# JOINT DECLARATION AFTER THE 13<sup>th</sup> ITALY – U.S. JOINT COMMISSION MEETING ON SCIENTIFIC AND TECHNOLOGICAL COOPERATION Washington, December 7<sup>th</sup>, 2018

Pursuant to the Agreement on Scientific and Technological Cooperation between the Government of the Italian Republic and the Government of the United States of America, signed in Rome on April 1<sup>st</sup> 1988, as amended and extended on October 4<sup>th</sup> 1993, and the Joint Declaration of the 12<sup>th</sup> Joint Commission Meeting on Bilateral Cooperation, signed in Rome, on January 14<sup>th</sup>, 2016, the 13<sup>th</sup> Joint Commission Meeting was held in Washington.

#### DELEGATIONS

The Italian delegation was headed by Min. Plen. Maurizio Greganti, Deputy Chief of Mission, Embassy of Italy to the United States.

The U.S. delegation was headed by Dr. Jonathan Margolis, Acting Deputy Assistant Secretary for Science, Space, and Health in the Department of State's Bureau of Oceans and International Environmental and Scientific Affairs.

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

#### **AGENDA**

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

- 1. Review of the bilateral scientific activities carried out in the period 2016-2018
- 2. Areas of interest for both countries
- 3. Announcement of projects funded by the Italian call for proposals
- 4. Meeting of the next Joint Commission.

## 1. Review of the bilateral scientific activities carried out in the period 2016-2018

The two delegations reviewed the cooperative activities accomplished to date and expressed their satisfaction with the implementation of the projects established at the 12<sup>th</sup> Session of the Italian - U.S. Joint Commission on Scientific and Technological Cooperation, held in Rome, on January 14<sup>th</sup>, 2016.

#### 2. Areas of interest for both countries

The delegations recognized the growing importance of science and technology with respect to the economic, social and cultural relations of the two Countries. Both sides put particular emphasis on the role of international cooperation for the further development of science and technology systems in the two Countries.

The two delegations discussed the scientific subjects of highest priority for cooperation in science and technology between Italy and the United States:

- 1. Health and life sciences:
  - i) Precision medicine in oncology and related biotechnologies
  - ii) Innovative technologies for health in aging (including robotics).
- 2. Physics and Astrophysics
- 3. Resilience to natural disasters
- 4. ICT limited to advanced materials and manufacturing, cyber security, quantum communications, and smart cities (in alphabetical order).

The participating institutions for each discussion and the implementation of the activities in each area include:

For Health and Life Sciences, the involved institutions are:

In Italy: Alleanza contro il Cancro, CREA, Human Technopole, INRCA, Istituto Auxologico Italiano, ISMETT, ISS, Italian Ministry of Health, La Sapienza University of Rome, RiMED, UNIBO, UNIFE, University of Naples "Federico II", UNITO.

In the U.S.: U.S. Department of Health and Human Services (including the U.S. Food and Drug Administration and the U.S. National Institutes of Health), Johns Hopkins Bloomberg School of Public Health, North Carolina State University, Oregon Health and Science University.

For Physics and Astrophysics, the involved institutions are:

In Italy: ASI, ENEA, INAF, INFN.

In the U.S.: DOE, NASA, Naval Research Institute, New York University, NSF, Princeton University, South West Research Institute, STScI, UCLA, UC Santa Cruz.

For Resilience to natural disasters, the involved institutions are:

In Italy: ASI, CNR, ENEA, EUCENTRE, INFN, INGV, ISPRA, Italian Civil Protection, SOTACARBO, OGS.

In the U.S.: DOE, EPA, FEMA, Library of Congress, NASA, NG A, National Research Council, NOAA, NPS, NSF, USGS.

For ICT, the involved institutions are:

In Italy: Bocconi University, CNR, CNIT, ENEA, IIT, INFN, INRIM, UNIBO, University of Naples "Federico II", University of Rome Tor Vergata.

In the U.S.: AFOSR, Army Research Laboratory, Johns Hopkins University, NIST, NSF, Pennsylvania State University, Stanford University, University of California at Berkeley, University of Maryland.

In all cases, the Research Centers and the Universities are responsible for funding their scientific projects.

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

The Italian delegation announced that 18 (eighteen) 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 II.)

Furthermore, the Italian Ministry selected 5 (five) more projects, listed in Annex III, as Reserve List. Their designation as reserve informs that the projects are of the highest quality, and that agencies or research institutions are encouraged to mobilize potential resources from different sources in order to implement the projects.

The delegations believe that future calls might benefit from holding the Joint Commission Meeting prior to making an announcement soliciting projects in order to focus the proposed project topics on priorities identified by the Joint Commission.

## 4. Next Meeting of the Joint Commission

The two delegations suggested that the next session of the Joint U.S.-Italian Commission on scientific and technological cooperation should take place in Rome, Italy, in 2021.

Prior to the next meeting, the two Countries may explore additional means to exchange information on national scientific priorities and areas of potential cooperation, and exchange views in areas that might involve the broader scientific communities.

Any addition to the present document will be completed through diplomatic channels.

Signed in Washington on December 7, 2018, in duplicate, in the English language.

