

Memorandum of Understanding

between

SABAP-FI (*Soprintendenza Archeologia Belle Arti e Paesaggio per la città metropolitana di Firenze e per le province di Pistoia e Prato*) in its own name and in the name and on behalf of the *Soprintendente* in charge of the Florentine area, Dr. Andrea Pessina (sabap-fi@beniculturali.it) and the Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., represented by the managing director at the Max Planck Institute for the Science of Human History in Jena, Germany, Prof. Jonathan Gershenzon

AGREEMENT:

Max Planck Institute for the Science of Human History (MPI-SHH, Jena, Germany) and SABAP-FI, hereafter referred to as the parties, hereby enter into a Memorandum of Understanding in a desire to develop cooperation in research in the furtherance of the advancement and dissemination of knowledge, agree as follows:

1. Based upon the principles of respect for each other's independence and mutual benefit, the parties will engage in the following activities:
 - 1.1 Collaboration for a research on aDNA analyses, Radio Carbon Dating and examination of pathogens of osteological remains from three selected sites in Florence (San Paolino, Borgo de' Greci and the Uffizi Gallery) and dated to Late Roman-Medieval periods. The below cited analyses will be conducted at the laboratories of the MPI-SHH on samples from teeth of individuals recovered in single and multiple burials, preferably one molar for each selected individual. If molars are not available, another tooth of the individual can be taken for the analyses. The teeth will be used to extract pathogen and human DNA in order to detect the bacterium of *Y. pestis* phylogeny or the presence of other pathogens related to infectious diseases. The sampling method is destructive and includes the separation of the tooth crown from its root and the drilling out of material from the tooth crowns and possibly roots. While the dentine will be used for aDNA analyses, the tooth roots of aDNA positive samples can be used for radiocarbon dating.
 - 1.2 Dr. Elena Martelli (independent researcher; elenamartelli@gmail.com) will act as a coordinator of this project (SABAP-FI authorization signed on 05 July 2019 number 15258). Archaeologist Dr. Monica Salvini (SABAP-FI; monica.salvini@beniculturali.it) is responsible for the archaeological excavations and the preservation of artefacts and structures in the Florentine area and has to be included in the project and related correspondence.
Gunnar Neumann (gneumann@shh.mpg.de) will be in charge of the sampling of the osteological material and the organisation of the analyses on behalf of the MPI-SHH, supervised by the director of the Department of Archaeogenetics, Prof. Johannes Krause.
 - 1.3 Exchange of scientific materials, publications, and other information of mutual interest.
 - 1.4 Collaborative activities such as joint research, lectures, symposia, conferences, in particular the presentation of the project to the scientific community and the museum audience.
 - 1.5 Collaboration between the researchers of the MPI-SHH and the laboratory of archaeoanthropology of the SABAP-FI in the person of Alessandro Riga (alessandro.riga@beniculturali.it), anthropologist of the SABAP-FI, including collaborative research ventures, co-authorship or co-advisorship and other support from both parties.
2. In order to carry out any of the above activities, a detailed plan may be drawn up after consultation between the parties and then shall become part of this agreement. Such a plan shall be the result of negotiation between the parties concerned in each specific case.
3. The parties shall comply with the laws of Italy and Germany as well as the regulations of the other's institution.
4. This agreement shall imply full funding from the MPI-SHH for the DNA analyses and radiocarbon dating, and the issues related to the project (such as shipment of the osteological material to Germany and back).

The costs for the analyses of ancient DNA at the MPI-SHH consist of tangible expenses up to 1000.- € per sample, including consumables, run and maintenance of laboratory equipment. The costs for radiocarbon dating of DNA positive samples in a collaborating lab will be payed upon invoicing. Other costs related to the project, such as shipment of samples, will be payed upon invoicing. All costs will be funded by the MPI-SHH, Department of Archaeogenetics.

5. Data collection

5.1 Alessandro Riga will provide the authorisations for sampling and shipment of the teeth.

5.2 Sampling of teeth will be carried on under the supervision of Alessandro Riga at the laboratories of SABAP-FI; the samples collected will be shipped to the Max Planck Institute in Jena, where aDNA analyses will be conducted. MPI-SHH will initiate radiocarbon dating of aDNA positive samples in a collaborating lab.

