

Aegyptus et Pannonia VI.



Acta Symposií anno 2019

B U D A P E S T

Aegyptus et Pannonia VI.

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AEGYPTUS ET PANNONIA VI.

Health and Life in Ancient Egypt. Mummies in Focus

Proceedings of the Conference held 27-29th

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INTRODUCTION TO THE “HEALTH AND LIFE IN ANCIENT EGYPT” CONFERENCE-VOLUME

Dr. Hedvig Győry PhD

Earlier readers of *Aegyptus et Pannonia* will surely be surprised by this volume. It has been more than 10 years since we organised our last conference for the fifth volume, and the theme has changed completely. Therefore, as an introduction, we would like to briefly summarize the recent events and the activities we have carried out in the professional field. This is also the reason for the structural change: the conference presentations will be followed by detailed articles resulting from the work of our Society.

The Hungarian-Egyptian Friendship Society and the Ancient Egyptian Committee

The Hungarian-Egyptian Friendship Society (HEFS) has been a non-governmental organization operating since 1995, which strives to acquaint and promote Egyptian culture; scientific activities and research are essential elements among its objectives. We discuss actual and earlier Egyptian topics from historical, artistic, literary, touristic or even economic points of view in our lectures. We also organize other programs according to the demand of situations and suggestions of our members. Thus, in the recent period our programs included Egyptian days and festivals, workshops, excursions, experience reports, public meetings and quizzes, as well as literary and photo competition. We also share other news and curiosities on our website and in our radio programs. Our activities are carried out partly in collaboration with other organizations, as was the conference organized in 2019 “Health and Life in ancient Egypt. Mummies in Focus”, presentations of which are published in this volume.

Particular emphasis is placed in our efforts to raise awareness of ancient Egyptian monuments, which is why an independent Committee (Ancient Egyptian Committee / AEC) has been set up to coordinate this. It plays a key role in the life of the Society and has done much work both in dissemination and research in recent years.

Part of our work is aimed at pupils who are taught ancient Egyptian knowledge through competitions in a playful way. There were also children’s classes and lectures in schools and community places (often called house of culture in the Hungarian language). Here, we primarily work through manual skills to develop on visual culture. We have been writing out fine art competitions (drawing/painting, puppet, digital

storytelling) for years. In the last two years, an adult category was also launched for the competition at the public's request, and we have organized some exhibitions with the paintings in Hungary, but had already a children's drawing/painting exhibition in Cairo. The committee has published a book on several occasions, most recently with children's drawings/paintings about the ancient Egyptian myth on the Eye of the Sun, and the next such volume is processed. Our radio programs belong also to this activity; there we present various faces of ancient Egypt and report on the latest news ("On the field of the Pharaohs"), resp. we draw attention to exhibitions in Hungary ("From Exhibition to Exhibition").

In the research field, the Ancient Egyptian Committee was initially involved in the excavation and reconstruction works of the Isis Temple in Szombathely (Savaria), focusing primarily on the religious, social, lifestyle, and artistic aspects of Egyptian religious cults. In co-operation with the archaeologists of the Savaria Museum in Szombathely and the Hungarian National Museum in Budapest, it also organized five international conferences. At that presentation, national results, discussion of controversial cases, and lectures on international professional results took place. A significant part of the lectures appeared in the form of articles in the volumes of *Aegyptus et Pannonia*, founded by AEC, representing the diversity of relevant scientific researches.

The medico-history research group

Already in the early 1990s, we contacted the Semmelweis University II, Clinic for Internal Medicine. With the support of the then director, Professor János Fehér, we published several publications in the *Orvosi Hetilap* and other Hungarian medical / medico-historical periodicals. In 2003 under the auspices of the Kriterion Publishing House in Cluj-Napoca, the book "Health and Lifestyle in Ancient Egypt" was published with the assistance of a biochemical researcher at the University. Besides the articles, lectures were also given on request.

