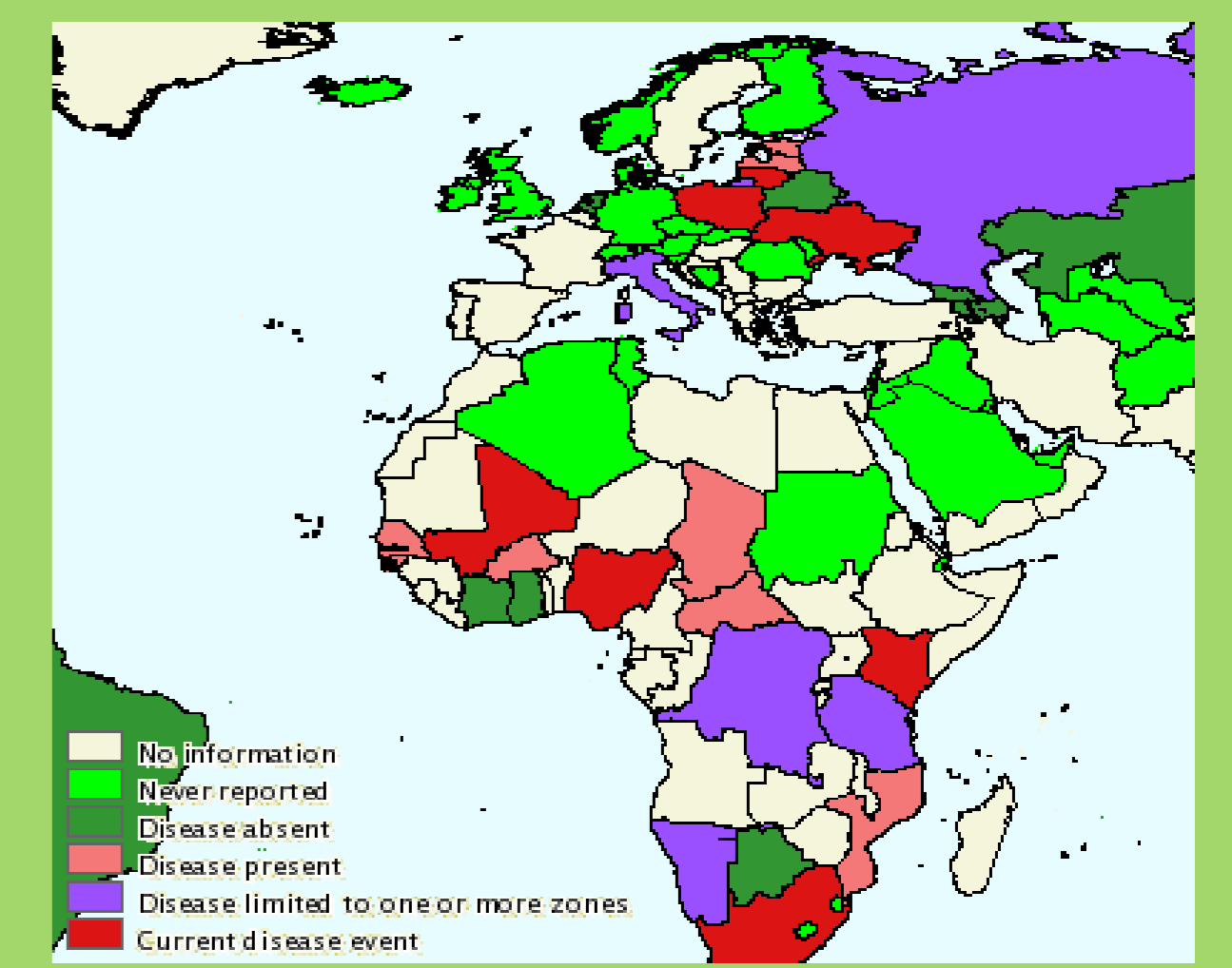


Fig 1. Countries where ASF is present (red, rose, purple).

