Report for **Genetic Legacies of Roman Horses** awarded £500 by the Roman Society from the Audrey Barrie Brown Memorial Fund & Donald Atkinson Fund in 2019.

**Brief project summary**

This project aimed to investigate the sex and genetic legacy of Roman military horses. It has been previously hypothesised that particular breeds and sexes were preferred as Roman cavalry animals; using ancient DNA it is possible to define genetic ancestry and distinguish between the biological sexes. We proposed to investigate horse remains from Trimontium (Newstead, Scotland) as this fort represents one of the early and most Northern fortifications. Horse remains were excavated at this site in the early 20th Century, found alongside military, cavalry equipment. The initial project (15 samples and 2 blanks) totalled £1000, and we simultaneously applied to the Association for Environmental Archaeology’s Small Research Grant to cover the full cost. Unfortunately, this application was unsuccessful.

**Reorientation of the project**

In order to match our budget (£500) we downsized the number of study individuals to eight. The horse remains from Trimontium are now held at the National Museum of Scotland (NMS). We completed the NMS destructive sampling application which was submitted to the Museum’s curators of Vertebrate Biology. Although discussions with the curators from this institution ahead of my initial proposal submission were very encouraging, the requirements for successful descriptive analysis requests have become stricter, due to increasing requests and a need to maintain the integrity of collections housed at the NMS. Thus, we were unable to reach a sampling agreement that would have given the best chance of extracting well preserved DNA to meet the aims of the project.

Whilst this was disappointing, it presented us with the opportunity to investigate another collection. We have been granted access to eight Roman Horses from two different sites in North Yorkshire. The Roman fort at Malton and the Roman settlement of Heslington East, York. In fact, by sampling four individuals from a military (Malton) and non-military (Heslington East) site the differences between cavalry and non-military horses may be more apparent. By extracting and analysing the DNA of samples from North Yorkshire
using the same laboratory and computational methods as originally proposed, we will investigate whether horses were selected for Cavalry work based on their breed or sex.

**Financial Statement**

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<th>Total Incomings</th>
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**Paragraph for the Website**

The horse was a very important animal during the Roman Period, the mounted guard were a prestigious and integral part of the Roman Army. Scholars suspect there was a strict selection process for Cavalry horses. Preferred attributes could relate to the sex or breed of the horses, however anatomical analysis of archaeological horse remains cannot easily distinguish either of these characteristics. We propose to use ancient DNA to investigate differences in genetic makeup and biological sex from Roman horse samples from Military (Malton) and non-Military (Heslington East) sites. By sequencing the DNA of military and non-military horses from the same region, we have the opportunity to investigate whether particular traits, which are very difficult to identify zooarchaeologically, are associated with military animals; ultimately enabling a discussion around animal recruitment in Roman Yorkshire.