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*Communicationes ex Instituto Archaeologico
Academiae Scientiarum Hungaricae*

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 KRISZTIÁN OROSS – LÁSZLÓ SÓPAJTI-TÓTH – TIVADAR VIDA

**THE MEDIUM-TERM STRATEGIC PLAN OF
 THE INSTITUTE OF ARCHAEOLOGY OF THE RESEARCH CENTRE
 FOR THE HUMANITIES OF THE HUNGARIAN ACADEMY OF SCIENCES
 AND ITS SCIENTIFIC ACTIVITY IN 2016 AND 2017**

I. THE MEDIUM-TERM STRATEGIC PLAN OF
 THE INSTITUTE OF ARCHAEOLOGY OF THE HAS RCH (2016–2019)

The external environment

The Institute of Archaeology of the Research Centre for the Humanities of the Hungarian Academy of Sciences (HAS RCH) has been firmly embedded in international archaeological scholarship and its contribution to this field has been considerably broadened with the elaboration of new research agendas and new research techniques. The Institute strives to forge and maintain a constructive collaborative relationship with the archaeological departments of Hungarian universities, with museums engaged in archaeological activities, with the authorities responsible for heritage protection and with the bodies responsible for legislation in these fields.

The internal environment

One of the Institute's main strengths is continuity in the positive sense of the word: the intellectual capital accumulated by successive generations of scholars building on each other's work is outstanding by both Hungarian and international standards. A similarly favourable trend is research activity focusing on major research issues spanning successive project periods. Several major research themes have been developed that have enabled exceptionally successful grant applications for research projects whose findings are presented at prestigious forums. Although it has not proved possible to study every archaeological period with the same intensity, we have made every effort to mitigate this situation. Instead of covering the entire spectrum, our goal is to support the efficient work of larger research groups who are competitive on both the Hungarian and the international level. These research projects are complemented with interdisciplinary studies, which are in part undertaken by the Institute's own specialists in our fully equipped laboratories and are in part conducted in collaboration with a wide range of foreign institutions. The qualitative improvement of the research community poses an increasingly serious problem. The options for the indefinite-term employment of public employees are strongly restricted. The prolonged stagnation of salaries and the lack of reclassifications, the fact that any economic background can only be planned with difficulty has led to a palpable sense of existential anxieties. The brain drain of our researchers is constrained to some extent by the Institute's prestige and the professional and community commitment of the overwhelming majority of the researchers.

Mission statement

The Institute is one of the leading institutions of Hungarian archaeological scholarship, which has been engaged in basic research since its foundation; the Institute conducts major excavations both in terms of the application of innovative field technologies and relevance for scholarship, and conducts extensive surveys for the identification and documentation of Hungarian archaeological sites with a view to both heritage protection and the advancement of the discipline. The archaeological research agenda spans the period from the Neolithic to the Early Modern Age, with a greater focus on certain periods and on the interaction between humans and their environment during the historical periods.

The Institute strives to meet the standards and challenges of international archaeological scholarship and to partake in the scientific assessment of the Hungarian archaeological material record, while its public duties include the promotion of an awareness of the importance of heritage protection and the dissemination of knowledge to the broader public. In a broader sense, archaeology as a discipline is part of historical research while, at the same time, its distinctive source material calls for a multidisciplinary approach employing various archaeometric procedures.

The Institute's strategic goals

The Institute's goals are two-fold: to fulfil its public duties in Hungarian archaeological scholarship and to ensure successful participation in international and Hungarian research projects. One of the Institute's major priorities is the continuation and modernisation of the Archaeological Topography of Hungary (MRT) project.

In Hungary, the Institute was among the first in the discipline to react to the methodological changes in international research trends and to adopt and promote the GIS-based data processing of settlement archaeological research and the introduction and application of non-destructive diagnostic procedures. Building on a decade of experience, the Laboratory of Archaeogenetics strives to attain a leading position in Hungarian archaeogenetic research and in designing and developing bioarchaeological research, to which one prerequisite is the purposeful engagement of the younger generation of researchers of the Institute's research community.

Our research projects are funded by various grants and one of our main priorities is to ensure the continuity of our projects. The Institute makes outstanding efforts to be an equal partner in international collaborative projects. The maintenance and development of already existing long-term partnerships is another important priority, as is the dissemination of our research findings in various journals as well as at prestigious scientific forums. In addition to regularly publishing in leading international journals, we make every effort to present our work partly in our own academic publications, such as "Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae" the Institute's foreign-language yearbook, monographs and compendiums of studies, and partly in a newly-launched book series published in Hungarian and English, "Hereditas Archaeologica Hungariae" series.

Performance indicators

We upload our publications and citations to the Storage for the Hungarian Scientific Publications system, "Magyar Tudományos Művek Tára" (MTMT) every year; however, this does not necessarily provide a realistic reflection of the research community's achievements. The publications of the humanities, and particularly of Hungarian-language studies, are not weighted appropriately in the MTMT system. One definite tendency in the Institute's publication activity is to increase

the proportion of foreign-language publications and the research community's contributions to prestigious foreign journals and other publications as well as to journals with a high impact factor.

The Institute's action plan for 2016–2019

Within this research period, the research plans during the initial one or two years were essentially determined by the relocation of the RCH to its new premises in late 2016, which caused a serious break in continuous work and took a toll on our research capacities. The merging of the libraries of the various institutions in the RCH meant a similar break because the research community did not have access to the library for many months. At the same time, the relocation to the new premises also offered a unique possibility for creating a modern, well-equipped new institution. The Institute's programmes and research projects were reviewed and redesigned in the second half of 2017. Our action plans are designed with a view to the yearly breakdown of ongoing projects on the one hand and to the success of various grant applications on the other.

Prehistoric Archaeology Research Group

The Prehistoric Archaeology Research Group is engaged in the study of the period between the Neolithic and the Late Bronze Age in the Carpathian Basin within the framework of Hungarian and international research projects. The Institute's prehistoric archaeogenetics projects explore how Europe was populated between the sixth and first millennia BC.

The Neolithic Research Group concentrates its research on southern Transdanubia, one of the major contact zones between the Balkans and Central Europe. The assessment of the Neolithic settlement investigated at Alsónyék-Bátaszék is performed in collaboration with the Römisch-Germanische Kommission des Deutschen Archäologischen Instituts (RGK DAI), and involves also the dating of the site based on a uniquely high number of samples. New applications have been submitted for Deutsche Forschungsgemeinschaft (DFG) and National Research, Development and Infrastructure Fund (NKFI) grants in order to explore various aspect of the settlement. Fieldwork was conducted in three micro-regions of southern Transdanubia. Several PhD and MA theses based on the findings of these research projects will be completed and defended during this research period.

