### JOINT DECLARATION OF THE 14th ITALY – U.S. JOINT COMMISSION MEETING ON SCIENCE AND TECHNOLOGY COOPERATION ROME, JANUARY 26-27, 2023

Pursuant to the Agreement between the Government of the United States of America and the Government of the Italian Republic for Science and Technology Cooperation, signed at Rome on April 1, 1988, as amended and extended, and consistent with the Joint Declaration of the 13th Joint Commission Meeting on Bilateral Cooperation, signed at Washington, on December 7, 2018, the 14th Joint Commission Meeting was held in Rome on January 26-27, 2023 in the presence of Maria Tripodi, Italian Undersecretary of State for Foreign Affairs and International Cooperation and Monica Medina, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, U.S. Department of State.

### DELEGATIONS

The Italian delegation was headed by Undersecretary Maria Tripodi, Ministry of Foreign Affairs and International Cooperation.

The U.S. delegation was headed by Shawn Crowley, Chargé d'Affaires a.i., U.S. Embassy Rome.

The composition of the two delegations is reported in Annex I.

### AGENDA

The agenda of the joint review meeting was adopted as follows:

- 1. Joint Statement on Science and Technology Cooperation
- 2. Review of the bilateral scientific activities carried out in the period 2018-2022
- 3. Areas of strategic interest for both countries
- 4. Formal agreements on science and technology cooperation between U.S. and Italian Institutions, and other relevant initiatives
- 5. Announcement of projects funded by the Italian call for proposals; and
- 6. Meeting of the next Joint Commission.

### 1. Joint Statement on Science and Technology Cooperation

The delegations recognize that science and technology is a pillar of the strategic alliance between Italy and the United States, with an unprecedented impact on the economic, social, cultural, and political relations between the two countries. In order to emphasize the common values and principles that should inspire research, higher education, and innovation, they have released a *"Joint Statement on Science and Technology Cooperation,"* reported in Annex II.

### 2. Review of the bilateral scientific activities carried out in the period 2018-2022

The two delegations reviewed the cooperative activities accomplished to date and expressed their satisfaction with the implementation of the projects discussed at the 13th meeting of the Italian - U.S. Joint Commission on Science and Technology Cooperation, held in Washington, on December 7, 2018.

### 3. Areas of strategic interest for both countries

Consistent with the *Joint Statement on Science and Technology Cooperation*, the two delegations have identified the following subjects of highest priority:

- Health and Life Science
- Quantum Information Science
- Earth and Climate Science
- Advanced Materials, Nanomaterials, and Biophysics
- High Energy and Nuclear Physics, Astrophysics
- Energy Transition; and
- Artificial Intelligence

The delegations identified participating institutions in each priority subject:

A. For Health and Life Science:

- Italy: Italian Ministry of Health, Alliance Against Cancer, Human Technopole, National Institute for the Care of the Elderly (INRCA), Istituto Auxologico Italiano, Mediterranean Institute for Transplantation and Advanced Specialized Therapies (ISMETT), Instituto Superiore Di Sanita (ISS), La Sapienza University of Rome, Fondazione RiMED, University of Bologna (UNIBO), University of Ferrara (UNIFE), University of Naples "Federico II," University of Turin (UNITO)
- United States: U.S. Department of Health and Human Services (HHS), including Food and Drug Administration, National Institutes of Health (NIH), National Cancer Institute (NCI), Johns Hopkins Bloomberg School of Public Health, North Carolina State University, Oregon Health and Science University
- B. For Quantum Technologies:
  - Italy: National Research Council of Italy (CNR), National Research Centers in High Performance Computing, Big Data, and Quantum Computing National, Interuniversity Consortium for Informatics (CINI)
  - United States: National Institute of Standards and Technology (NIST), Department of Energy (DOE), National Science Foundation (NSF), Amazon Web Services (AWS)
- C. For Earth and Climate Science (including resilience to natural disasters):
  - Italy: Italian Space Agency (ASI), National Research Council of Italy (CNR), Agency for Energy Efficiency (ENEA), Euro-Mediterranean Center on Climate Change (CMCC), EUCENTRE Foundation, National Institute for Nuclear Physics (INFN), National Institute of Geophysics and Volcanology (INGV), Italian National Institute for Environmental Protection and Research (ISPRA), Italian Civil Protection, Sustainable Energy Research Centre (SOTACARBO), National Institute of Oceanography and Applied Geophysics (OGS), Council for Agricultural Research and Economics (CREA), Carabinieri-Forestali

