Reg. No: 2022/47/D/HS3/02162; Principal Investigator: dr Robert Juliusz Mahler

The latest study of the Kom el-Dikka necropolis indicates that during the Fatimid period significantly more females died when they were young than was observed in the earlier phase of the cemetery. However, those who lived through early adulthood experienced an improvement in their living conditions.

How can the question be answered about **why women buried at Kom el-Dikka in the Fatimid times were dying more frequently in early adulthood** than in earlier times?

1. By investigating the population as a whole, not only women.

2. By collecting and analysing new data from Kom el-Dikka (to date, too few data has been collected from the Lower Necropolis phase to allow statistical answers to all but the most general questions).

3. By comparing it to another population from the same time and close in space.

4. By considering the problem in close relation to the cultural context.

Through answering this question the proposed investigation would contribute, if only to a limited extent, to some of the most important problems asked today by scientists from all over the world. One is about women and their role in history; the other is about environmental change. What did the life of women living different lives in the past look like – in the shadow of men, in different cultures, in different environments? Women are mostly absent from historical records but for non-Islamic communities we have bioarchaeological sources readily available. This is not so in the case of Islam, especially not in Africa. Here, in the case of Kom el-Dikka we have **a unique opportunity to take a look at the Muslim part of the story**. The necropolis on Kom el-Dikka has yielded one of only two Muslim bone series ever known from Egypt and one of the most numerous in the world. The Kom el-Dikka cemetery has so far provided information on no less than 2603 individuals from the 9th–10th and 11th-12th-century Alexandria.

This project is about change that is both cultural and environmental. Environmental change could trigger major historical processes and both the Arab invasion and subsequent demise of Alexandria –

still the second city in Egypt today – were to some extent caused by such changes. Interpreting physical characteristics of the inhabitants of Alexandria in the context of culture and the natural environment would provide interesting insights into these processes and provide fairly objective data for comparisons with historical sources.

By exploring a new area of the cemetery, we could acquire a skeletal series that would be numerous enough to supplement the materials already stored on-site to an extent justifying the use of different methods that would not be compatible with what has been done before (since the 1960s). In particular, it is expected that modern analyses of teeth would provide important insights into the lives of the people buried and that a comparison with contemporary and well preserved material from Naqlun (11th–13th century) would give us the necessary point of reference for the results.

Such a comparison carried out within the scope of a single project with all the data collected in nearly one go by one team of researchers using a uniform methodology would ensure high quality results. This kind of approach gives a pretty good chance that if there is something that can be observed it will not be missed.

Studying the different bioarchaeological characteristics of a population of people is like looking at a beautiful sculpture from different angles with the light carving a different picture for us each time we change the angle and move around to see what is hidden behind it. Each of these views give us new information and is pretty in itself but only all of them combined together can make a complete whole. It is expected that all the characteristics studied in the scope of this project when taken together would produce considerably more information about the life of Muslim women in Fatimid Alexandria than would be possible to achieve if they were analysed separately. The value of such an approach has proved beneficial many times in the past; the only limit lies in the time we have and in our ability to separate useful information from the noise. Therefore, in this study we are limiting ourselves to characteristics that can be studied on the population level and we will use statistics to distinguish the patterns among the noise.

By conducting this project we would **get to know better the role of women in the Middle Ages** in Egypt and possibly the biocultural impact of Islamization on their lives. Lives which are only very rarely mentioned in historical records. We would also describe the **biological and biocultural characteristic of two populations** in the context of history and the natural environment. Moreover, **the Muslim sample from Kom el-Dikka is unique**. The study of Muslim samples, is rarely allowed, especially in Africa. This project is our chance to do it as thoroughly as possible.