The archaeological and bioarchaeological study of the burials of Late Copper Age society has been continued as part of an international collaborative project and we plan to submit a project application for a European Research Council (ERC) grant to continue this work. Preparations are underway for the publication of a foreign-language monograph on the Late Copper Age cemeteries in the eastern part of the Carpathian Basin.

The work of the Bronze Age Research Group is conducted within the framework of various Hungarian and international collaborative projects, one of these being the "Momentum Mobility Research Group". The research agenda focuses on the complex investigation of the first half of the Bronze Age, a period spanning some one thousand years (mapping of regional settlement networks, the archaeological and bioarchaeological assessment of the period's cemeteries, the archaeometallurgical examination of bronze artefacts and studies on their manufacturing techniques). The research projects focus on the two banks of the Danube in central Hungary, the Tápió Valley and the Veszprém and Füzésabony areas.

Ancient World and Migration Period Archaeology Research Group

The project focusing on the identification of individual master-sculptors hands in classical Greek art using the re-created 3D models of statues and sculptures in major Greek collections (Athens, Paros, Delos) will be completed and, in the light of the project's findings, an application for an ERC grant will be prepared and submitted. The detailed assessment of the relics of late antique art from Alexandria in Egypt will similarly be completed, as will the full evaluation of the imperial

villa at San Potito in Italy. The assessment of the rich find material from the Roman-period villas, rural settlements and military forts of Pannonia continues. The research project focusing on the Seuso Treasure is fitted into the cultural context of the Roman Empire.

A greater emphasis has been laid on the research of the late antique and early Byzantine Mediterranean in order to have a better understanding of the impact of late antique civilisation on Barbarian peoples. This research direction will be continued in the future too (circum-Pontic trade, the late antique metal vessels of the Carpathian Basin, the burial customs of the Mediterranean during Late Antiquity). The insights gained from these research projects have a direct bearing on studies on the late antique period in the Carpathian Basin and the potential interactions between the Germanic and the Avar period, which, together with research on the ninth century (centred around the Carolingian-period site of Zalavár) is high on the research group's agenda, alongside the detailed analysis of the connections between the Eurasian steppe, Italy and Byzantium.

The research projects extending into the analysed period focus on the multidisciplinary assessment of key Germanic and Avar-period cemeteries (Szólád, Budakalász) as well as the further archaeological exploration of the centre at Zalavár and the assessment of the site's outstanding relics and find assemblages (the churches, the pottery, the burials and the glass workshop), enabling the fitting of the site (and of Carolingian-period Transdanubia) into the overall ninth-century history of Europe.

In the coming years, the Institute will continue to contribute to the systematic publication of the Migration-period archaeological material and in initiating new research projects (a landscape archaeology project in Mongolia as part of a bilateral collaborative programme; studies on Hun, Avar and steppean nomad weaponry; bioarchaeological examination of Migration-period material; research excavations at important sites such as Fenékpuszta).

Hungarian Conquest Period, Medieval and Post-Medieval Research Group

In hindsight, the fragmentation of research on the Hungarian Conquest period – and, in close association, of the archaeology of the prehistory and ethnogenesis of the Hungarian people – between several institutes and research groups of the RCH was not a particularly good decision. This research field continues to remain one of the Institute's priorities, particularly the period's weaponry, settlement history and settlement patterns, and the interaction between the ancient Hungarians and their environment, alongside the bioarchaeology of the ancient Hungarians and the systematic publication in corpus-like monographs of the Conquest-period material from the entire Carpathian Basin, the latter undertaken in collaboration with the Department of Archaeology of Szeged University. Monographs on the earliest coin- and sword-dated burials of the Conquest period are currently in preparation and will be published jointly with the Römisch-Germanisches Zentralmuseum – Leibniz-Forschungsinstitut für Archäologie (RGZM). The Institute participates in Russian projects focusing on the eastern settlement territories and finds of the ancient Hungarians prior to the Conquest period as well as in physical anthropological and archaeogenetic projects.

The assessment and publication of the findings of the research project on eighth- to eleventh-century settlement patterns is underway, as are the results of the projects on the medieval archaeological relics of the Pilis Mountains and the prehistoric and medieval hillforts and castles of County Pest. The interdisciplinary research project involving collaboration between several disciplines (history, archaeology, geology, biology, environmental history, climate history) aimed at gaining a better understanding of the environmental history of the Carpathian Basin during the Middle Ages is continued. The impact of this project on the research perspective of various other concurrent investigations is clearly discernible. The English-language volumes on the interdisciplinary research conducted in southern Transdanubia and the Drava region will be completed and published.

A corpus-like monograph on the relics of the medieval Szekler runic (*rovás*) script from Transylvania has been assembled and will be published as part of an inter-institutional collaborative project.

The study of the post-medieval and Ottoman period has always figured high on the Institute's research agenda, with a primary focus on the fortifications and settlements of Transdanubia and their material. Our plans include the historical, archaeological and art historical assessment of Csókakő Castle and its estates, one of the castles that has been included in the National Castle Project, as part of a collaborative project.

In addition to its own research, the research group is committed to the publication of handbook-like volumes – in collaboration with external specialists – that present the new research results of specific fields to the Hungarian and international academic community. The publication of a volume on crafts and workshops during the Middle Ages and the Early Modern Period is currently in progress.

At least two PhD theses will be completed and defended during this research period (one on medieval interior furnishings, the other on Early Modern Age pottery).

The members of the research group continue to participate in higher education and doctoral programmes, in public education, in editorial committees and in various academic and public committees.

In collaboration with other research groups, the members of the research group have focused part of their research activities on reviving and breathing new life into the MRT project and its GIS-based modernisation. We will publish a volume that addresses theoretical and methodological issues of topographic fieldwork as well as the project's overall tasks. In Counties Békés and Csongrád, we work in collaboration with the Department of Archaeology of Szeged University and the local museums.

Bioarchaeological and Palaeoenvironmental Research Group

With its research agenda covering several fields and research directions, the projects of the research group that received grants for modernising and expanding its equipment are closely allied to the work of the Institute's other research groups organised according to archaeological periods. The research group's specialists play an important role in the increasingly wider application of non-destructive field methods and analytical imaging techniques. They participate in specialist training as part of international collaborative projects. Major results are expected from the research projects focusing on the Neolithic settlement history of southern Transdanubia, on the settlement networks of the Bronze Age and on the medieval environmental history of the Carpathian Basin.

The research agenda of the Laboratory of Archaeogenetics between 2016 and 2019 includes the introduction of NGS technologies for genomic analyses, a major prerequisite to participation in international research projects. We have begun the archaeogenetic research of human and animal pathogens in collaboration with the Max Planck Institute of Jena and the Harvard Medical School. We plan the collection of DNA samples for research on the history of the Hungarian people by joining forces with other Hungarian institutions and we plan to launch an archaeogenetics project focusing on the population of the Árpáadian Age to be funded through grants.