 United States: Department of Energy, Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), Library of Congress, NASA-HQ, NASA-JPL, NASA-Ames, NASA-Goddard, National Oceanic and Atmospheric Administration, National Park Service, National Science Foundation, U.S. Geological Survey, U.S. Department of Agriculture, National Council of University Research Administrators (NCURA), MIT University

### F. For Advanced Materials, Nanomaterials, and Biophysics

- Italy: CNR, University of Rome Tor Vergata, University of Bari, University of Naples-Federico II, Politecnico di Milano
- United States: U.S. Air Force Office of Scientific Research, U.S. Army Research Laboratory, NSF, NIH, NCI, John Hopkins University, University of Illinois, Texas AM University, University of Maryland, Johns Hopkins University, Parallax Advanced Research, National Council of University Research Administrators (NCURA)
- G. For High Energy and Nuclear Physics, Astrophysics
  - Italy: Italian Space Agency (ASI), Agency for Energy Efficiency (ENEA), National Institute for Astrophysics (INAF), National Institute for Nuclear Physics (INFN)
  - United States: DOE, Fermilab, NSF, NASA, Naval Research Institute, New York University, Princeton University
- H. For Energy Transition
  - Italy: ENEA, Ente Nazionale Idrocarburi (ENI), Divertor Tokamak Test Project (DTT)
  - United States: DOE, NSF, Fermi National Accelerator Laboratory (Fermilab), University of Rochester, Lawrence Livermore National Laboratory/National Ignition Facility
- I. For Artificial Intelligence
  - Italy: Ministry of Universities and Research (MUR), National Institute for Nuclear Physics (INFN), National Lab for AI and Intelligent Systems
  - United States: National Science Foundation, UC Berkeley, MIT University, Stanford University, NVIDIA

There are ongoing close collaborations between Italy and the United States in these areas. In some of them, bilateral working groups have been active for some years. In others, working groups are being established over the next three years.

In all cases, the nongovernmental research centers and academic institutions are responsible for funding their own respective participation in science and technology cooperation projects.

4. Agreements or arrangements for science and technology cooperation between Italian and U.S. institutions and other relevant initiatives.

The two delegations acknowledged and appreciated that in the past three years the following agreements and arrangements were concluded between Italian and U.S. institutions:

- Research Agreement between Fermilab and INFN for cooperation at the Superconducting Quantum Materials and Systems (SQMS) Center, March 4, 2021;
- Memorandum of Understanding between the Ministry of Health of the Italian Republic and the Department of Health and Human Services of the United States of America on Health and Medical Sciences (signed in Rome on September 3, 2021, by the Minister of Health of the Italian Republic and the Secretary of Department of Health and Human Services of the United States of America);
- Cooperative Research and Development Agreement between Fermilab and INFN's Laboratori Nazionali di Frascati (LNF) concerning Superconducting Undulator development, June 29, 2021;
- Project Planning Document between Fermilab and INFN for participation in the Proton Improvement Plan-II (PIP-II), June 29, 2021;
- Memorandum of Understanding for collaboration in the Short-Baseline Neutrino Program between Fermilab, INFN and other funding agencies, February 28, 2022;
- Memorandum of Understanding between the Italian Ministry of Education, University and Research and the U.S. National Science Foundation Concerning Artificial Intelligence Collaboration (signed on July 25, 2022, by the Minister of University and Research and the NSF Director). Under the guidelines of the MOU, a management plan will allow the two sides to fund joint research projects in the short term. In the medium term the MOU provides an opportunity for funding cooperative projects to connect research centers/institutes of the two countries;
- Implementing Arrangement for Italian Space Agency-NASA (ASI-NASA) for Surface Biology and Geology and Thermal Infrared Radiometer (SBG-TIR) Mission (signed by NASA March 15, 2022; signed by ASI April 19, 2022).
- Implementing Arrangement for ASI-NASA Implementing Arrangement for Multi-Angle Imager for Aerosols (MAIA) Mission MAIA (signed by NASA December 19, 2022; signed by ASI January 12, 2023).

In other noteworthy initiatives, the two delegations:

 Recognize the support to U.S.-Italian bilateral cooperation by ISSNAF (Italian Scientists and Scholar North America Foundation), a not-for-profit organization connecting more than 3,000 Italian and Italian-American scholars, researchers, and technologists in North America.

