



Università
Ca' Foscari
Venezia

PROJECT ACRONYM AND TITLE: Development of a High Resolution, Multi-Century PaleoFire Reconstruction from Tropical Australian Stalagmites

FUNDING PROGRAMME: Agreement form containing conditions and procedures for the funding of 1 Research fellowship between Ca' Foscari University and Cornell College

CALL: Development of a high resolution, multi-century paleofire, reconstruction from tropical Australian stalagmites NSF proposal number 1812476

SCIENTIFIC FIELDS: Environmental Sciences

HOST DEPARTMENT: DAIS – Department of Environmental Sciences, Informatics and Statistics

SCIENTIFIC RESPONSIBLE: Carlo Barbante

FINANCIAL DATA:

Project total costs	Overall funding assigned to UNIVE
€ 10.000,00	€ 10.000,00

ABSTRACT:

Fire plays a critical role in the ecology of the dry tropics of Western Australia and is associated with both human activities and nature processes related to the Australian summer monsoon. Attempts to understand background rates of biomass burning in this region are hampered by a sparsity of records that are continuous, provide clear evidence of fire at high (annual) temporal resolution, and span multiple centuries. The PI has previously developed an extremely well dated and high-resolution record of monsoon rainfall using stalagmites from a cave in the Kimberley region of Western Australian. The goal of the proposed research is to use chemical biomarkers (polycyclic aromatic hydrocarbons, PAHs) in these stalagmites to develop a multi-century-long record of paleofire activity. These data will help identify how baseline burn rates varied in response to changing climate states (e.g., enhanced monsoon rainfall during the Medieval Climate Anomaly. Reduced rainfall during the Little Ice Age) and the arrival of European pastoralists.

Planned Start date	Planned End date
1 st February 2018	31 st July 2019

PARTNERSHIP:

1. Ca' Foscari University	Italia	Coordinatore
2. Cornell College	Stati Uniti D'America	Partner