The comprehensive assessment of the human and animal bone remains in monographic format or as PhD theses is a decisive part of the work undertaken by the research group. The material analysed in these volumes and theses is based on the Laboratory's research.

Documentation and Conservation Group

One of the main priorities of the group beside the professional storage and preservation of archival records is the digitisation of the traditional archival records and a shift to digital data storage that can be easily queried. HAS infra grants and the welcome attention of the RCH to this matter have immensely aided this work.

The Graphics Division has reliably undertaken the preparation of illustrations to the Institute's publications. Currently, we are faced with the difficult problem of rejuvenation by engaging young specialists and enlarging the division. The Institute has not had its own photographer for many years.

The minimal, but well-trained staff of the well-equipped Conservation Laboratory proved sufficient for silica-based conservation before the Institute's relocation. Following the relocation, our plans include the enlargement of the Laboratory with facilities for metal conservation and an X-ray laboratory.

The Library

Following the relocation of the Institute of Archaeology, its internationally renowned library was merged into the joint library of the RCH. Our plans include the enlargement of the archaeological section and the monitoring of its development, for which we will provide the necessary assistance.

The economic background to the Institute's action plan for 2016–2019

The earlier deficit amounting to several ten million HUF of the Institute that was incorporated into the RCH, founded in 2012, was successfully eliminated by 2016. Unfortunately, the Institute is not independent financially, which greatly constrains any planning, and our financial plans essentially depend on accepted grant applications. All other expenditures on personnel and supplies have to be coordinated with the RCH. This situation could be remedied by an up-to-the-minute and transparent financial situation and a greater room for manoeuvre for the Institute.

Monitoring of the activities deriving from the strategy (feedback), performance measurement and control of the implementation of the strategic activities

At the beginning of each year, members of the research community submit a written report of their research and present a verbal report at an internal meeting, covering also their published studies and completed manuscripts, and answering any questions on specialist activities and strategy. The Institute's director evaluates the research community's work on an annual basis, conforming to the regulations.

II. THE SCIENTIFIC ACTIVITY OF THE LAST TWO YEARS IN THE INSTITUTE OF ARCHAEOLOGY OF THE HAS RCH

Main duties of the Institute in 2016 and 2017

The Institute performs its duties in compliance with the academic standards and within the general conceptual framework of global archaeological research, adapted to the specific issues raised by the Hungarian archaeological material. One of the Institute's main goals is to play a prominent and meaningful role in Hungarian and international archaeological scholarship; in order to achieve this goal, the Institute has forged strategic partnerships with several leading European research institutes and prominent Hungarian institutions. The Institute plays a prominent role in university education and in PhD research training. The Institute's major research projects have led to increased collaboration between archaeology and the natural sciences. In addition to the application of non-destructive analytical techniques and non-invasive field surveys, major progress has been made

regarding the theoretical background of radiocarbon dating and the full use of the equipment of the Institute's Laboratory of Archaeogenetics, as well as in non-destructive fieldwork.

While the archaeological heritage of the medieval Hungarians is a research field of paramount importance in the Institute, its research agenda is mindful of all archaeological periods – within the limits of its research capacity – and the related scientific problems as well as of the participation in heritage protection tasks within Hungary, in cooperation with other archaeological institutions.

Academic work in the Institute of Archaeology covers the Neolithic, the Copper Age, the Bronze Age, the period from Antiquity to the Árpáadian Age (including the Germanic and Avar periods as well as the Carolingian and the Hungarian Conquest periods), the Middle Ages and the Early Modern period (i.e. the Ottoman period). In addition to research in these “traditional” fields, the Institute has been a driving force behind complex research projects that are relevant to all aspects of the discipline in Hungary: we have continued and breathed new life into the “Archaeological Topography of Hungary” project and we have edited several thematic volumes, each of which is dedicated to one particular field of archaeological research. In 2016, we launched a new series, “*Hereditas Archaeologica Hungariae*”, in collaboration with *Archaeolingua*, Academic Publishing in Archaeology, Linguistics and Cultural Heritage, with the goal of presenting and promoting in a clear, but nevertheless academic style our most important results both in English and in Hungarian. After a longer interruption, the publication of “*Antaeus*”, the Institute's yearbook, could be resumed on a regular basis. The Institute edits “*Acta Archaeologica Academiae Scientiarum Hungaricae*”, the most significant international journal of Hungarian archaeology.

The last months of 2016 were taken up by the preparations necessary for the Institute's relocation from the former old building in Buda Castle to the new research centre in Tóth Kálmán Street. The actual process of moving and the creation of suitable working conditions took up a considerable portion of our energies in 2017. Meanwhile, the management of the Institute regularly reviewed the questions of the strategic planning of the period ahead and the public tasks faced by the Institute during a number of workshops.

We always pay special attention to young researchers: their advancement is an important academic interest, as they make a vital contribution to fulfilling the Institute's public tasks.

Outstanding research and other results in 2016–2017

Prehistoric Archaeology Research Group

The projects of the research group are focused on the period's chronology and ceramic styles as well as on the interpretation of technological innovations, alongside bioarchaeological studies on lifeways and complex approaches to landscape archaeology. Some of our research projects are integrated into various international projects (ERC, DFG, Polish Research Fund) or are part of strategic collaboration projects, for example with the RGK DAI. In addition to collaborative partnerships with several Hungarian institutions, various research projects were funded by grants from the National Research Fund (NKA) and the NKFI. The Neolithic Alsónyék project was ranked among the world's ten most significant Field Discovery projects by the Shanghai Archaeology Forum in 2017. Both the first and the second research years of the “Momentum Mobility Research Group” were given excellent qualification. Our researchers participate in archaeogenetic research projects focusing on population changes in prehistoric Europe and the domestication of the horse. The group's members are co-authors of several studies published in “*Nature. International journal of science*”, and are co-organisers of various other research projects in addition to participating in the Institute's modern topographic surveys.

The Neolithic Research Group concentrated its research on southern Transdanubia. The assessment of the Neolithic settlement investigated at Alsónyék-Bátaszék is performed in collaboration with the RGK DAI, which now has a research post (DAI Forschungsstelle) in Budapest. The construction of an integrated database and the 3D scanning of the finds were undertaken as part of the ongoing evaluation of the settlement's finds. The dating of the site, based on a uniquely high number of samples, was performed as part of NKFI- and ERC-funded projects led by Professor Eszter Bánffy, and the results have been presented in seven studies published in the journal "Bericht der Römisch-Germanischen Kommission" and at an international conference in 2016. The findings have been comprehensively summarised in the study: "The Alsónyék story: towards the history of a persistent place". Anett Osztás's PhD thesis, currently in preparation, will cover one aspect of this significant site. The emergence of Neolithic economies based on cattle breeding was the subject of another ERC-funded project in which the Institute's researchers participated. The complex archaeological exploration of south-eastern Transdanubia was continued as part of an NKFI-funded project led by Krisztián Oross. The Tolna-Mözs settlement was explored by a small-scale excavation in two succeeding excavation seasons, while intensive prospection for sites was undertaken in three regions of Counties Baranya, Tolna and Somogy in order to gain a better understanding of the period's settlement network. An international conference was held on the investigations in the Baranya region in early 2017. Tibor Marton's PhD thesis and Gergely Gortva's MA thesis covering various aspects of this project have been accepted, while János Jakucs's PhD thesis is currently under preparation.

