1 year Postdoctoral position at the National Museum of Natural History (MNHN), Paris

DIM- MAP (Ancient and Heritage Materials, http://www.dim-map.fr/projets-soutenus/geocot/)

Post-doc project: **GEOCOT-Geochemistry of cotton production and distribution**

Advisors: Charlène Bouchaud and Antoine Zazzo (CNRS/UMR 7209).
The project involves collaborations with Christophe Moulhérat (Musée du Quai Branly-Jacques Chirac), Eric Douville and Caroline Gauthier (CEA/LSCE).

Cotton (*Gossypium* sp.) is an eloquent symbol of modern globalisation. Its internationalisation, however, is not the result of a recent process and the history of cotton, involving four domesticated species, shows one of the most outstanding examples of social, environmental, technical and economic entanglement. The various trajectories of the cotton products, raw and processed seeds and fibres, are relevant markers of the circulation of knowledge, goods and people. However, understanding cotton diffusion in the past is limited by the difficulty of identifying the geographical origin of products (fibres, fabrics, seeds) found in charred or desiccated forms in archeological context. The successful candidate will focus on developing new isotopic approaches in order to 1) generate information on the nature and local environment of modern cotton seeds and fibres whose provenance is known (modern cultivated specimens and heritage collections) and 2) to understand how carbonisation affects their isotopic composition. The most relevant isotopic tracers will then be used to identify the local or imported provenance of seeds and textile fibres from two archaeological sites located on important Ancient trade routes (Mouweis, Nile valley, Central Sudan and Madâ'in Sâlih, northwestern Saudi Arabia).

The post doctorate will develop an analytical protocol in order to perform isotope analysis of light (C, N, O, H) and heavy (Sr) elements on fresh and experimentally charred modern cotton fibres and seeds among the available collection present in the lab. She/He will be responsible for sample analysis in the laboratory and for interpretation of the results. The successful candidate should have an excellent knowledge of isotope geochemistry of plants and proficiency in mass spectrometry. Experience on the analysis of ancient samples will be appreciated. Fluency in either English or French is required and basic level French is recommended for non-French speakers. Candidates are requested to send a cover letter, full CV and minimum one letter of recommendation in a single pdf file to Dr. Charlène Bouchaud (charlene.bouchaud@mnhn.fr) and Dr. Antoine Zazzo (zazzo@mnhn.fr). Feel free to contact them with questions about this position. The closing date for the position is on **April 30th, 2018**. The shortlisted candidates will be interviewed in May-June. The successful candidate will be expected to commence in the beginning of October. She/he will be employed by the CNRS with a full time position for the duration of one year. Salary indication € 50.000- gross per year.