2. TRANSMISSION

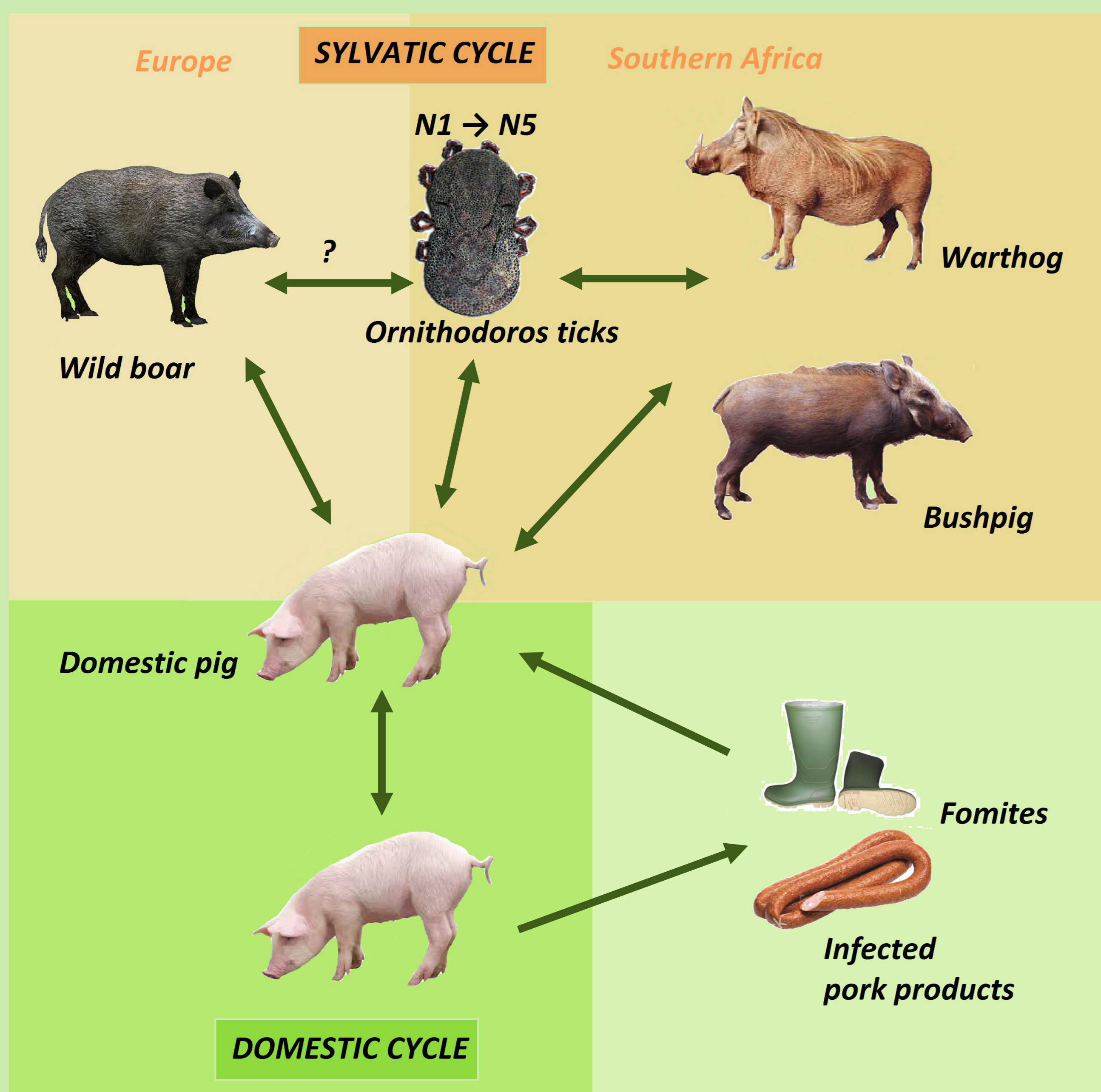


Fig 2. ASFV main transmission routes: sylvatic cycle, domestic cycle, through contaminated pork products and fomites.