The relative chronology of the Late Copper Age burial grounds of the Carpathian Basin was the subject of a comprehensive study, "Phasen – Perioden – Zeitscheiben. Zur Chronologie der spätkupferzeitlichen Nekropolen im Karpatenbecken", and an application has been submitted for an NKFI grant for funding a research project to continue this investigation. The designated principal investigator of the project is Mária Bondár. Another study focused on the excavation of a kurgan of the Yamna culture. Gabriella Kulcsár participated in the elaboration of a project application for ERC funding.

The work of the Bronze Age Research Group led by Viktória Kiss and Gabriella Kulcsár, two senior researchers of the Institute, is conducted within the framework of Hungarian and international collaborative projects and various NKA- and NKFI-funded investigations. The "Momentum Mobility Research Group", whose principal investigator is Viktória Kiss, is a major undertaking of the research group. Outstanding results have been achieved in relation to the three major research agendas, such as the study "Visible and invisible inequality: changing patterns of wealth consumption in Early and Middle Bronze Age Hungary" and a study of third-millennium BC migrations through the application of bioarchaeology. Major advances have been made in the chronological and physical anthropological assessment of cremated human remains and the identification of certain diseases such as tuberculosis. Our researchers partake in a dynamic new research direction focusing on the trade in copper and the associated metallurgical issues. Research in landscape archaeology has been broadened through archaeological excavations and the application of non-invasive survey techniques, principally in the central Hungarian region (County Pest and Füzesabony area in County Heves). Our investigations are conducted using an integrated approach, combining statistics, GIS and petrography, and we have explored issues regarding the archaeology of textiles, gender roles, aspects of cognitive archaeology and the archaeology of mourning. A volume addressing the current state of Bronze Age studies in Hungary has been completed. Another project explores the burials of the Late Bronze Age/Early Iron Age and preparations have been made for a project investigating the period's genetics. The researchers working in the projects have also participated in public education events and have created an intensive presence in the electronic media. The PhD theses by Ágnes Király and Eszter Melis covering various aspects of the research projects are currently in preparation, and a

BA thesis has also been completed. The study of the Late Bronze Age fortified settlements in southern Transdanubia and the southerly regions of the Hungarian Plain is another research project conducted by the group. The latter project is led by Vajk Szeverényi who has been awarded a PhD degree.

Ancient World and Migration Period Archaeology Research Group

This research group is involved in the study of the major research themes of Antiquity and the changes in the cultural, economic and socio-political sphere of the peoples of the Migration period. The NKFI-funded project led by András Patay-Horváth focusing on identifying the origins of classical Greek sculpture employs the “master-sculptor’s hand attribution” method. The project analysed the sculptures from Paros and Epidauros in the Greek National Museum in Athens using 3D scanning and surveyed the Greek and Roman Plaster Cast Collection in Berlin in order to identify the master-sculptors and workshops of different sculptures and to assess the impact of these workshops.

The assessment of the pottery finds from late Roman sites in Pannonia by Friderika Horváth resulted in several major publications offering a better understanding of Roman-period society and economy. An MS Access database was constructed by Friderika Horváth, Zsófia Masek and Anett Mihácz-Pálfi to evaluate the finds from the cemeteries of southern Pannonia and the funerary practices observed in these burial grounds (Somogyszil, Ságvár, Nagykanizsa-Inkey-kápolna, etc.). As part of the socio-historical analysis of the sites, the finds have been entered into the database and the critical multivariate re-assessment of the cemetery at Somogyszil has been completed with a statistical programme. Professor Dénes Gabler curated the exhibition “Pompeii: Life and death in the shadow of Mt. Vesuvius” in the Szeged Museum, in collaboration with the Museo Archeologico Nazionale di Napoli. Professor Emeritus László Török coordinates the activities of the “Seuso Research Committee”. The chapter by Ádám Bollók, covering the treasure’s art historical analysis, has been completed for the planned exhibition catalogue. Several of the Institute’s researchers (Tivadar Vida, Ádám Bollók and Gergely Csiky) participated in the organisation of the temporary exhibition “Saint Martin and Pannonia – Christianity on the Frontiers of the Roman World” and contributed studies and entries to the catalogue accompanying the exhibition.

Tivadar Vida has published a small monograph, “Late Antique Metal Vessels in the Carpathian Basin. Luxury and Power in the Early Middle Ages” in Hungarian and in English on the role of late antique copper-alloy and precious metal vessels in the social display of the elites of the Migration period as well as on the prestige ascribed to these vessels. The comprehensive monograph “The Transformation of Pontic Trade from Late Antiquity to the Middle Ages. Transport vessels from the Archaeological Museum of Sinop” by Gergely Csiky on the transformation of early medieval trade in the Pontus region sheds new light on previously unknown aspects of the cultural relations of the Carpathian Basin. Research on the transformation of late antique burial customs focusing on Christianisation has been continued as part of a HAS–RGZM collaborative project led by Ádám Bollók. The archaeological and bioarchaeological assessment of the Lombard cemetery uncovered at Szólád also continued within the framework of an international project led by Tivadar Vida. Studies devoted to the cauldrons of the Hun period and to the antler combs of the Migration period have been completed by Zsófia Masek, alongside a study on the early Migration-period settlements on the Hungarian Plain.

The cataloguing of the finds from the Avar cemetery at Budakalász has been completed by Levente Samu and Tivadar Vida, as has the archaeometric analysis of the metal finds, while the illustrations to the volume on this site have been assembled. A small monograph by Tivadar Vida has appeared on the copper-alloy jug with hunting scenes found in the Avar cemetery at Budakalász and its significance for late antique toreutics. Two studies, one discussing the ethnic

make-up and the colourful cultural tapestry of the early Avar period, the other covering the cultural connections between the Avars, Byzantium and Italy, have been completed by Professor Emeritus Csanád Bálint. Levente Samu has surveyed different types of early Avar belt sets in another study. A joint NKFI–Austrian Science Fund research project focused on the cultural transformation of the peoples of the Eurasian steppes as reflected in the archaeological record and the written sources with the participation of Csanád Bálint, Ádám Bíró and Gergely Csiky. A volume on the Nagyszentmiklós Treasure intended for the broader public, has been published by Csanád Bálint.

