



The use of strontium isotope ratio measurements by MC-ICP-MS for the reconstruction of animal migration on the example of the Celtic excavation site Roseldorf in Lower Austria

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The application of $^{87}\text{Sr}/^{86}\text{Sr}$ ratio measurements in anthropological and archaeological research offers the possibility to elucidate historical questions including human and animal migration, the reconstruction of ancient trade routes and may shed light on cultic practises and social concepts of (pre)historic societies as well. The ubiquity of strontium in the environment, the natural variation and regional difference of its isotopic composition permit the distinction between local and non-local individuals.

The Celtic central settlement site Roseldorf (Lower Austria) represents an actual, very important and impressive find spot of Latène culture (approx. 300 BC) in Austria. Not only the dimension of the settlement and amount of unique archaeological findings (e.g. weapons, coins, iron crown) but also several structures identified as sanctuaries and comprising huge amounts of fragmented animal and human skeletal remains are of particular concern for the reconstruction of burial practises and ritual behaviour of Celts in our region. Archaeozoological investigations seem to indicate the presence of non-autochthonous animals (in particular cattle) in Roseldorf and point to their Italic provenance. Here we present the first results of the $^{87}\text{Sr}/^{86}\text{Sr}$ ratios obtained in cattle, horse and human tooth enamel samples by MC-ICP-MS compared with the local strontium signal. The latter is represented by environmental samples taken from the area around Roseldorf. The strontium isotope signatures give an indication about the origin of the examined individuals and allow drawing conclusions about trading contacts practised by the Celtic settlers of Roseldorf.