The medico-history research group in the AEC was established with such antecedents in 2010 to examine herbs of ancient Egyptian medicine that can still be used currently in today's life, in the knowledge that ancient Egyptian science has reached such a high standard that it has become an outstanding and exemplary professional skill for the surrounding peoples, and later became one of the cornerstones of modern medicine — through the mediation and further development of Greek and Roman and then Arabic medicine. A significant part of the substances used in prescriptions are of vegetal origin, so reviewing and examining their effects and the data on them may provide new uses for current pharmacology. In this field, we collaborated primarily with researchers from the Semmelweis University of Medicine, under the direction of Professor Anna Blázovics.

A few years ago, I was also invited to contribute to the work of the editorial staff of *Kaleidoscope, Journal of Culture, Science and Medical History* at the Semmelweis Uni-

versity. Last year a lecture was given with the staff of the University and the Hungarian Academy of Sciences on the occasion of the Science Day of the Hungarian Academy of Sciences. We thus also maintain an excellent relationship with Professor Judit Forrai, who headed the Institute of Public Health at Semmelweis University, and with the Life Sciences and History Working Committee of the Hungarian Academy of Sciences under her leadership.

Over time, we contacted the HNM Semmelweis Museum of the history of Medicine, which also houses some Egyptian medical material, and the mummy of Zoltán Arányi, whose mummification method raises questions concerning the afterlife of this practice. Documents on this topic were encrypted for the conference, published in this volume.

Initially, our goal was to present international results to Hungarian people, which is why we have given several lectures inside and outside the Society on herbs known and used in ancient Egypt, from the point of view of phytotherapy, aromatherapy, and other medico-historical topics, some of which are summarized in our *Egyiptomi Füzetek* (Egyptian Booklets). We aimed to make aware as many people as possible of the newly acquired pieces of knowledge; at the same time these lectures provided us opportunity for a kind of summary and systematization, for reviewing the still immature results, and for expanding the professional consultation.

After years actively pursued in-depth research on *materia medica*, we have found interesting, even currently valid discoveries in the case of figs, sycamore, Christ's thorns, or coniza. In doing so, we collaborated with the Institute of Pharmacognosy at the Semmelweis University and the Hungarian Free Radical Research Society (Magyar Szabadgyök-Kutató Társaság), also involving pharmacist students at the University, focusing on free radical researches. It has led to a significant change in attitudes and approaches. Our research has yielded results that are as valuable from a medico-historical point of view as from a medical point of view, because they may provide solutions to broaden boundaries in the field of pharmacognosy and to discover newer therapeutic indications. It has been proven that the use of the ingredients listed in ancient Egyptian recipes studied so far can be proven to be effective drugs even today. One of our articles¹ was awarded the Lajos Markusovszky Prize by the *Orvosi Hetilap* (Medical Weekly, May 2017). The student, we worked with, took also a 2nd place prize for her work made for the rector's competition in the frame of the Scientific Students Body (TDK).

Scientific publications were thus produced and the need for wider dissemination of the results arose again. The idea of a public meeting or dissemination conference

1 Katona, Júlia – Győry, Hedvig – Blázovics, Anna: „Azon orvosságok kezdete, melyeket a májra adnak”. [The beginning of the medicaments given for the liver]. *Orvosi Hetilap* 157/48, 2016, 1926-1933.

was raised, where ancient Egyptian medicine could be approached from a historical, cultural, ethnographic and pharmaceutical historical point of view, while drawing attention to the diverse uses and health-preserving and improving roles of these plants. In the course of these researches, the study of the contemporary treatment of the liver came to the fore again, which is also reflected in the current volume, building on our previous results. In the course of this investigations, it was suggested that it would be worthwhile to follow the *jns.t* / anise identification more thoroughly. The results of the researches can be found in this volume, significantly expanded compared to what was presented at the conference. Another direction of research is the mineral analyses, which we recently launched with the participation of Dr. Klára Szentmihályi.