A landscape archaeological study of various sites and relics dating from the Khitan period (tenth–eleventh centuries) in Mongolia (Bulgan province), together with aerial archaeological prospection and a field survey at the archaeological site of Kharbukh balgas were completed as part of a joint research project with the Mongolian Academy of Sciences, “Inner Asia in the pre-Mongolian period”, by Gergely Csiky and his research team. The preliminary findings have been published in various articles.

The researchers participating in the NKFI-funded “Power and Culture in the Carpathian Basin of the Early Middle Ages” project headed by Professor Béla Miklós Szőke organised an international conference, “Facing and Transforming the Roman Tradition in Late Antiquity and the Early Middle Ages – Roman-ness and the Barbarians in Western and East Central Europe”, whose main themes were various aspects of continuity and barbarisation. The assessment of the Carolingian-period ceramic finds from Zalavár-Récéskút and Zalavár-Vársziget, and the data collection of the Avar-period biritual cemeteries in the Zala Valley have been completed by Béla Miklós Szőke and his team. The analysis of the early Migration-period material of the Middle Tisza region was continued by Zsófia Masek; three PhD theses (by Zsófia Masek, Anett Mihácz-Pálfi and Katalin Gergely) have chosen as their subject various themes of the early medieval period.

Two studies exploring the “Hungarian chapters” of Constantine Porphyrogenitus’ “De administrando imperio” have been published by Ádám Bollók.

Hungarian Conquest Period, Medieval and Post-Medieval Research Group

The group’s research agenda covers the period from the Hungarian Conquest to the late medieval and Early Modern period set in a broader European context.

Szabina Merva and Rozália Bajkai participated in an NKFI-funded project, “Centuries of transformation – settlement structures, settlement strategies in the central parts of the Carpathian basin in the eighth–eleventh century”, led by Professor Miklós Takács, whose goal was the assessment of the settlements dating from the Avar period to the Árpadian Age investigated ahead of major development projects in Hajdú-Bihar County and in the Visegrád area. Szabina Merva undertook the study of the Slovakian and Moravian archaeological material. One of the major findings of this project was the demonstration of the Carolingian-period antecedents of Visegrád.

Studies on the Hungarian Conquest period focus on the conversion to Christianity, on the period’s costume, on the animal remains and on the dynamics of the tenth-century campaigns in the west.

The publication of corpus-type volumes on the period’s grave assemblages was continued with the publication of a new volume in this series, in collaboration with Szeged University and the Hungarian National Museum (Kalocsai-Sárköz in County Tolna). The manuscript of the next volume treating the find assemblages from County Nógrád, co-edited by Professor László Kovács, has been completed. Work on the volume assessing the coin-dated early Hungarian burials and the graves containing swords of the Conquest period was continued. Miklós Takács completed a manuscript on the influence of Byzantine architecture on Hungarian ecclesiastical architecture in the Árpadian Age.

Péter Langó completed the manuscript covering the relics of early missionary activity among the ancient Hungarians. The study of the eastern and European relations of the ancient Hungarians from a bioarchaeological perspective was continued.

The Institute participated in the preparation of The House of Árpád Programme to be held between 2017 and 2022.

The assessment of the medieval ecclesiastic relics and monuments in the Pilis Mountains, principally of the archaeological and architectural material of the Cistercian abbey of Pilis, was continued by Professor Elek Benkő, as was the geoarchaeological and palaeoenvironmental survey of the medieval fish-ponds of the Pilis region. In 2016, the Institute partook in organising an exhibition of the relics from Pilis Abbey at Szentendre jointly with the Ferenczy Museum and a “Momentum Research Group” of Debrecen University. An exhibition catalogue related to this research was published. In 2017, a series of cores were extracted from the monastery’s pond and a terrain model of the broader area was prepared.

Elek Benkő, Gyöngyi Kovács and Krisztina Orosz edited a volume of studies in memory of Imre Holl, covering medieval crafts and workshops in Hungary. The volume “Mesterségek és műhelyek a középkori és kora újkori Magyarországon. Tanulmányok Holl Imre emlékére. Crafts and Workshops in Hungary during the Middle Ages and the Early Modern Period. Studies in Memory of Imre Holl” was published in 2017.

The systematic survey and assessment of the prehistoric and medieval hillforts and medieval castles of County Pest involving aerial photography, traditional field surveys and geophysical surveys as well as the preparation of graphic illustrations was continued as part of an NKFI-funded project led by Gyöngyi Kovács. The preparation of the manuscript of the planned volume is well underway. In 2016, members of the research group commemorated the project’s former director, the late Zsuzsa Miklós with an exhibition “For one who flies above...”, in honour of her memory in the Ferenczy Museum Centre in Szentendre in 2016.

Research on the post-medieval and Ottoman period focused on the topography of various architectural remains, castles, urban topography, marketplaces and pottery studies, carried out by Gyöngyi Kovács, Ágnes Kolláth and Adrián Berta. The research on late medieval and Ottoman-period castles is represented by the excavations conducted in the lower area of Csókakő Castle by Gyöngyi Kovács and at Dombóvár Castle by Adrián Berta in 2016–2017. Gyöngyi Kovács, Gábor Serlegi and Bence Vágvolgyi completed a geophysical survey of Barcs Ottoman Castle in 2016.

The interdisciplinary NKFI-funded research project “Environmental History of the Carpathian Basin during the Middle Ages” aimed at gaining a better understanding of the environmental history of the Carpathian Basin during the Middle Ages was continued with the complex assessment of the cores extracted earlier. The principal investigator of the project is Elek Benkő, whose team members are Professor Pál Sümegi, Gusztáv Jakab, Csilla Zatykó, Erika Gál, Krisztina Orosz and other colleagues. Palaeoenvironmental studies have been conducted at several marshland and bog locations in Transylvania and Hungary. Of the undisturbed cores extracted for palaeoenvironmental analyses at seventeen sampling locations in Transylvania, the assessment of the cores from Bisztra (Bistra), Csíksomlyó (Șumuleu Ciuc), Homoródszentpál (Sânpaul), Magyarbagó (Băgău), Marosszentkirály (Sâncraiu de Mureș) and Szék (Sic) was completed in 2016. A total of forty-six AMS radiocarbon dates have also been obtained. The long sequence from the Bisztra bog (Gilău Mountains) is of outstanding importance because, on the testimony of the radiocarbon dates, it spans the period from the early Migration period to our own days, and thus has the potential of providing important data on climate history. The cores are assessed in collaboration with the Institute for Geological and Geochemical Research of the HAS Research Centre for Astronomy and Earth Sciences. A study focusing on the animal bone sample from a layer sequence underlying the fourteenth–fifteenth-century archiepiscopal kitchen of Esztergom Castle was completed by Erika Gál. The work on environmental archaeology was complemented by the organisation of a conference with a comprehensive overview of the issue.

Another NKFI grant enabled the publication of a volume covering the findings of the research project on the medieval and Ottoman-period palaeoenvironment of southern Transdanubia.