3. ASF VIRUS

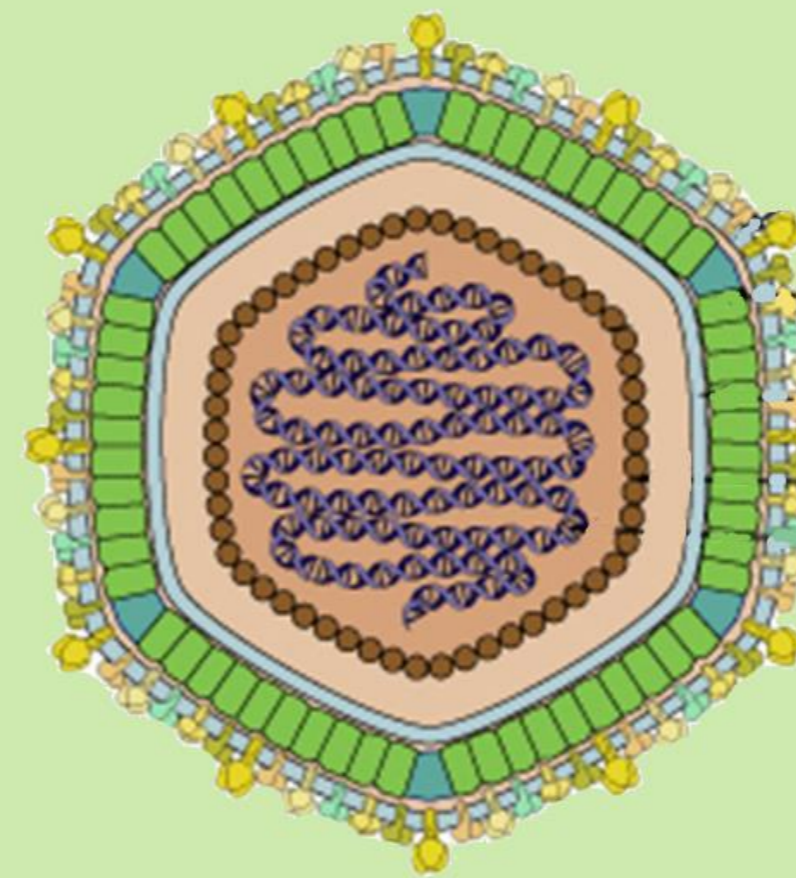


Fig 3. ASFV morphology.

dsDNA virus
Family *Asfarviridae*
ARBOVIRUS
Icosahedral form
22 genotypes

Target cells:
MACROPHAGES

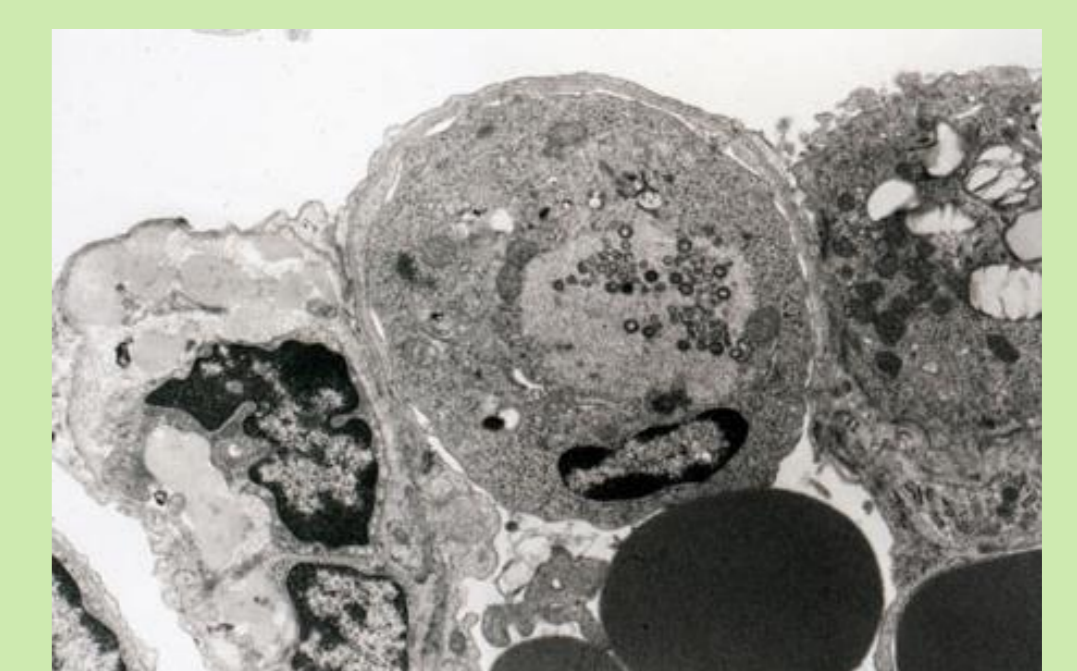
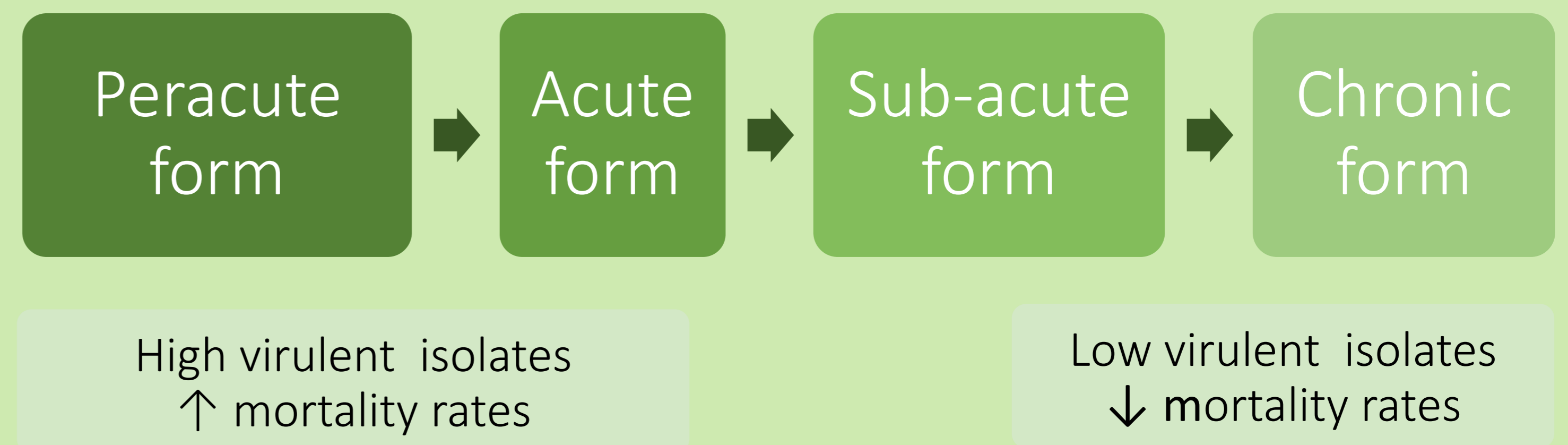