The year 2018 then gave our research team a new impetus and members. In addition to phytotherapy and pharmacognosy, there was an anthropological direction, as can be seen from our article in the volume, which is an expanded material for the 2019 conference presentation. At the same time, we have relaunched the series of *Aegyptus et Pannonia* scholarly symposia with a new direction: mummy research. That year namely, a PhD student Enikő Szvák, who has been investigating the Egyptian mummies of the Hungarian Natural History Museum, asked us to help with our expertise in ancient Egyptian culture by participating in the research of these mummies. We already made some insight into this field as we have continually monitoring the publications concerning ancient Egyptian mummies, but made some practical steps only in 1996, with the help of Ildikó Pap, the than director of the Anthropological Department, when a publication was issued for the 90th centenary of the Hungarian excavation at Gamhud, Middle Egypt. It included the human remains kept in the Hungarian Natural History Museum, taken out from the coffins published at that time.²

We have now embarked on a much wider range of activities, as indicated by our joining to the Nephthys Project. The new, exciting topic added new colour to the palette of our research team, and brought our earlier conference plan to the forefront. It was a natural consequence of organizing this conference together with the Hungarian Museum of Natural History. Still, since there are also ancient Egyptian monuments in the Hungarian National Museum's Semmelweis Museum of Medical History in Budapest, we wanted to draw attention to them as well. The fact that this conference remained not just a plan is due to the active participation of the two partner-institutions, and also to the National Cultural Fund (NKA), which not only made possible to organize the conference, but also contributed to the publication of this volume. We received further help from Ibisz Bt.

² Győry, Hedvig, *Az első magyar ásatás Egyiptomban, 1907. Válogatás a gamhudi ásatás anyagából, 1997.* [The first Hungarian Excavation in Egypt, 1907. Selection from the material of the Gamhud excavation. 1997]. Budapest 1998.

The Nephthys Project

Enikő Szvák

The Nephthys Project was launched in the fall of 2018 as part of a PhD dissertation. The aim of the research is a comprehensive series of studies on Egyptian human and animal mummies and mummy remains kept in Hungary. A particularly important aspect is to implement a multidisciplinary investigations that involves the least invasive procedures possible.

The research began with the biological anthropological reconstruction of the Egyptian mummy collection preserved in the Anthropological Department of the Hungarian Museum of Natural History. Based on the preliminary results, the investigation of the pathologically most promising pieces continued with industrial CT examination, electron microscopy and 3D digital microscope analyses. Radiocarbon dating was also performed, aiming to get a more precise age-determination of the mummies. We wanted to learn the age of death, the possibility of diseases, general health conditions, and materials used in mummification for the deceased individuals, and the period from which the remains originate.

In the course of our research, we found that not only human remains, but also the organic and inorganic chemical analysis of the materials used for mummification can add a lot of new and exciting information to our knowledge about mummies. Thus, the identification of mummifying substances is also treated as a priority area during the project.

We are also experimenting with new procedures. Our goal is not only to realize a multidirectional research, but also to advance in the field of innovation in the future. Therefore, we also performed non-destructive ion beam studies on mummy remains with the help of ATOMKI employees in Debrecen. The preliminary results of the procedure are encouraging, and it is believed that the method may be suitable for a preliminary assessment of the bones at a later stage. This could make further chemical analysis on remains in future safer and easier.

The project resulted in several conference-presentations and professional posters at renowned national and international conferences. These successes gave us the chance to find new research partners and bring new mummy remains under investigation. Currently, the research material of the project includes the remains of the Egyptian human and animal mummies of the HNM's Semmelweis Museum of Medical History and the Török Aurél Collection in the Eötvös Lóránt University, Budapest, as well as the fish mummy of the Déri Museum, Debrecen.

Some of the test series have been completed, and other ones are still ongoing, as the evaluation of the results is. The first scientific publications were scheduled for 2020, which is unfortunately severely hampered by the limitations due to COVID-19.

With the scientific conference we organized, we want to create a tradition. We want to encourage renowned international researchers to participate in the mummy conferences held in Hungary every few years to become an integral part of the circulation of the Egyptian mummy research. In our opinion, it is essential to maintain old professional relationships and make new acquaintances also for the sake of research and to increase our professional knowledge. To maintain the research's smoothness, from time to time, the partial results available to us should be presented to the general public and the narrower profession in the framework of scientific lectures and professional posters. It makes it easier to clarify the issues before the publications appear, so we also organized a mummy workshop on one of the afternoons of the "Health and Life" conference. We presented our results in front of a forum of excellent researchers.

