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## 14C dating in forensics: the CMP (Committee on Missing Persons) project for the identification of missing persons

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Since few years the Centre of Applied Physics Dating and Diagnostics (CEDAD) at the University of Salento is collaborating with the Committee on Missing Persons in Cyprus (CMP) for the analysis of the human skeleton remains of around two thousand persons who went missing during the inter-communal fighting of 1963-64 and the events of 1974.

The aim of the CMP, supported by the United Nations, is to locate and identify the remains of the missing and return them back to their relatives. Unfortunately, the identification process is often made complicated by the generally poor preservation status of the remains and the complex burial conditions, relatively large post-mortem intervals, and the lack of context information or associated artefacts and personal belongings.

It is then often very important to assess a first compatibility of the recovered skeleton remains with the expected time range. This is the reason why radiocarbon dating is one of the steps of the well-established identification protocol set-up by CMP together with the anthropological and genetic analysis of the skeletal remains and the comparison between the physical evidence with the available witness information. The aim of the 14C analysis is first to assess whether the analysed sample is relevant to the CMP mandate or not, and then give a contribution to the identification of the person in terms, for instance, of birth year.

We review the use of 14C dating for the analysis of around 197 bone samples so far analysed highlighting the potentialities, as well as the strategies developed to address possible issues such as dietary-induced offset in the measured age or the need to develop a proper model of carbon turnover in the analysed tissues.

The importance of 14C dating is then shown by discussing some cases of both relevant and not relevant context to the CMP mandate.

### Student Submission

No

**Primary authors:** QUARTA, Gianluca (University of Salento); Dr ENGIN, Istenc ((2) Committee on Missing Persons in Cyprus (CMP)); Dr ELEFTHERIOU, Theodora (Committee on Missing Persons in Cyprus (CMP)); D'ELIA, Marisa (CEDAD-Dept. of Mathematics and Physics, University of Salento); MARUCCIO, Lucio (CEDAD-Dept. of Mathematics and Physics, University of Salento); PECCARRISI, Dalila (CEDAD-Dept. of Mathematics and Physics, University of Salento); FRAGOLA, Mattia (CEDAD-Dept. of Mathematics and Physics, University of Salento); CALCAGNILE, Lucio (CEDAD-Dept. of Mathematics and Physics, University of Salento)

**Presenter:** QUARTA, Gianluca (University of Salento)

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