# 5. Announcement of projects funded by the Italian call for proposals

The Italian delegation announced that 18 projects have been approved for funding. The selected projects were identified through the Ministry for Foreign Affairs and International Cooperation's recent call for proposals. (The projects are listed in Annex III.) Furthermore, the Italian Ministry selected five more projects, listed in Annex III, as the Reserve List. Their designation as reserve means their projects are of the highest quality, and that agencies or research institutions are encouraged to mobilize potential resources from different sources to implement the projects.

### 6. Next meeting of the Joint Commission

The two delegations decided that the 15th U.S.-Italian Commission on Science and Technology Cooperation Meeting should take place in Washington, DC (USA), at a date to be determined in the coming months.

Prior to the next meeting, the two countries, consistent with the *Joint Statement*, may explore additional means to exchange information on national science and technology priorities and areas of potential cooperation, and exchange views in areas that might involve the broader scientific communities.

At its 15th meeting, the next Joint Commission intends to identify priority areas of research to be supported through a call for projects.

Any modification to this joint declaration can be completed through diplomatic channels.

Signed at Rome, on January 26, 2023, in duplicate, in the English language,

For the Italian Republic

For the United States of America

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Maria Tripodi, Undersecretary Ministry of Foreign Affairs and International Cooperation

Shawn Crowley, Chargé d'Affaires a.i. U.S. Embassy Rome

### ANNEX I COMPOSITION OF THE TWO DELEGATIONS

### **ITALY DELEGATION**

- Maria Tripodi, Head of Delegation, Undersecretary, Foreign Affairs and International Cooperation, MFA
- Giuseppe Pastorelli, Minister Plenipotentiary and Director for Integrated Promotion and Innovation, MFA
- Alessandra Tognonato, MFA
- Alessandro Garbellini, MFA
- Francesco De Ciantis, MFA
- Maria Letizia Santangelo, MFA
- Giulia Prati, MFA
- Marcello Alecci, Appointed Science Attache, Consulate of Italy Chicago
- Claudio Barchesi, MFA Science Expert
- Riccardo de Sangro, MFA Science Expert
- Giuditta Perozzi, MFA Science Expert
- Alessandra Scaffidi-Abbate, MFA Science Expert
- Marco Gilli, Science Attache, Italian Embassy Washington
- Giuseppe Ippolito, Director General, Research and Innovation, Italian Ministry of Health
- Rino Rappuoli, Professor, Fondazione Biotecnopolo Siena and GSK Vaccines
- Ruggero De Maria, President, Alliance Against Cancer
- Marco Salluzzo, Senior Researcher, National Research Council of Italy, CNR-SPIN
- Paolo De Natale, Research Director, CNR-INO
- Valter Bonvicini, Research Director, National Institute for Nuclear Physics, INFN
- Fabrizia Buongiorno, Director of Technology Research, National Institute of Geophysics and Volcanology, INGV
- Antonio Navarra, Professor, Euro-Mediterranean Center on Climate Change, CMCC
- Giovanni Coppini, Director, Ocean Predictions and Applications, Euro-Mediterranean Center on Climate Change, CMCC
- Francesco Longo, Head, Earth Observation Unit, Italian Space Agency
- Luigi Ambrosio, Director, Institute of Polymers, Composites and Biomaterials, Italian National Research Council, CNR
- Antonio Zoccoli, President, National Institute for Nuclear Physics, INFN
- Marco Pallavicini, Vice President, National Institute for Nuclear Physics, INFN
- Filippo Zerbi, Scientific Director, National Institute for Astrophysics
- Francesco Romanelli, President, Divertor Tokamak Test Facility, DTT
- Paola Batistoni, Research Director, ENEA
- Diego Bettoni, Director, Legnaro Lab, National Institute for Nuclear Physics, INFN