5.3 The exact numbers of individuals subject to this analysis will be provided in a separate document and then shall become part of this agreement. The number of individuals to be sampled could be reduced due to conservation purposes. However, the number of individuals to be examined could increase, due to on-going excavations.

5.4 After the analysis, the portion of the teeth still intact will be shipped back to the SABAP-FI or, if all parties agree, to another laboratory.

5.5 Data should be shared among all members of this agreement for scientific purposes.

6. Intellectual Property

Each Party shall respect the intellectual property rights of its counterparts related to the intellectual property used or developed within the frame of this Agreement.

The intellectual property rights regarding a common work shall be agreed by the Parties before its execution. Each Party shall not use the name or trademark of its counterparts without consent.

7. Confidentiality

The Parties undertake to hold in confidence any and all documents marked as secret and any other secret information which the Parties have made available to one another in a manner that clearly indicates their confidential nature, and not to disclose such information to any third party. Such obligation of confidentiality shall survive termination of this Memorandum of Understanding, but apply no longer than three (3) years following completion research partnership according to this Memorandum and shall not extend to information that has become part of the public domain as a result of third-Party publications or in any other manner, or the disclosure of which has been explicitly approved by the Party to whom it relates.

8. Publications

8.1 The parties agree that all those who are involved on the scientific side of this MoU should be involved in the interpretation and authorship of all publications resulting from this collaboration. Data collection of the entire combined dataset will be divided as follows: 1) Johannes Krause and his colleagues will conduct aDNA analysis and initiate radiocarbon dating; 2) Dr. Riga and his collaborators (including Silvia Gori) will analyse the anthropological remains of the individuals subject of this project; 3) Elena Martelli will analyse the archaeological contexts of burial and will provide an overview of Roman/Medieval Florence.

8.2 Additional authors other than those mentioned in this MoU of this agreement may be included in future publications associated with this agreement to accommodate additional researchers who have contributed in data collection and/or given access to collections, provided that all parties agree.

8.3 The number of publications derived from this collaboration will be determined at a later date by all parties. It is possible that at least a publication will result from this collaboration. As is customary, the first author of any publication will be the researcher doing the majority of the analysis and write-up.

8.4 Papers and presentations should mention the archaeological societies which excavated the sites as follows:
a) Uffizi Gallery: Cooperativa Archeologia - Archaeologist responsible for the Uffizi Excavations, Paolo Lelli;
Anthropologists: Elsa Pacciani (anthropologist in charge), Erika Albertini, Irene Baldi and Silvia Gori.

b) San Paolino: Società cooperativa archeologica ARA, archaeologist in charge, Fabrizio Minucci; anthropologists: Guido Agresti, Anne Malcherek, Cosimo Giachetti; archaeologist responsible for this excavation, Federico Quintili.

c) Borgo de' Greci: B&P Archeologia e Beni Culturali - Archaeologists in charge: Carlotta Bigagli and Alessandro Palchetti. Archaeologist and anthropologist also involved in this specific excavation: Valeria D'Aquino and Roberta Iardella.

8.5 The pictures and maps provided by SABAP-FI should be credited following point 8.4.

8.6 The use of the dataset provided by the parties should be limited to the research goals stated above and should not be distributed to any other individuals. Any additional research goals to be undertaken with the shared dataset should be approved first by all parties. However, no permission from the other parties involved is needed when using your own dataset in other projects not listed here.

9. Liability

9.1 To the extent legally possible, the Partners shall be liable to each other only with regard to wilful intent and gross negligence.

9.2 To the extent legally possible, any liability for consequential damages is excluded.

10. Schedule

10.1. Data collection and analyses are scheduled to start in the early months of year 2020.


10.2 This agreement shall be effective from the date of signing and will have a duration of three years, ~~It is subject to change, renewal or termination at any time by mutual consent or by six months' written notice by either party.~~ It is subject to change, renewal or termination at any time by mutual consent or by six months' written notice by either party.

Signed this date of February 19, 2020

By

On behalf of SABAP-FI,

On behalf of MPI-SHH, Jena


Dott. Andrea Pessina


Prof. Jonathan Gershenzon