Fig 4. Macrophages infected with ASFV.

4. COURSE OF THE DISEASE



There is no treatment nor vaccine

5. DIAGNOSIS

Clinical diagnosis

- Generalized hemorrhages

Differential diagnosis

- Classical Swine Fever

Laboratory diagnosis

- Virus isolation (HAD, PCR)
- Serology (ELISA, LFA)



Fig 5. Acute petechiae in the kidney.

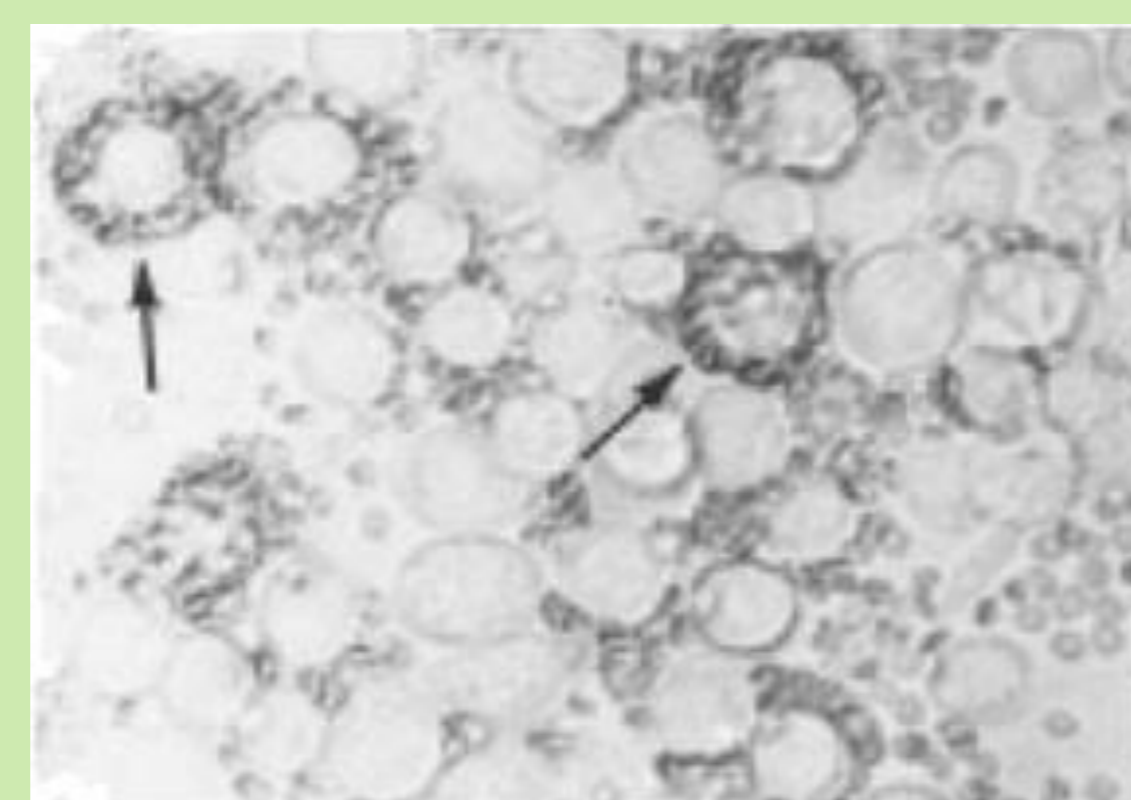


Fig 6. Positive HAD "rosette" test.

6. PREVENTION AND CONTROL



- STAMPING OUT**
- Cleaning and disinfection
- Destroying or sterilizing contaminated pork products

7. FUTURE PERSPECTIVES



DIVA vaccines
(Sub-units or GMO)

8. CONCLUSIONS

ASFV has an important **social and economic impact** in the swine industry. Its potential to rapidly spread and produce long-term persistent infection **threatens many ASF-free European and Asian countries**. Up to now, stamping out policies are the only measure able to control this disease, but they are ethically and financially difficult to accept. For this reason, the future control and elimination of ASFV occurrence depends on the development of an **effective and safe DIVA vaccine**.