- Francesca Ferrazza, Head, Magnetic Fusion Initiatives, ENI
- Gianluigi Consoli, Director General, Ministry of University and Research, MUR
- Col. Giancarlo Papitto, Forestry and Environment Unit, Carabinieri
- Gianni Serra, Director, International Relations, Sotacarbo
- Marco Ciuchini, Vice President, National Institute for Nuclear Physics, INFN
- Rita Cucchiara, Professor, National Institute for Nuclear Physics, INFN
- Valentina Benfenati, Research Director, CNR
- Thomas Brown, Associate Professor, University of Rome Torvergata
- Paola Nicchia, Professor, University of Bari
- Stefania Cantoni, Deputy Manager, Space Division, CIRA
- Annalisa Convertino, Professor, IMM-CNR
- Vincenzo Palermo, Director, Organic Synthesis and Photoreactivity, CNR
- Raucci Maria Grazia, Project Manager, CNR
- Roberto Zamboni, Research Director, CNR
- Alessandro Gonzales, Deputy Chief of Mission, Embassy of Italy Washington
- Lamberto Moruzzi, Head, Office of Economic, Trade and Scientific Affairs, Embassy of Italy Washington
- Maurizio Biasini, Science Attache, Embassy of Italy Washington
- Giusi Condorelli, Science Attache, Embassy of Italy Washington
- Antonella Incicchitti, Science Attache, Consulate General Houston
- Tommaso Calarco, Director, Institute for Quantum Control PGI-8, Forschungszentrum Jülich and University of Bologna
- Fabio Beltram, Professor, National Quantum Science and Technology Institute, Scuola Normale Superiore
- Paolo Villoresi, CNR-IFN and University of Padova
- Giorgio Metta, Scientific Director, Istituto Italiano di Tecnologia, IIT

### U.S. DELEGATION

- Shawn Crowley, Head of Delegation and Charge d'Affaires, U.S. Embassy Rome
- Courtney Nemroff, Acting Deputy Chief of Mission, U.S. Embassy Rome
- Birgitta Hoggren, Counselor, Environment, Science, Technology, and Health, U.S. Embassy Rome
- Alexis Layman, Professional Science Affairs Associate, U.S. Embassy Rome
- Federica Signoretti, Science Affairs Specialist, U.S. Embassy Rome
- Jason Donovan, Director, Office of Science and Technology Cooperation, U.S. State Department
- John Choi, International Relations Officer, Office of Science and Technology Cooperation, U.S. State Department
- Cristina Cassetti, Deputy Director, Microbiology and Infectious Diseases, NIH

- Abid Patwa, High Energy Physics, DOE
- Michael Famiano, International Cooperation and Outreach, DOE
- Denise Caldwell, Division Director, Physics, NSF
- Claire Saundry, Director of International and Academic Affairs, NIST
- James Kushmerick, Director, Physical Measurement Laboratory, NIST
- Anna Grassellino, Senior Scientist and Director, Superconducting Quantum Materials and Systems Center, SQMS, Fermilab
- Stefano Lami, COO, SQMS, Fermilab
- Hema Ramamoorthi, Director, International Engagements, Fermilab
- Linda Heath, Director, Inventory, Monitoring, & Assessment Research, USDA U.S.
   Forest Service
- Kelsey Aho, Watershed Program Manager, Europe and Eurasia, USDA U.S. National Forest Service
- Frank Webb, Earth Science Research and Mission Formulation, NASA JPL
- Claire Chen, Director, Global Initiatives, National Council of University Research Administrators, NCURA
- Umberto Fugiglando, Research Manager, MIT
- Simone Mora, Research Scientist, MIT
- Simone Severini, Director, Quantum Computing, Amazon Web Services
- Monica Medina, Assistant Secretary, Bureau of Oceans and International Environmental and Scientific Affairs, U.S. State Department
- Sarah Scharf, Regional Program Director, Europe, Israel & Multilateral Organizations, NIH Fogarty International Center
- Paul Pearlman, Program Director, Center for Global Health, NIH/NCG
- Jeff Buchsbaum, Medical Officer and Program Director, Clinical Radiation Oncology Branch, NIH/NCI
- Ingrid Verstraeten, Regional Science Advisor, Central Asia, Circum Arctic, Europe and Russia, USGS
- Bhima Sastri, Director of Crosscutting R&D and Systems Integration in Office of Fossil Energy, DOE
- Eva Zanzerkia, Program Director, Earth Sciences, NSF
- Paul Steblein, Wildland Fire Science Coordinator, USGS
- Jennifer Gibson, Post-Wildfire Coordinator, U.S. National Park Service
- Hilary Stockdon, Program Manager, Coastal and Marine Hazards and Resources, USGS
- Matthew Andersen, International Science Advisor for Biology, USGS
- Doug Beard, Chief, National Climate Adaptation Science Center, USGS
- Alicia Cheripka, Program Analyst, International Activities, NOAA
- Dalia Kirschbaum, NASA Goddard
- Lara Peterson, USDA
- Sofi Bin-Salamon, Program Manager, U.S. Air Force Office of Scientific Research