The volume “Per sylvam et per lacus nimios. The Medieval and Ottoman Period in Southern Transdanubia, Southwest Hungary: the Contribution of the Natural Sciences”, edited by Gyöngyi Kovács and Csilla Zatykó, was published in 2016.

Work on the MRT project was resumed with the participation of Adrián Berta, the group’s junior researcher in County Csongrád. Field surveys were conducted on the northern outskirts of Hódmezővásárhely. A collection of studies, “Magyarország Régészeti Topográfiája. Múlt, jelen, jövő” [Archaeological Topography of Hungary. Past, present, future], was edited in 2017 by Elek Benkő, Mária Bondár and Ágnes Kolláth who also authored some of the studies in the volume.

Csilla Zatykó took part in the organisation of a conference on landscape archaeology, “Historical landscapes – Landscape archaeology: results and perspectives in Hungarian landscape archaeology”, that covered several important fields.

The three-volume monograph, “A Székelyföld története” [History of the Székler Land], with a major contribution by Elek Benkő, was published in 2016.

Elek Benkő was elected corresponding member of HAS, university professor of the Eötvös Loránd University and corresponding member of DAI in 2016. A PhD thesis on medieval house interiors has been completed and submitted by Krisztina Orosz in 2017; two other PhD theses by Ágnes Kolláth and Szabina Merva are currently in preparation. Ágnes Kolláth won recognition for the best presentation in her section at the conference “Young scholars at midpoint” organised by HAS. Members of the research group lectured and held courses on medieval archaeology at the Institute of Archaeological Sciences of the Faculty of Humanities of the Eötvös Loránd University during the first semester of 2017. Miklós Takács became professor at the Pázmány Péter Catholic University. Szabina Merva completed her post-graduate thesis at the Budapest University of Technology and Economics.

Bioarchaeological and Palaeoenvironmental Research Group

This research group has a broad research agenda, which is linked by several strands to the Institute’s main research projects. Following successful HAS Infra grant applications and the upgrading of the Laboratory’s equipment, the number of research projects has increased.

One of the main research projects involves complete genome-level analyses of Neolithic, Copper Age and Bronze Age populations as well as of the prehistoric populations of the Iberian Peninsula to chart ethnogenetic relations; these studies are conducted as part of an international research project coordinated by the Harvard Medical School. Anna Szécsényi-Nagy has published the results in major international journals, such as the study “Parallel palaeogenomic transects reveal complex genetic history of early European farmers” in “Nature. International journal of science”.

The research staff of the Laboratory of Archaeogenetics led by Aranka Csósz has published its Conquest-period database of archaeogenetic samples, embodying the laboratory work of the previous years, in a major international journal.

The archaeogenetic analysis of Bronze Age mass graves was undertaken by Anna Szécsényi-Nagy, jointly with the “Momentum Mobility Research Group”. After defending her PhD in 2016, Veronika Csáky sequenced and typified the samples collected from elite burials of the early Avar period as part of an international NKFI-funded project. As a specialist in bioinformatics, Dániel Gerber successfully identified sex based on shotgun sequencing. In collaboration with the Max Planck Institute for the Science of Human History in Jena, grant applications were submitted for the study of the Iron Age and the Migration period. The Laboratory completed its sampling for the international project on Lombard ethnogenesis. Annamária Pósa, one of the Laboratory’s junior researchers, acquired a PhD degree.

As part of a several years’ long palaeoanthropological research project, the first phase of data collection and assessment of the Neolithic cemetery at Alsónyék has been completed by Kitty

Köhler. Balázs Gusztáv Mende presented the initial findings of sampling for a research project on the ancient Hungarians at a major Russian conference.

Erika Gál analysed the domestication of Neolithic and Bronze Age horses, in part within the framework of an ERC-funded project. She also concluded her independent NKFI-funded project on the Late Copper Age/Early Bronze Age with the monograph “Animals at the dawn of metallurgy in south-western Hungary. Relationships between people and animals in southern Transdanubia during the Late Copper to Middle Bronze Ages”. The assessment of the animal bones from Neolithic sites in south-eastern Transdanubia, in part funded by an NKFI grant, has been completed. The assessment of the animal bones unearthed in Alsónyék in collaboration with several archaeozoologists has been concluded.

Gábor Serlegi and Bence Vágvolgyi conducted palaeoenvironmental research involving non-destructive surveys as part of projects focusing on a particular micro-region, the investigation of hillforts and the reconstruction of past environments. The new equipment acquired through a HAS Infra grant was immensely useful in these surveys.

In addition to participating in the Institute’s non-destructive surveys and archaeological soil analyses as well as in its GIS-based palaeoenvironmental research, topographic surveys and the digitisation of the Archives, the activities of Gábor Serlegi and Bence Vágvolgyi also included the upgrading of the non-invasive equipment and the synchronisation of the instruments.

Documentation and Conservation Group

The staff of the Institute’s Archives has continued to provide invaluable assistance to the academic work of the Institute’s researchers by providing the necessary records and the required material. The modernisation of the Archives has involved the digitisation of major portions of the three collections making up the Archive’s holdings; the integration of the academic literature reference cards, survey reports and tracing paper drawings into a GIS database system has been completed. During the preparations for the Institute’s relocation, substantial numbers of inactive archival materials were returned to the Archives, whose assessment became necessary. The packaging of the material also meant a physical challenge and several researchers participated in this work in addition to the Archive’s staff. The same holds true for the Conservation Laboratory. The Graphics Division and the Photo Laboratory continued its work until the very last moment before the relocation.

Library of the Institute

As of 2017, the Library’s holdings currently amount to 78,032 items, whose value exceeds HUF 160,000,000. In 2016, the Library’s new acquisitions were 325 items. In 2017, the Library’s new acquisitions were 493 items, most of which were acquired through exchanges, with a smaller portion coming from the personal library and collection of offprints of our departed colleagues. The stock of exchange items has been expanded by the Institute’s five new publications in 2016 and three new publications in 2017, respectively. A larger number of the Institute’s publications has reached foreign institutions as part of international exchanges.

The Institute continued to closely follow the stock of archaeological books during the organisational transformation of the Institute’s Library, including the cataloguing of bequeaths. The preparations for the relocation of the Library continued in 2016: as part of this work, various documents were exchanged with museums in Budapest and the provinces, and a high number of items were offered and donated to these institutions. The Institute’s researchers participated in the thematic planning of the new library’s archaeological open access shelves. Following the Institute’s relocation, the creation and furnishing of the Library’s new premises accounted for the greater part of the work during the year’s first few months. The new Library opened its doors on June 5, 2017. Given that storage facilities are rather limited, the downsizing of the duplicates and

the stock of exchange items was continued. This involved the exchange of documents and the donation of various items to museums in Budapest and in the provinces.

