INTRODUCTION

- Zika virus has rapidly spread through the Caribbean and Americas.
- Exposure of the foetus to Zika virus can be devastating, with those surviving to birth at risk of Zika Foetal Syndrome.
- Children apparently healthy at birth are now shown to be at risk of developing Zika Syndrome, including microcephaly, within their first year.
- Infected adult males can excrete infectious virus within semen for many months.
- The range of male and female tissues persistently infected and associated long term health consequences remain unknown; notably the reproductive tract, CNS and peripheral nerves.

MATERIALS AND METHODS

RESULTS

Plasma Viral Load

- All animals had a PCR detectable plasma viremia

Rapid Entry, Persistence and Pathology in the Central Nervous System

- Zika virus is rapidly detectable and persists within both male and female reproductive tracts and central nervous and peripheral nervous systems.
- Neuroinflammation and neuronal damage occur despite loss of peripheral viremia.
- Modelling adult infection reveals Zika virus persists in crucial tissue reservoirs, triggering regional neuronal damage and potential foetal exposure in future pregnancies.
- Putative zika vaccines must assess efficacy against mucosal transmission and the potential for induced immunity to clear tissues reservoirs.

CONCLUSIONS