- Khershed Cooper, Program Director, Civil, Mechanical & Manufacturing Innovation, NSF
- Shashi Karna, Research Scientist, U.S. Army Research Laboratory
- Wolfgang Losert, Professor, University of Maryland
- Ishan Barman, Associate Professor, Johns Hopkins University
- Larry Nagahara, Vice Dean, Research and Translation, Johns Hopkins University
- Jan Bruegmann, Program Associate, NCURA
- Scott Hsu, Senior Advisor and Lead Fusion Coordinator, DOE
- Riccardo Betti, Professor, University of Rochester
- Riccardo Tommasini, Lawrence Livermore Labs
- Theresa Wilks, Research Scientist, Plasma Science and Fusion Center, MIT
- Ian Brosnam, Science and Technology Manager, NASA Ames Research Center
- Marco Pavone, Professor, Stanford University and NVIDIA
- Tomaso Poggio, Professor, MIT
- Shankar Sastry, Professor, UC Berkeley
- Michael Littman, Division Director, Information and Intelligent Systems, NSF

### ANNEX II

### JOINT STATEMENT ON SCIENCE AND TECHNOLOGY COOPERATION

### The United States of America and the Italian Republic

- Recognizing that science, technology, and innovation have enabled transformative capabilities across multiple crucial sectors and that the foundation of this progress is the global research enterprise, and its constant creation of new knowledge, understanding, and insights;
- Acknowledging that international partnerships are key to combine the expertise, ingenuity, creativity and further insights from the innovation ecosystems of our countries and thereby accelerate the realization of innovative technologies for the benefit of humanity;
- Welcoming the broad range of new collaborations pursued under the Agreement between the Government of the United States of America and the Government of Italy for Science and Technology Cooperation, singed at Rome April 1, 1988, as amended and extended, and by the work of the triennial Joint Committee on Science and Technology Cooperation over its 14 sessions;

Intend to harness the spirit of science, technology, and innovation to further pursue science and technology cooperation in the following priority areas, which underpin the development of society and the economy:

- Health and Life Science
- Quantum Information Science
- Earth and Climate Science
- Advanced Materials, Nanomaterials, and Biophysics
- High Energy and Nuclear Physics, Astrophysics
- Energy Transition; and
- Artificial Intelligence

They intend to advance this agenda by:

- Embarking on good-faith cooperation that is underpinned by our shared principles including
  openness, transparency, honesty, equity, fair competition, freedom of inquiry, respect for
  human rights and democratic values, and further promoting protection and enforcement of
  intellectual property and of rigor and integrity in research.
- Fostering inclusive scientific research communities and tackling cross-cutting issues of common interest such as equity, diversity, inclusion, and accessibility, so that every person is able to fully participate and have an equal opportunity to succeed.

- Utilizing bilateral science and technology cooperation mechanisms and multilateral cooperation frameworks, and pursuing new implementing pathways, as appropriate, to promote cooperative research and development efforts.
- Promoting avenues to encourage a broad and inclusive ecosystem and research environment, to facilitate multidisciplinary research, the sharing of research methodologies, infrastructure and data on voluntary, mutually agreed terms, and in line with respective national laws.
- Enabling opportunities to build a trusted market and supply chain for research and development, and supporting economic growth by engaging stakeholders including industry consortia, research leaders, policy makers, and business security stakeholders.
- Supporting the education and development of the next generation of scientists and engineers
  necessary to expand the above fields, which could include opportunities for personnel
  exchanges.
- Leveraging regular multilateral opportunities to discuss research matters of international importance and respective policy issues.
- Creating potential economic and social value for both countries through innovative collaborations, based on scientific excellence and mutual interests.

## ANNEX III

# PROJECTS FUNDED BY THE ITALIAN MINISTRY OF FOREIGN AFFAIRS AND INTERNATIONAL COOPERATION CALL FOR PROPOSALS

SECTOR	PROJECT TITLE	ITALIAN PARTNER	U. S. PARTNER
Health and Life Sciences	An innovative aptamer-based epigenetic approach for non-small cell lung cancer targeted therapy	Esposito Carla Lucia CNR-IEOS	Di Ruscio Annalisa Beth Israel Deaconess Medical Center
Health and Life Sciences	Multifunctional DNA nanomaterials for biosensing and imaging applications	Del Grosso Erica Tor Vergata University, Rome	Franco Elisa UCLA
Health and Life Sciences	Selection and design of Proteolysis Targeting Chimeras (PROTAC) as novel therapeutic strategies against ultra-rare CIC- rearranged sarcomas (PRIMA)	Mancarella Caterina IRCCS Istituto Ortopedico Rizzoli, Bologna	Morrione Andrea Temple University
Health and Life Sciences	SECULARIS: Nanoscale Security based on Molecular Information for the Internet of Bio-Nano Things	Barletta Luca Milan Polytechnic	Pieroboni Massimiliano University of Nebraska-Lincoln
Health and Life Sciences	Deep-brain optical imaging of electrical activity	Silvestri Ludovico Florence University	Hong Guosong Stanford University
Health and Life Sciences	Innovative materials and techniques for dental health (IMT4DeH)	lannucci Leonardo Turin Polytechnic	Shokuhfar Tolou University of Illinois Chicago

