Progress Report STP 2014-011 (FY 2015-2016)

Histopathological review of the causes of death in Woylies (*Bettongia penicillata*) presented to Murdoch University for necropsy in the last 10 years, with special focus on (possible) *Trypanosoma* related histopathology.

Animal Science

Project Core Team

Supervising Scientist	Adrian Wayne
Data Custodian	Adrian Wayne
Site Custodian	Adrian Wayne

Project status as of June 14, 2016, 2:35 p.m.

Update requested

Document endorsements and approvals as of June 14, 2016, 2:35 p.m.

Project Team	required
Program Leader	required
Directorate	required

Histopathological review of the causes of death in Woylies (*Bettongia penicillata*) presented to Murdoch University for necropsy in the last 10 years, with special focus on (possible) *Trypanosoma* related histopathology.

A Wayne, Z Lim, Prof A Thompson (Murdoch University), Dr S Godfrey (Murdoch University)

Progress Report

The aim of this project is to review the causes of deaths and histopathology in the Woylies presented to Murdoch University in the last 10 years; particularly the presence of Trypanosomes, their related histopathology and their significance. Two of 73 Woylies had organisms (morphologically similar to Trypanosomes) associated with muscle lesions in oesophagus and heart. These lesions may have resulted in decreased food intake and abnormal function of the heart respectively, possibly contributing to death. This project will also attempt to identify the Trypanosomes and demonstrate spatial association between Trypanosoma DNA and muscle (or other) lesions via in-situ hybridization (ISH). In light of the study by Botero and others (2013), an increased understanding of the effects of Trypanosoma infections in the Woylie will help aid future management of this species. Our database collates post-mortem results from woylies, including tissues examined (and findings) and archived tissues. The database is complete and is being reviewed and collated. A probe to identify a conserved region of Trypanosome kinetoplast DNA has been designed and purchased; and labeling efficiency tests will start July 2015.