

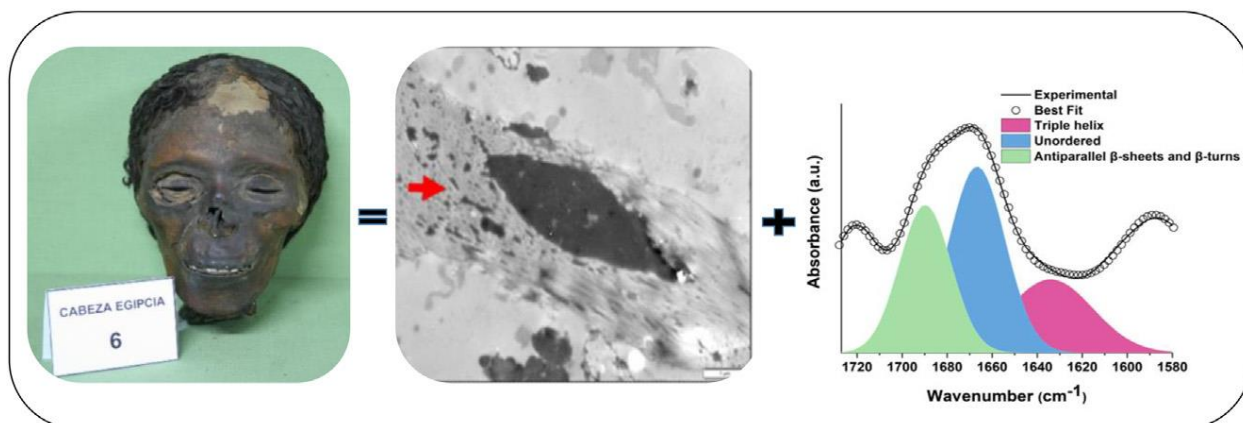
## ***“Open SESAME for cultural heritage research and beyond”***

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During the last two decades, a huge increase in the use of accelerators-based techniques is witnessed in a wide range of scientific applications such as physics, chemistry, biology, geology, biomedicine, agriculture, environment, materials science, cultural heritage and archeology. Exhibiting a strong interest in the fields of archaeology and cultural heritage compared to laboratory-based source, they are commonly implemented to shed light on the best methodologies of manufacturing, conservation, and/or restoration of different forms of heritage materials and objects. This presentation will highlight the accelerators' importance in heritage studies, with a focus on different examples of related research in the field conducted at the recently operational SESAME synchrotron facility. SESAME is the only synchrotron light facility in the Middle East. It aims at promoting advanced research capabilities and technology within its Members, and considered as the region's bridge to peace and mutual understanding. Current Members are Cyprus, Egypt, Iran, Israel, Jordan, Pakistan, the Palestinian Authority and Turkey. Whereas, Brazil, Canada, China, the European Union, France, Germany, Greece, Italy, Japan, Kuwait, Portugal, the Russian Federation, Spain, Sweden, Switzerland, the United Kingdom and the United States are the Observers. A few examples of SESAME Users' first experiments on archaeological remains, historical parchments, and on ancient mummy's skin, together with the future opportunities and perceptions in the field of cultural heritage at SESAME will be demonstrated.



Mummified embalmed head skin: SR-FTIR microspectroscopic exploration