

# POST-DOCTORAL POSITION/RESEARCH CONTRACT IN PIGMENT AND RESIDUE ANALYSIS

UMR 5199 PACEA, University of Bordeaux, France

The UMR 5199 of the CNRS offers a funded Post-doctoral position for the European Research Council Advanced Grant project TRACSYMBOLS "*Tracing the evolution of symbolically mediated behaviours within variable environments in Europe and southern Africa*" for a period of one year renewable for one year. The position is available from 1<sup>st</sup> September 2012 or by negotiation.

## Background

The aim of TRACSYMBOLS is to examine how key behavioural innovations emerged among *Homo sapiens* and *Homo neanderthalensis* in southern Africa and Europe respectively, and explore whether and how environmental variability influenced this development between 180 – 25 ka [Marine Isotope Stages 6 – 3].

The Post-Doctoral candidate will be part of a multidisciplinary team addressing this issue through new archaeological excavations in South Africa, i) the application of innovative methods to the analysis of early symbolic and complex material culture of *H. sapiens* and Neanderthals, ii) the reconstruction of climate, vegetation and fire regimes through multiple proxies analyses of marine and terrestrial archives and high resolution climatic simulations, iii) the incorporation of archeological and palaeoclimatic data into bio-computational architectures allowing for the reconstruction of past eco-cultural niches.

The post-doctoral candidate will assist the project PI (Chris Henshilwood, University of Bergen) and Co-PI (Francesco d'Errico, CNRS/University of Bordeaux) in the analysis of pigments and residues from Africa and Europe. The applicant will be responsible for the operation of a portable Raman spectrometer, XRF and a high quality colorimeter to analyse museum collections in Africa and Europe. The candidate will have confirmed experience in the storage, treatment, analysis and interpretation of the captured data. He/she will need to complement these analyses through the use of SEM, EDS, XRD, TEM, PIXE/PIGE techniques. A working knowledge of these techniques is a pre-requisite. A number of analyses of pigments and residues have been conducted in the framework of this project during the last two years, which has lead to the acquisition of large amount of data. The candidate will play a leading rôle in the publication of these already acquired data and will also conduct new research on key archaeological material.

## The Applicant

The successful candidate will:

- have a PhD in chemistry, geology, archeology or conservation studies with clear competences in the physical and chemical characterization of pigments and residues.
- have the ability to independently conduct scientific research (literature mining, analysis, creation of databases, syntheses and reporting), leading to international publications
- be motivated to travel in Europe and South Africa
- be fluent in written and spoken English and preferably also in French.

## Conditions

The post-doc research fellow will work at the laboratory PACEA (CNRS-UMR5199, University of Bordeaux, France) under the supervision of Francesco d'Errico. This position requires a minimum commitment of 38,5 hours per week. Salary: Total package depending on post-doctoral experience: €27, 000 - 45,00 per annum/conditions apply.

## Enquiries

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## Deadline

CVs and motivation letters should be ideally received before the end of July 2012.