We are pleased to announce that there are currently more than twenty Hungarian and international institutions and more than thirty colleagues working free of charge for the success of the research. We hope that this number will get higher over time and that even more will join us.

At present, we hope that our relatively recent research will stand the test of time and enrich the positive image of Hungarian anthropologists and researchers abroad as a long-term project.

Health and Life in Ancient Egypt conference

In 2012, our conference "Cultures and Therapies. Ethnography and Science" failed due to financial reasons, so it was a special pleasure for us to successfully apply in 2018/2019 for an international conference with the Hungarian Natural History Museum and the HNM's Semmelweis Museum of Medical History. The conference entitled "Health and Life in Ancient Egypt. Mummies in Focus" was held in August 2019. Its program could be followed on the conference's website to make it available to those interested.

The conference was preceded by a press reception organized by the Hungarian Natural History Museum, for which a separate promo spot was created. The participants of the conference were greeted by dr. Ildiko Pap PhD, the honorary director of the Department of Anthropology of the Hungarian Natural History Museum and dr. Gábor Tomka, the deputy general director of the Hungarian National Museum and the Egyptian Embassy. In the introductory speech the three organizing institutions presented their respective research and plans. During the lectures, we enjoyed the hospitality

of the two partner institutions for three days. An exhibition was also organized in the Semmelweis Museum of Medical History in honour of the conference, which was presented to the participants by the museum staff on the occasion of a reception. During the conference, lectures, a poster section and two workshops were held, which provided opportunities to get to know the new results more thoroughly, also on the situation of the research in ancient TB, and discuss the issues that arose during the research of the examined mummy material in the Museum. Many of the presentations were held as introduction to discussions and consultations, which provided an opportunity for exchanges of professional experience.

The program ended with a visit to the Egyptian exhibition in the Museum of Fine Arts and another one to the Holy Right preserved in St. Stephen's Basilica. It was also possible to visit the periodical exhibition "Gold of Mexico" and try out the "Escape Room" of the Hungarian Natural History Museum.

Acknowledgement

The publisher of this volume would like to thank all the organizations and individuals, who made possible the conference and the publication of the volume, as well as the speakers and the volunteers involved in organizing and conducting it, who contributed to the success of the conference by their work.

We want to emphasize the work of Krisztina Scheffer and Enikő Szvák, who not only contributed to the lectures, but also took part in eliminating many of the pitfalls of the organization process.

We also say special thanks to the members of the Scientific Committee: Prof. dr. Rosalie David (University of Manchester), dr. Dina Faltings (Heidelberg Universität, Sammlung Ägyptologisches Institut), dr. Győry Hedvig PhD (HEFS), Prof.dr. Salima Ikram (American University of Cairo), habil. dr. György Pálfi (University Szeged, Anthropology Chair), dr. Ildikó Pap PhD (Hungarian Natural History Museum), Prof. dr. Wilfried Rosendahl (Reiss Engelhorn Museum), Stephanie Zesch (Reiss Engelhorn Museum), habil. dr. Albert Zink (Eurac Research), who took part in the scientific preparation of the conference.

We want again thank the authors of this volume for their professional contributions, and also for their patience and cooperation.

Also, special thanks for Hedvig Király for her assistance in editing work, and for Almamag Bt's work in graphic editing and for its understanding and flexibility during these times burdened with COVID-19.

We then are greatly indebted to Rosalie David in Manchester for her invaluable help by proofreading almost every article in the volume, despite her many other tasks and the situation in Manchester, severely affected by the virus.

We hope you will be as happy to read this volume as the AEC has released it.

ADVANCES IN THE STUDY OF LITHUANIAN MUMMIES

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Abstract

Within the framework of the Lithuanian Mummy Project, mummified remains found in crypts or held in museums have been investigated since 2011. This short report illustrates some of the most striking findings, and demonstrates how mummy studies can contribute to both history and archaeology.