Scholarship and the public, 2016–2017

In addition to performing its academic duties, the Institute actively participates and plays an important role in Hungarian and international academic life, in university training, in heritage protection and in the dissemination of research findings to the broader public.

The Institute participated in the work of HAS Section II, Section of Philosophy and the Historical Sciences, through its representatives in the HAS General Assembly: Csanád Bálint, Elek Benkő and László Török as academicians and Tivadar Vida as a non-academician representative. Our researchers are members of several academic bodies and committees, in which they must adopt a position not only regarding the linkages between various disciplines and the diverse issues of scholarship and culture of the Hungarian minorities living in the neighbouring countries, but also in respect of several broader questions affecting society as a whole (Seuso Research Committee, House of Árpád Programme). The Institute participates in the work of the Excavation Committee, one of whose members is Gabriella Kulcsár, as well as in the coordination work preceding legislation on heritage protection. Gabriella Kulcsár also holds the position of Secretary of the Archaeological Committee of HAS.

Our researchers make every effort to be more visible on the Internet and in certain areas of the social media, especially for the generation that can barely be reached using traditional media. As previously, the Institute's events are open to the public and its academic programmes (such as the modernisation of the MRT project, the increase in the number of participating researchers and the broadening of its public circle of supporters; research on Hungary's palaeoenvironmental history and landscape archaeology) have been highly valued by the academic community and have enjoyed great public interest.

The dissemination of research findings to the broader public has always been high on the Institute's agenda. The Institute's researchers have authored several works intended for the broader public, which will undoubtedly contribute to a better knowledge of Hungary's past. Our researchers hold presentations on open days ("Day of Hungarian Archaeology") and as part of the lecture series during the Hungarian Science Festival, and they also hold tours of the archaeometric and conservation laboratories for the public interested in archaeology (including schoolchildren). We deem it extremely important to present to the broader public the less-known, modern aspects of archaeology, which involves collaboration with the natural sciences and the application of twenty-first-century technology. For example, the issues of migration to Central Europe and aspects of acculturation have been incorporated into several research projects, whose arsenal of research technologies includes pioneering ones such as archaeogenetics.

National and international R&D relations of the Institute in 2016–2017

The Institute's researchers play an important role in several higher education institutions by holding courses and they also partake in the work of doctoral schools. Our research projects provide the framework for several MA and PhD theses, and in some cases, they represent the single option for mobility for junior researchers. Eleven researchers regularly lecture at various higher education institutions, holding courses at Eötvös Loránd University, Debrecen University, Pázmány Péter Catholic University, Szeged University and Szent István University.

The Institute organised five international and twelve Hungarian academic and public interest events, in part independently, and in part in partnership with other institutions in 2016. Among the

Hungarian events, the conference “Bronze working from prehistory to the Middle Ages – Workshop on the potentials of archaeological and historical bronze artefacts”, held during the Hungarian Science Festival in 2016 provided a forum for the researchers of several periods. The participants of the “Momentum Project” directed by the Institute’s researchers partook in the organisation of the event “The Momentum Project in the Humanities” hosted by HAS. The international events such as the conferences “Facing and Transforming the Roman Tradition in Late Antiquity and the Early Middle Ages – Roman-ness and the Barbarians in Western and East Central Europe”, the “6th Meeting of the ICAZ Animal Palaeopathology Working Group” and “The Alsónyék story: towards the history of a persistent place. The 6th–5th millennium BC in the Sárköz in southern Hungary”, provided occasions for presenting research findings from various disciplines ranging from archaeozoology to radiocarbon dating in addition to “traditional” archaeological research. The Institute organised several exhibitions in partnership with other institutions: “The Gothic in the Pilis Mountains – the French Connections of King Andreas II” and “For one who flies above...” in the Ferenczy Museum Centre in Szentendre, as well as “Saint Martin and Pannonia – Christianity on the Frontiers of the Roman World” in Pannonhalma Abbey. One of the Institute’s researchers was the curator of the exhibition “Pompeii: Life and death in the shadow of Mt. Vesuvius” showcasing original find assemblages from Pompeii in the Móra Ferenc Museum in Szeged.

In 2017, the Institute organised four international and eight Hungarian academic and public interest events, in part independently and in part in partnership with other institutions. Particularly important among the Hungarian events was the one organised on the occasion of the opening of the Institute in its new location, “The renewed Archaeological Institute”, where guests representing Hungarian and foreign archaeological research institutes as well as specialists of heritage protection and heritage management were shown around the new premises and familiarised with the Institute’s research agenda. The several days’ long conference “Historical landscapes – Landscape archaeology: results and perspectives in Hungarian landscape archaeology”, offering a platform for the researchers of several periods, was held as part of the Hungarian Science Festival in the new building for the human studies of HAS. The “Momentum Mobility Research Group”, engaged in Bronze Age studies, and the “Momentum Medieval Economy Research Group” of the Historical Institute of RCH HAS jointly organised a conference, “Mixture textualis. Man and textiles in the Carpathian Basin”. Several other conferences and workshops were held in relation to the Institute’s NKFI-funded projects. The Institute regularly hosts book launches. The launching of the volume “Magyarország Régészeti Topográfiája. Múlt, jelen, jövő” [Archaeological Topography of Hungary. Past, present, future] was attended by specialists from a wide range of disciplines. Among the international events, the international conference “At the Gates of the Balkans – Prehistoric Communities of the Baranya/Baranja Region and the Adjacent Areas” was organised jointly with the Janus Pannonius Museum of Pécs as part of an NKFI-funded research project. A workshop focusing on the spread of cremation burials in Europe provided a forum for a new Hungarian–Italian–Austrian collaborative venture. In addition to German and Turkish colleagues, one of our researchers was the co-organiser of a section devoted to prehistoric architecture at the “23rd Annual Meeting of the European Association of Archaeologists” held in Maastricht (The Netherlands).

Nine of the Institute’s researchers travelled to nine foreign institutions for specialist studies in 2016 (Harvard Medical School, Boston; Historical and Archaeological Institute, Mongolian Academy of Sciences, Ulanbator; Deutsches Archäologisches Institut, Berlin; Leibniz-Institut für Geschichte und Kultur des östlichen Europas, Universität Leipzig; RGZM; Universität Wien; Albert-Ludwigs-Universität, Freiburg; Universität Innsbruck; Archaeological Institute, Slovakian Academy of Sciences, Nitra). Three researchers worked in various Hungarian institutions as visiting scholars (Déri Museum, Debrecen; Hungarian National Museum–Mátyás Király Museum, Visegrád; Szent István Király Museum, Székesfehérvár).

