Ceramic vessels are the subject in which real everyday life of ancient communities is reflected. Studies on this most common artefact left by our ancestors, are an inseparable element of any archaeological research.

The aim of the project is to reconstruct the role and functionality of clay vessels from the Hallstatt period, found in a variety settlement and funeral context. Multivariate analysis of ceramic ships (shapes and sizes, technology, ornamentation and surface treatment, measurements of dimensions, traces of use), the principles of the selection and the find contexts we want to join with a large series of molecular and isotopic tests for the presence of lipids from ceramic potsherds and archaeobotanical studies of fillings. Organic residue analysis is an excellent tool to point pottery function and can determine the intended use of clay containers and identifying the contents, specifying groups of foods and drinks cooked or stored in them. The team's intention is also to initiate innovative chemical analysis of organic remains preserved in ceramic vessels as the basis for reconstructing its function and determination of the main sources of food, drinks and even social behaviors of ancient communities. Publication of research in prestigious scientific journals will ensure the dissemination of the results obtained and their entry into the scientific circulation.

A team of scientists engaged in research on the development of excavations, archaeobotanical and chemical analysis, want to join forces to study the importance of ancient ceramic ships, enriching European results with new data and interpretations, and introducing innovative guidelines. For research, we want to use materials from sites from Lower Silesia, discovered during rescue archaeological research conducted on the construction of the A4 motorway, for which we have very rich ceramic material and samples of fillings.

The settlement of Milejowice and the necropolis of Domasław, create unique research opportunities. The discovered objects confirmed the changes, analogous to those taking place in the entire cultural zone, consisting in forming the type of Hallstatt aristocracy. The scale of contexts that we can refer to when choosing the material for analysis, as well as the diversity of both, is huge. The complex discovered in Milejowice surrounded by a solid palisade fence can be treated as a local implementation of the headquarters of a leading social group, occupied by a person or family with a particularly privileged position. The abundant ceramic material from this settlement comes not only from functionally and economical diverse buildings, but also from numerous wells and deposits, probably of a votive nature. Nearly 300 chamber graves discovered in the large necropolis in Domasław and the inventories show that the people buried there kept extensive contacts of various kinds with the most important cultural centers of Europe at the time. In graves, sets reflecting the feast customs known from the Hallstatt cultures appeared. We assume that they contained varied sets for libations and material sacrifices, vessels for eating and drinking, drawing drinks and consuming, storing and washing them.

The interpretative possibilities offered to us by molecular and isotopic methods for identifying food residues in ceramic fragments, allow us to decide on the functionality of vessels obtained during excavation works. This type of research not only allows to discuss the relationship between the functionality and morphology of the vessels found, but also deepens our understanding of past practices. Identification of vessel function is an important source of information in the study of eating and processing habits, as well as the relationship between eating habits, status and identity in the context of societies, allows us to understand the context and function of many ceramic deposits and determine the use of ceramic products that have been given the desired utilitarian or cult characteristics.

The integration of transdisciplinary findings has already proven to be very productive, increasing our knowledge about ancient lifeways at house/sacrum, site and then regional scales. The proposed project provides unprecedented Central European insight into the life of the Early Iron Age populations.