Introduction

Human mummies are remains characterized by the presence of soft tissue, including the skin, muscles, ligaments and even internal organs.¹ Since 2011, the Anthropology Lab of Vilnius University has been conducting research on the mummified remains held in the cities of Vilnius and Kaunas, Lithuania. These included the bodies from the crypt of the Dominican Church of the Holy Spirit, the Basilian Church of the Holy Trinity, the Church of Saint Michael, and even some Egyptian mummies curated in two different museums. This short report is aimed at summarizing some of the most relevant results of our activities.

Paleopathology

In 2011, we were given the opportunity to inspect and study 23 bodies from the Dominican Church of the Holy Spirit (Figure 1). Therefore, together with a number of colleagues from different backgrounds, we CT-scanned the 7 best preserved mummies. Due to the

¹ LYNNERUP 2007.

lack of outer tissue, we were able to sample the internal organs of the rest. At the end of the study, the mummies were brought back to the crypt, where they still rest today.²



Figure 1. An adult female mummy from the Dominican Church of the Holy Spirit.

One of the main results of the imaging study was the identification of tuberculosis, which did not affect the bones, but was visible on the soft tissue in the form of calcifications of the lungs and pleural adhesions indicating a healed inflammatory process. The most likely explanation for this evidence was lung tuberculosis, which is historically documented in Lithuania for the period concerned.³

Additionally, three of the mummies showed evidence of atherosclerosis, an accumulation of fat along the walls of the arteries, which was at times very severe. This condition has recently been explained as a consequence of the normal ageing process, but indeed the Vilnius mummies demonstrate that in some cases diet and behaviour played a significant role.⁴ In order to have a better understanding of this phenomenon, we used the letters of Georg Foster, a German professor of natural history at Vilnius University. Foster complained in his writings about the lack of vegetables, fruit and

2 CARDIN 2015.

3 PIOMBINO-MASCALI ET ALII 2015a.

4 THOMPSON ET ALII 2013.

greens, how the food was mainly consisted of meat and was prepared with animal fat, and that the locals were drunk at least once a week.⁵

Bone conditions were also found, amongst which a case of hydrocephalus associated with rickets stands out.⁶ The child with these conditions may have been prohibited from going out of the home due to her disorder, which may have led to the lack of sun exposure and the consequent onset of rickets, a defect of ossification due to a lack of vitamin D (Figure 2). Other abnormalities included arthritis, neoformations, variants such as a hole in the sternum, and some occupational conditions such as the *os acromiale*. Scoliosis and *hallux valgus* were also found.⁷



Figure 2. A child mummy from the Dominican Church of the Holy Spirit showing evidence of hydrocephalus and rickets.

More recently, we started to investigate the samples by extracting and amplifying ancient DNA; one of the children was found to be positive for variola virus. Comparison with more recent DNA of variola samples showed that our sample is basal to all other data, indicating that the story of this condition may be more recent than previously thought.⁸

5 FOSTER 1988.

6 PANZER ET ALII 2013.

7 PIOMBINO-MASCALI ET ALII 2014.

8 WERTHEIM 2017.

Crypt Archaeology

Between 2015 and 2016, investigations were carried out in a crypt of the Basilian Church of the Holy Trinity, founded in the 16th century AD. The aim of our work was to organize the crypt and arrange the coffins in an orderly manner, as well as carry out a study of the room and its contents.

Anthropological research was specifically conducted on 13 poorly mummified bodies, and 5 mummified bodies, which appeared to be preserved among the other burials due to a process of natural desiccation. Only one subject showed that the abdomen and chest areas were filled with small woodchips, which might possibly indicate a case of embalming. Investigations revealed that the majority of the subjects were males, and judging from the grave goods, they were most likely religious members of the Basilian Order.⁹

An additional crypt investigation was carried out in 2017, when we were summoned to inspect a subterranean chamber located in the Church of Saint Michael (now Church Heritage Museum), one of the many architectural masterpieces of Vilnius, Lithuania. This building, which shows Renaissance and Baroque elements, was originally founded in the late 16th century, and was completed by the early 17th century.¹⁰

It was commissioned by Lew Sapieha, a prominent figure of the Grand Duchy of Lithuania. A rich and powerful magnate, he was known for his wisdom as a lawyer and military commander, and he was one of the greatest leaders at the time of the Duchy's highest cultural flourishing.

