
BIOPATINES

OBJECTIVES

The objective of the project is to propose an alternative biological treatment for the conservation-restoration of copper alloys artefacts.

PROGRAM

Taking advantage of unique properties of carefully selected fungal species, the project relies on the conversion of existing corrosion patinas into copper oxalates.

In fact, thanks to their insolubility and stability even in acidic atmospheres, copper oxalates are expected to provide the treated objects with long-term protection and no aesthetical alteration.

After initial successful attempts (FP6-EU-ARTECH, 2004-2009 and FP7-BAHAMAS, 2010-2012), the efficacy of the fungal treatment is now improved and validated against ageing procedures.

The environmentally-friendly use of microorganisms for restoration of metal artworks that is now proof-tested, could present a breakthrough innovation for the conservation industry.

RESULTS

The project should provide conservation professionals with access to a simple-to-use, reliable, versatile, environment-friendly and low-cost technology, for art objects, archaeological objects, architectural components, etc.

One of the expected outcomes is the development of an easy-to-use kit dedicated to conservators-restorers. A feasibility study that deals with the ageing of coupons replicating the commonly found patinas in nature has been approved by the Swiss Commission for Technology and Innovation (CTI) for an 18-months funding and is now ongoing.



FUNDING

Swiss Commission for Technology and Innovation (CTI).

PROJECT LEADER

Edith Joseph
edith.joseph@he-arc.ch

PARTNERS

Laboratory of Microbiology, University of Neuchâtel (principal partner).

DURATION

18 months
2013-2014