



## **OZBONEPROT: New protein sequences for Australian marsupials with applications to zooarchaeological and palaeontological samples.**

Sofia C. Samper Carro (ANU and ARC Centre of Excellence for Australian Biodiversity and Heritage); Vera Weisbecker (Flinders University); Sue O'Connor (ANU and ARC Centre of Excellence for Australian Biodiversity and Heritage).

New biomolecular approaches are rapidly increasing the zoological information that can be retrieved from archaeological and palaeontological sites. Palaeoproteomics, the study of ancient proteins has received much attention and is rapidly becoming a standalone discipline. Nevertheless, advances in the field have been mainly limited to research on European sites and collections. As such, the application of proteomics to old mammal assemblages in Australia requires building curated and validated protein sequences from modern specimens. This presentation will examine the work carried out in Australia as part of the *Ozboneprot* project, the first project aimed at implementing palaeoproteomics in Australian archaeological and palaeontological sites. Using shotgun proteomics and genomics, this project is developing open-access protein sequences (including collagen and other non-collagenous proteins) for modern marsupials, as well as designing screening methods to test collagen preservation; a significant challenge in tropical and sub-tropical environments. This presentation will present the results thus far, analytical pipelines, and projected outcomes of our project, as well as providing space for discussion on future steps and challenges in the study of human-animal interactions with mammals more generally.

Sofia Samper Carro: [sofia.samper@anu.edu.au](mailto:sofia.samper@anu.edu.au)