Upon inspection, the crypt was found to contain 21 coffins, three of which turned out to be empty. In total, a minimum number of 18 individuals was observed, with some coffins containing more than one individual. Two of the bodies belonged to children, and the remainder pertained to adults (Figure 3 and 4). Twelve of the bodies were completely mummified, three were partially preserved, and another three were completely skeletonized.



Figure 3. A female mummy found in the crypt of the Sapieha family at Saint Michael's.

9 PIOMBINO-MASCALI ET ALII 2017.

10 VASILŪNIENĖ 2010.

Our preliminary survey revealed that these are most likely spontaneous mummies, as evisceration was only evident on two individuals. Both sexes were represented, as well as two social categories including the nobility and the clergy. Interestingly, the main coffin, which belonged to Lew Sapieha himself, contained the remains of a vigorous, robust male. According to historical records, he died aged 76, which was consistent with the remains that were discovered.¹¹



Figure 4. A child mummy found in the crypt of the Sapieha family at Saint Michael's.

In addition to members of this important family, the church revealed another crypt nearby. There, the remains of Dorota Siedlczyńska, a nun that was killed by the Russians in 1655, were also inspected and showed evidence of perimortem trauma.¹² Within the framework of the Lithuanian Mummy Project, these important remains will soon be carefully studied anthropologically, radiologically and genetically, combining historic sources to biological and medical details.

Biomedical Egyptology

Within the Lithuanian collection there were also several Egyptian mummies which were CT-scanned and included in the project. The results were surprising. Two mummies, though to be children from the Greco-Roman period, were scanned (Figure 5).

¹¹ VASILIŪNIENĖ 2010.

¹² VASILIŪNIENĖ 2010.

One contained no human remains whatsoever, while the other contained only one adult hand. However, the most interesting discovery was the presence of a tin foil located beneath the paint on the bundle. As tin was industrially produced only during the Modern Age, it is believed that these mummies are fakes, manufactured to be sold to tourists as a souvenir around the 1700-1800 time period.¹³



Figure 5. One of the two pseudo-mummies belonging to the National Museum of Lithuania.

Another interesting mummy which belonged to the King of Poland in the 17th century, was finally

handed over to the Vilnius Museum of Antiquities at the end of the 19th century (Figure 6). Interestingly, while the coffin is dated to the 21st dynasty of Egypt, the mummy undoubtedly dates to the Roman period as evidenced by the wrapping, although it is impossible to estimate when the coffin was reused.¹⁴

Another fascinating example is the Kaunas mummy, purchased by the first Lithuanian Egyptologist, Marija Rudzinskaitė-Arcimavičienė, who brought the item to Lithuania. Until the late 20th century, the mummy was believed to belong to a princess called Shemait. However, the CT investigation revealed a different story. First of all, bundles with a palm mat underneath are associated with poor status burials; secondly, the mummy belongs to a man, and was probably skeletonized and then wrapped in the bundle. Additional elements were found within the bundle, suggesting there may be more than just one



Figure 6: The coffin containing a mummy dating back to Roman times on display in the National Museum of Lithuania.

13 PIOMBINO-MASCALI ET ALII 2013-2014.

14 PIOMBINO-MASCALI ET ALII 2016.

individual wrapped inside. A small bottle of lavender oil, sourced from Crimea, Ukraine, was found during the CT-scanning process (Figure 7). It was likely placed there by Rudzinskaitė-Arcimavičienė, with the intent of creating a mystifying environment, which is supported by recent biographical research.¹⁵

This short report has shown the great potential of mummy studies in contributing to the history and demise of past populations, as well as to the social history of some of Vilnius most affluent members, and we are confident that additional, significant data will be acquired from Lithuanian mummies in the very next future.



Figure 7. The Kaunas mummy during an inspection at the Pranas Gudynas Restoration Center.

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