TECHNART 2023
LISBOA

International conference
on analytical techniques
in art and cultural heritage

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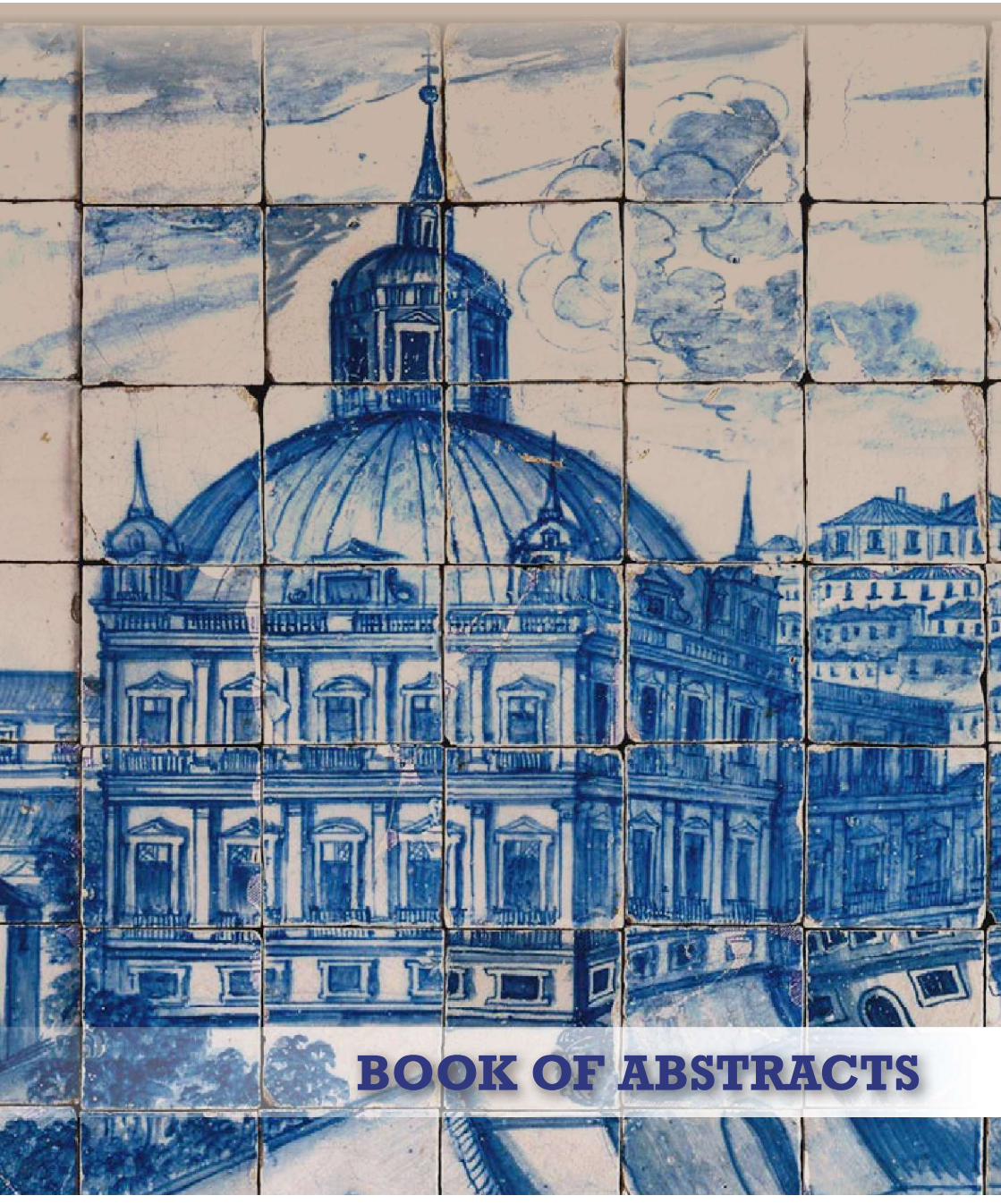

BOOK OF ABSTRACTS

TECHNICAL INFORMATION

TECHNART2023 BOOK OF ABSTRACTS

TITLE
TECHNART2023
Non-destructive and Microanalytical Techniques in Art and Cultural Heritage. Book of Abstracts

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Prospection of bioactive compounds produced by bacterial isolates from pristine environments

Patrícia Gatinho [1,2], Cátia Salvador [2], Silvia Macedo Arantes [2], M. Rosário Martins [2,3], Amélia M. Silva [4], Ana Z. Miller [2,5], A. Teresa Caldeira [2,6,7]

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Pristine environments can be defined as places with limited or no connections to anthropogenic activities [1], for example, karstic and marine caves, important landmarks of Natural and Cultural Heritage. Usually, these environments are exposed to extreme factors such as temperature, salinity, osmolarity, UV radiation, pressure, or pH, with values close to the limit of life. In these extreme environments, living organisms biosynthesize secondary metabolites with potential bioactivities giving them unique survival skills to grow in hostile conditions [2]. This study aims to search for new bioactive compounds produced by Actinobacteria, Firmicutes, Bacteroidetes and Proteobacteria stains isolated from pristine environments such as Selvagens Islands (Madeira, Portugal) and the Paleolithic Escoural Cave (Montemor-o-Novo, Portugal) [3]. The antioxidant activity and antimicrobial action spectra against *Gram*-negative and *Gram*-positive bacteria were evaluated. Additionally, supernatants of bacterial strains cultures were screened for antitumor potential using a breast cancer epithelial cell line MDA-MB-231. The results obtained suggest that selected bacteria isolates produce biologically active compounds with potential application in biotechnology and biomedicine. Bioprospection and discovery of new compounds represent an opportunity for the study and valorization of these Natural and Cultural Heritage habitats, allowing new products obtained by fast and low-cost biotechnological processes to be implemented as novel green-safe and sustainable solutions.

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