In 2017, nine of the Institute's researchers travelled to leading universities and research institutes for specialist studies (RGK DAI; Universität Wien, Institut für Urgeschichte und Historische Archäologie an der Ludwig-Maximilians-Universität München; Archäologische Staatssammlung München; Albert-Ludwigs-Universität Freiburg; University of Oxford, Department of Classics; Stockholms Universitet, Osteoarkeologiska forskningslaboratoriet; Max Planck Institute For The Science of Human History; The Orlando Group, Toulouse; Historial and Archaeological Institute of the Mongolian Academy of Sciences, Ulanbator, Mongolia; Shandan Archaeological Museum, Gansu, China). Two researchers worked in Hungarian institutions as visiting scholars (Hungarian National Museum-Mátyás Király Museum, Visegrád; Szent István Király Museum, Székesfehérvár).

Brief description of the national and international research grants awarded in 2016

“Assessment and publication of the Migration-period archaeological finds from Hungary” – NKFIH, November 1, 2016–October 31, 2019, HUF 33,562,000. The goal of the collaborative project of the Institute of Archaeology, HAS RCH and the Hungarian National Museum is the assessment and publication of the finds from selected Migration-period sites of Hungary according to identical criteria and a uniform approach. The German- and Avar-period finds are published in the “*Monumenta Avarorum Archaeologica*” and the “*Monumenta Germanorum Archaeologica Hungariae*” series.

“HAS RCH Database III” – HAS, January 1, 2016–August 30, 2016, HUF 8,300,000. The goal of the project was the digitisation of the RCH's existing traditional databases and a digital upgrading, as well as the creation of a joint database for the humanities and of special institutional databases.

“Archaeological Topography of Hungary – Special Volume on Methodology” – Office of the Prime Minister and HAS Books and Journals Publication Committee, January 1, 2017–June 30, 2017, HUF 3,000,000 and HUF 2,000,000, respectively. The volume to be published by HAS RCH IA will contain the studies presented at the conference “Archaeological Topography of Hungary: Past – Present – Future” hosted by the Institute in 2015, which cover all aspects of the wide range of topographic work conducted over the past decades, the methodology of this field of research and its research perspectives.

“*Festschrift* in honour of Imre Holl” – HAS Books and Journals Publication Committee, January 1, 2017–June 30, 2017, HUF 2,000,000. The volume to be published by HAS RCH IA will contain the studies written on the occasion of the ninetieth birthday of Imre Holl, who sadly passed away in 2016. The studies cover a wide range of themes, with a main focus on medieval and post-medieval crafts, craftsmen, workshops and their products, based essentially on Hungarian research in this field, but set in a wider European, mainly Central European context.

“Infra grant, Spring 2016, Category 1” – HAS, February 2016–June 30, 2017, HUF 16,500,000. The Institute had earlier successfully applied for an Infra grant to enlarge its equipment for non-invasive field diagnostics and upgrade the necessary softwares procured with a previous grant, and for a vehicle to transport the equipment. The equipment, the softwares and the vehicle were purchased by the end of 2016, the latter's customisation will be completed by summer 2017. The instruments were used already in 2016 during the prospecting for archaeological sites as part of topographic fieldwork.

“Infra grant, Spring 2016, Category 2” – HAS, February 2016–January 31, 2017, HUF 18,200,000. In 2016, the Institute successfully applied for a Research Infrastructural Development grant to procure an Agilent TapeStation 4200. The quality and quantity control and assessment of the results of the successive phases is essential for optimising the efficiency of Next Generation Sequencing (NGS) protocols, which were previously only possible using

procedures that yielded approximate results. This instrument is capable of high-precision sample processing. The measurements made using this instrument are directly linked to the Laboratory's NGS technology.

"Infra grant, Autumn 2016, Category 1" – HAS, November 2016–June 30, 2017, HUF 11,100,000. The Institute successfully applied for a grant to enlarge the equipment of the Laboratory of Archaeogenetics, which was necessitated by the laboratory's relocation to the new research premises. The general laboratory equipment and instruments (freezers, PCR boxes, a centrifuge, chemicals cupboard, etc.) enable a more efficient exploitation of the potentials of the increased technological options and work spaces of the newly-created laboratory. The procurement of the instruments was begun simultaneously with the Laboratory's relocation to the new premises.

"Development grant, Autumn 2016" – HAS, October 2016–June 30, 2017, HUF 3,700,000. The grant enabled the upgrading of the Archaeogenetics Laboratory's instruments in order to delay the amortisation of the technologies provided by the instruments and to ensure the smooth functioning of the instruments serving the Laboratory's special needs. The development and upgrading specified in the grant application were begun in late 2016, simultaneously with the relocation to the new Laboratory in the new research centre.

Brief description of the national and international research grants awarded in 2017

Organisation of the conference "Historical Landscapes – Landscape Archaeology: Results and Perspectives in Hungarian Landscape Archaeology" – National Cultural Fund, Heritage Protection College, November 6–7, 2017, HUF 350,000. The conference had a two-fold goal: to present the fields/directions in Hungarian archaeological scholarship which contributed to the adoption of landscape archaeology and to show how its main directions evolved, alongside offering a comprehensive overview of fresh results that determined the place of Hungarian research within the international mainstream of this discipline.

"Maintenance of the airflow system of the DNA Laboratory of the HAS RCH Archaeological Institute" Infra grant – HAS, February 2017, HUF 6,000,000. Since the Laboratory only became operative in early summer 2017 owing to the Institute's relocation, we re-scheduled the tasks to be performed as part of this grant to early 2018 after gaining the approval of the Finance Department of HAS. The maintenance work involved the cleaning of the cleanroom and the postPCR lab that was not undertaken after moving to the new premises as well as the replacement of several sets of filter and UV pipes.

"Enlargement of the geodesic-topographic and field survey equipment" Infra grant, Autumn 2017 – HAS, November 2017–June 31, 2018, HUF 9,700,000. As part of the enlargement of the Institute's geodesic-topographic and field survey equipment achieved through an earlier Infra grant, the necessary accessories to the coring instrument and the still missing elements of the field geodesic equipment were procured in early 2018.

Major academic publications in 2016

*J. Jakucs*¹ – *E. Bánffy* – *K. Oross* – *V. Voicsek* – *C. Bronk Ramsey* – *E. Dunbar* – *B. Kromer* – *A. Bayliss* – *D. Hofmann* – *P. Marshall* – *A. Whittle*: Between the Vinča and Linearbandkeramik Worlds: The Diversity of Practices and Identities in the 54th–53rd Centuries cal BC in Southwest Hungary and Beyond. *Journal of World Prehistory* 29 (2016) 267–336.

¹ Names of the authors who work at the Institute are written italics.

K. Oross – E. Bánffy – A. Osztás – T. Marton – É. Á. Nyerges – K. Köhler – A. Szécsényi-Nagy – K. W. Alt – C. Bronk Ramsey – T. Goslar – B. Kromer – D. Hamilton: The early days of Neolithic Alsónyék: the Starčevo occupation. BRGK 94 (2013) [2016] 93–121.

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