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Histological, immunohistochemical and anthropological study among mummies coming from different geographic areas

Paola Delaconi¹, Vittorio Mazzarello¹, Pasquale Bandiera¹, Daniela Chessa¹, Gabriella Piu¹, Valeria Pomponi¹, Rita M. Serra¹, Giorgio Piga¹, Federica Longoni¹, David J. Kelvin³, Nikki Kelvin² and Salvatore Rubino¹

¹ Department of Biomedical Science University of Sassari, 07100 Sassari, Italy

² Department of History, University of Sassari, 07100 Sassari, Italy

³ University Health Network, ONM5T 2S8 Toronto, Canada

Following the discovery of two partially mummified corps in a Cathedral of Castelsardo, to better understand the mummification process it was decided to compare them with a peruvian mummy given to the University of Sassari in the late '800.

The aim of this work is to compare tissue conservation status by a morphological study supported by anthropological analysis.

Samples of skin and muscle were taken and rehydrated in Sadison's solution to be subjected to histological and immunohistochemical procedures. To establish sex, death-age and height we worked following classical methods (Ferembach 1980; Uebelaker 1989; Meindl and Lovejoy 1985).

Castelsardo's mummies conditions are generally fair, although very variable in different points of the body: the former is male, with death-age between 45-55 years. His height is 171 cm. The latter female, with death-age between 60-67 years. Her height is 157 cm. She shows reduction of some intersomatic spaces, spondyloarthropathy and scoliosis. The muscular and cutaneous tissues show a good conservation, in particular the former presents a fibrillar structure well-preserved, boundaries free between cells.

The peruvian mummy is male, with death-age older than 25 years. His height is 160 cm. He shows osteophytosis at lumbar area with a collapse of the body at 4th lumbar vertebra; his conditions are overall good however the tissues show a poor conservation where a structural organization cannot be distinguished.

This study allowed us to obtain paleo and microanatomy informations and to describe the morphological characteristics of mummified tissues.

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Key words

Mummies, anthropology, histology, immunohistochemistry.