Ca' Foscari University of Venice

PROJECT ACRONYM AND TITLE: GREENART, GREen ENdeavor in Art ResToration

FUNDING PROGRAMME: Horizon Europe

CALL: HORIZON-CL2-2021-HERITAGE-01

HOST DEPARTMENT: Department of Environmental Sciences, Informatics and Statistics

SCIENTIFIC RESPONSIBLE: Semenzin Elena

FINANCIAL DATA:

Project total costs	Overall funding assigned to UNIVE
€ 5.618.453,00	€ 137.751,00

ABSTRACT: European Cultural Heritage (CH) is a crucial resource that must be maintained, preserved and accessible, to counteract degradation enhanced by unfavorable environmental conditions and climate changes. Conservation methodologies lack durability, sustainability and cost-effectiveness, and are typically based on energy-consuming processes or non-environmentally friendly materials. Coping with these issues, GREENART proposes new solutions based on green and sustainable materials and methods, to preserve, conserve and restore CH: 1) Protective coatings based on green materials from waste and plant proteins, with self-healing and reversibility character, possibly functionalized with organic/inorganic nanoparticles to impart VOC capture, anti-corrosion and barrier behaviors. 2) Foams and packaging materials made by biodegradable/compostable polymers from renewable sources (polyurethanes and natural fibers) to control T/RH. 3) Consolidants based on natural polymers from renewable sources, to mechanically strengthen weak artifacts. 4) Gels and cleaning fluids inspired by the most advanced systems currently available to conservators, improving them according to green and circular economy. 5) Green tech solutions for monitoring CH assets non-invasively against pollutants and environmental oscillations. Life cycle Assessment and modeling will favor the "safe-by-design" creation of affordable solutions safe to craftspeople, operators and the environment, and minimize energy-consumption in monitoring museum environments. Such holistic approach is granted in GREENART by a multidisciplinary partnership that gathers hard and soft sciences and engineering, including academic centers, innovative industries and SMEs, conservation institutions and professionals, museums whose collections hold absolute masterpieces in need of conservation, public entities and policy makers. The latter will favour training and dissemination
to make stakeholders familiar with the new methods.

Planned Start date	Planned End date
1/10/2022	30/09/2025

BENEFICIARIES:

1 Consorzio interuniversitario per lo sviluppo dei sistemi a grande interfase	IT	Coordinator
2 Consiglio Nazionale delle Ricerche	IT	Partner
3 Idryma Technologias Kai Erevnas	EL	Partner
4 University College Cork - National University of Ireland, Cork	IE	Partner

5	Università Ca' Foscari Venezia	IT	Partner
6	GREENDECISION SRL	IT	Partner
7	Univerza v Ljubljani	SI	Partner
8	Chalmers Tekniska Hoegskola Ab	SE	Partner
9	Mirabile Antonio	FR	Partner
10	ZFB Zentrum Fur Bucherhaltung Gmbh	DE	Partner
11	Stiftelsen Chalmers Industriteknik	SE	Partner
12	Solomon R Guggenheim Foundation	US	Partner
13	Ministero della Cultura	IT	Partner
14	Museum Associate Dba Los Angeles County Museum of Art	US	Partner
15	Universidade Federal Do Rio Grande Do Sul	BR	Partner
16	Universidade Estadual De Campinas	BR	Partner
17	Sichuan University	CN	Partner
18	Specific Polymers	FR	Partner
19	Magyar Nemzeti Muzeum	HU	Partner
20	Tokyo University of Science	JP	Partner
21	NIKKO CHEMICALS CO., LTD.	JP	Partner
22	PANEPISTIMIO DYTIKIS ATTIKIS	EL	Partner
23	BEWARRANT	BE	Partner
24	Universitat Politecnica De Valencia	ES	Partner
25	The Metropolitan Museum of Art	US	Partner
26	Nouryon PULP AND PERFORMANCE CHEMICALS AB	SE	Partner
27	THE BOARD OF TRUSTEES OF THE TATE GALLERY	UK	Partner
28	Naturkundemuseum Leipzig, Stadt Leipzig	DE	Partner