



THE
MANCHESTER
MUSEUM

Professor Norman Palmer
Chairman
Working Group on Human Remains
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Tel. No. 0161 275 2647
Email: Rosalie.david@man.ac.uk
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Ref: jem/ard/palmer

Dear Professor Palmer

Working Group on Human Remains

Thank you for your letter of November 28th, 2001, offering me the opportunity to comment on human remains in the museum context.

Since 1973, I have directed the Manchester Museum Egyptian Mummy Research Project which we inaugurated to study the evidence of disease in mummified remains, and to obtain information which would enhance understanding of the lives and culture of the ancient Egyptians. In its early stages, the project concentrated on the examination of full-body mummies in the Manchester Museum collection and, by invitation, in some other Museums and at archaeological sites. The project pioneered an interdisciplinary, scientific approach to this type of research, and also developed the use of non-destructive techniques of examination such as radiography, or the minimally invasive method of endoscopy to obtain tissue samples for histological, immunological and DNA studies.

In 1996, we were approached by Dr George Contis, President of Medical Service Corporation International, Virginia, whose company was working with the Egyptian government on an extensive epidemiological study of schistosomiasis (Bilharzia) in Egypt. He invited the Manchester Project to participate in a unique epidemiological study to see how the disease - and its causative parasite - had behaved and developed in Egypt over a 5000-year period. In 1997, in order to provide a sufficient quantity of mummified tissue samples for this epidemiological study, the Manchester Museum established the International Egyptian Mummy Tissue Bank. Tristram Besterman, Director of the Manchester Museum, has played a leading contributory role in establishing this new kind of collection and resource at the Museum and in the formulation of the subsequent protocols. The Tissue Bank now holds nearly a thousand tissue samples, donated by museums and institutions worldwide. They are not only used for the schistosomiasis project but also for projects on disease history and mummification techniques that are undertaken by other *bone fide* researchers.

Cont/d

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Director Tristram Besterman MA FGS FMA



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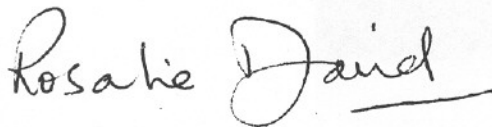
The Manchester Project has devised and developed immunological tests to detect the antigens that lie on the surface of schistosome worms and eggs. This has been a major breakthrough in our research because, as a diagnostic tool, immunocytochemistry can detect the presence of disease in very small tissue samples taken from any part of the body. Further work has extracted schistosome DNA from the remains of parasites which remain in the mummified tissue, opening the way for scientists to investigate the evolution of these parasites by comparing the genes from ancient and modern schistosomes. In turn, this may contribute to knowledge currently required to create and develop vaccines against the disease.

Ultimately, the data derived from the ancient tissues will be compared with the 100,000 modern case studies that have been undertaken by our partner, the Egyptian Ministry of Health. In this way, the Tissue Bank and museum collections of mummies are enabling us to contribute to the understanding of disease history.

Currently, at Manchester, we have the world's only university course devoted to this area of research - the MSc Degree in Biomedical and Forensic Studies in Egyptology. We also have 10 PhD students working in the same area. New research at Manchester involving mummified samples includes studies on ancient viruses and their possible links with cancer, and the incidence and development of malaria and tuberculosis over thousands of years.

I hope that this overview will demonstrate how ancient remains held in a museum collections can contribute dynamically to understanding modern disease patterns, and will therefore be of interest to your Working Group's discussion.

Yours sincerely

A handwritten signature in cursive script that reads "Rosalie David". The signature is written in dark ink and is positioned above the typed name.

Professor Rosalie David
Keeper of Egyptology