Health and Life Sciences	POWHER: Promoting Older Worker Health for Employment Retainment	Porta Micaela Cagliari University	Nussbaum Maury A. Virginia Polytechnic Institute
Physics and Astrophysics	JetOut - Breakout, propagation, and observational signatures of short gamma-ray burst jets from binary neutron star mergers	Ciolfi Riccardo INAF	Campanelli Manuela Rochester Institute of Technology
Physics and Astrophysics	Saving quantum computers from cosmic rays	Cardani Laura INFN	Grassellino Anna Fermilab
Physics and Astrophysics	Fundamental physics and astrophysics with next generation of gravitational wave detectors	Maselli Andrea Gran Sasso Science Institute, L'Aquila	Berti Emanuele Johns Hopkins University
Physics and Astrophysics	DEFEQT - DEterministically FabricatEd Quantum emitters in Two dimensional materials	Todisco Francesco CNR-Nanotech	Suarez Forero Daniel Gustavo Joint Quantum Institute
IT and Industry (Artificial Intelligence, Advanced Materials, Autonomous Vehicles/Systems)	An Al-assisted virtual manufacturing approach to mitigate defects in advanced composites	Petrolo Marco Turin Polytechnic	Zobeiry Navid University of Washington
IT and Industry (Artificial Intelligence, Advanced Materials, Autonomous Vehicles/Systems)	SMART-AVIC: Scaled Multi-Actuated Research Testbed for Autonomous Vehicle Identification and Control	Lenzo Basilio University Padua	De Castro Ricardo University of California, Merced

Climate Change and resilience to Natural Disasters	ReefSurvAI: Towards a web-based AI infrastructure for coral reefs surveying	Gaja Pavoni CNR-ISTI	Sandin Stuart University of California, San Die
Climate Change and Resilience to Natural Disasters	Next-generation green structures for natural disaster- proof buildings	Amendola Ada University of Salerno	Ruzzene Massim University of Colorado, Boulde
Energy Transition	Study of high- temperature SUPERconductors NEeutron radiation damage for compact fusiON reactors. (SUPERNEON)	Torsello Daniele Turin Polytechnic	Hartwig Zachary MIT-PSFC
Energy Transition	Empowering Advanced Photovoltaic Pioneers	Colombara Diego University of Genoa	Friedman Gary Drexel University
Innovative Technologies for Sustainable Agriculture	REgenerative agriculture techniques assisted by proximal sensing to enhance sustainability and quality of wheat FARMing systems in Italy and USA (RE- FARM)	Oteri Marianna University of Messina	Trostle Calvin Texas A&M AgriLit Extension

## **RESERVE LIST**

SECTOR	PROJECT TITLE	ITALIAN PARTNER	U. S. PARTNER
Health and Life Sciences	Development of a melt electrowritten PCL - bone particles composite scaffold to improve osteogenesis in bone regeneration	Bucciarelli Alessio IRCCS Istituto Ortopedico Rizzoli	Bottino Marco University of Michigan
Health and Life Sciences	Personalized Skeletal Repair: Design and Manufacture of Medical Implants with Therapeutic Surface Functionalization	Ginestra Paola Serena University of Brescia	Dean David Ohio State University
Health and Life Sciences	Identification of potential new therapeutic approaches for preventing chemotherapy cardiotoxicity by exploiting single-cell RNA sequencing technologies	Ghigo Alessandra Turin University	Asnani Aarti Beth Israel Deaconess Medical Center and Harvard Medical School
Climate Change and Resilience to Natural Disasters	Climate change and dormancy: comparing and contrasting seasonal recruitment of plankton in two highly productive marine habitats	Roncalli Vittoria Anton Dohrn Zoological Station, Naples	Lenz Petra University of Hawai'i at Manoa
Energy Transition	A hybrid chemical- biological carbon capture process for carbon-neutral jet fuels production from microalgae	Barbera Elena University of Padua	Kumar Sandeep Old Dominion University