Archaeological research at necropoli of prehistoric communities is a popular subject among scientists. It allows to obtain direct information about individual members of past societies and the rituals practiced during the parting with the dead. For these reasons sepulchral studies significantly contribute to our image of the bygone reality. However, the methods used by archaeologists to extract relevant information, such as descriptions of grave forms, grave goods and their context, presently seem insufficient, even in connection with numerous available osteological analyses of human remains. Consequently, the proposed project encompasses a series of physico-chemical studies, the objective of which is to clarify certain issues, that have remained ambiguous for years. These include the problems of geographical origins of people who inhabited the Polish lands from between the 6th century BC and the 1st century AD, their migrations and contacts with other communities. The research will also elucidate the funerary customs of these societies, however in order to avoid false interpretations, analyses aimed at the identification of processes which might have led to grave alteration will also be conducted.

The studies will be carried out on grave materials (stored at present in museums) from seven necropoli related to the Pomorze, Przeworsk and Oksywie cultures. These communities used cremation as the basic type of funerary rite. This fact compels the development and implementation of a dedicated research procedure, which differs from the one used in the case of inhumation burials. Hence, physical anthropology analyses will be conducted to recognize the weight, size and colour of burnt bones, as well as diagnostic features of the skeletal remains. The patterning of some of these traits may be culturally determined and result from intentional breakage of bones or selection of a portion of them for placement within the urn – such practices were attributed to communities of the Przeworsk and Oksywie cultures. Samples collected during these analyses will be subjected to infrared spectroscopy (FTIR), what will show the temperatures reached in the funeral pyre and indicate possible interruptions of the cremation process. Also strontium isotope analyses will be conducted. This isotope accumulates in bones during human life and measuring its ratios can serve as a proxy to specify geographical origin and migrations of individuals. Determinations made for “standard” and atypical burials of a given community, can help answer questions about settlement continuity and intercultural contacts, eg. with Celtic people, whose burials were most likely found in Kuyavia. The project also involves micromorphological and physico-chemical analyses of urn infills. This will lead to a recognition of factors, which affected the burial during and after its deposition and differentiation between natural processes and cultural aspects related directly to the funerary rite itself. Phenomena interpreted preliminarily as “cultural” or “ritual”, can in fact be the result of transformations occurring naturally in the soil.

The described research procedure has never been used in studies of cremation burials from Polish lands, so the results of the project will serve as a benchmark for further, similar investigations. For the time period in question, the project will enable an understanding of funerary customs of Pomorze, Przeworsk and Oksywie culture communities in a novel way, that strives to explain differences in grave form and grave goods inventory from an interdisciplinary perspective. This will lead to a verification of current hypotheses based solely on artefactual archaeological data, which offer only limited insights into the past. In effect, it should be possible to draw conclusions about some aspects of the reality in which Early Iron Age people existed – an issue that still remains understudied.