For the Republic of Italy

Min. Plen. Maurizio Greganti
Deputy Chief of Mission
Embassy of Italy to the United States

For the United States of America

Dr. Jonathan Margolis
Acting Deputy Assistant Secretary for
Science, Space, and Health in the
Department of State's Bureau of Oceans
and International Environmental and
Scientific Affairs
U.S. Department of State

## ANNEX I

### **DELEGATIONS**

## **Italian Delegation**

Embassy of Italy: Maurizio Greganti, Lamberto Moruzzi, Emanuele Manzitti, Ludovica Laviani, Ugo Della Croce, Stefano Lami, Marco Gilli (designated Science Attaché)

Health and Life Sciences:

Italian Ministry of Health: Giovanni Leonardi (Co-Chair)

Innovative Technologies for Health in Aging (including Robotics)

CREA: Fabio Virgili

Istituto Auxologico Italiano: Marco Stramba-Badiale

University of Bologna: Lorenzo Chiari (Theme Co-Chair)

University of Ferrara: Giuseppe Mincolelli

Precision Medicine in Oncology and related Biotechnologies

Alliance against Cancer: Ruggero De Maria (Theme Co-Chair), Giuseppe Pelicci

Human Technopole: Marco Simoni

ISS: Laura Bracci, Lucia Gabriele

Ri.MED Foundation: Alessandro Padova

"Sapienza" University of Rome: Elisabetta Ferretti

University of Naples "Federico II": Gerolama Condorelli

University of Turin: Federico Bussolino

University of Udine: Giuseppe Damante

## Physics and Astrophysics:

**INAF:** Fabrizio Capaccioni, Adriano Fontana, Giuseppina Micela, Giovanni Pareschi, Corrado Perna, Luca Valenziano, Filippo M. Zerbi

INFN: Marco Battaglieri, Andrea Celentano, Marco Contalbrigo, Raffaella De Vita, Speranza Falciano, Donatella Lucchesi, Antonio Masiero (co-Chair), Stefano Miscetti, Marco Radici, Patrizia Rossi, Mauro Taiuti, Antonio Zoccoli

#### **Resilience to Natural Disasters:**

CNR: Massimiliano Alvioli, Paola Reichenbach

Corpo Nazionale Vigili del Fuoco: Emanuele Gissi

ENEA: Gerardo De Canio, Vittorio Rosato, Anna Sytchkova

**EUCENTRE:** Fabio Germagnoli, Riccardo Pietrabissa

Gran Sasso Science Institute: Giulia Urso

**INAF:** Mauro Messerotti

**INFN:** Vania Virgili

INGV: Fabrizia Buongiorno (Co-Chair), Rita Di Giovambattista, Carlo Doglioni, Leonardo

Sagnotti

ISPRA: Andrea Fiorentino, Daniele Spizzichino, Andrea Taramelli, Emiliana Valentini

Italian Civil Protection: Chiara Cardaci

OGS: Florence Colleoni, Laura De Santis, Francesca Malfatti (remotely connected)

University of Perugia: Fernando Nardi

SOTACARBO: Alessandro Lanza, Enrico Maggio, Alberto Pettinau, Gianni Serra.

### ICT:

Bocconi University: Andrea Sommariva

CIRA: Stefania Cantoni

CNR: Luigi Ambrosio, Valentina Benfenati, Paolo De Natale, Salvatore Iannace, Luca Maiolo,

Roberto Marcialis, Emanuela Saracino, Roberto Zamboni

ENEA: Mauro Annunziato

INFN: Donatella Lucchesi, Antonio Zoccoli

**INRIM:** Filippo Levi

Italian Cluster Advanced Manufaturing: Tullio Tollio (remotely connected)

Italian Institute of Technology (IIT): Simone Collobiano

Materias: Caterina Meglio

Politecnico of Turin: Mariangela Lombardi

Scuola Superiore Sant'Anna: Massimo Bergamasco

University of Naples Federico II: Domenico Accardo, Paolo Netti, Luigi Nicolais

University of Padua: Fabrizio Dughiero

University of Rome Tor Vergata: Thomas Brown, Loredana Santo

## **U.S.** Delegation

**Department of State:** Jonathan Margolis, Constance Arvis, Jared Banks, Riju Srimal, Fernando Echavarria, Daniel Moore, Brian Nordmann, Scott Smith, Cole Donovan, Gavin Piercy

Health and Life Sciences:

Health and Human Services: Colin McIff (Co-Chair)

National Institutes of Health: George Herrfurth

Innovative Technologies for Health in Aging (including Robotics)

FDA: Leonardo Angelone

Johns Hopkins Bloomberg School of Public Health: Michelle Carlson, Jennifer Schrack

National Institute on Aging: Eleanor Simonsick (Theme Co-Chair)

North Carolina State University: Mary Ann Lila, Giuseppe Valacchi

Oregon Health and Science University: Martina Mancini

University of Mississippi: Michael Griswold (remotely connected)

Precision Medicine in Oncology and related Biotechnologies

George Mason University: Lance Liotta

Georgetown University: Giuseppe Giaccone

National Cancer Institute: Alice Chen, Richard Little, Margaret Mooney (Theme Co-Chair),

Nita Seibel

Physics and Astrophysics:

DOE/HEP: Tof Carim, Glen Crawford, Abid Patwa, Claudette Rosado-Reyes, Jim Siegrist (co-

Chair), Kathy Turner

DOE/Office of Science: Corey Cohn, Kaitlyn Schroeder-Spain

DOE/Fermilab: Brendan Casey, Nigel Lockyer, Martina Martinello, Hema Ramamoorthi

DOE/JLab: Rolf Ent, Stuart Henderson, Cynthia Keppel, Robert McKeown

DOE/Brookhaven Lab: David Asner, Berndt Mueller

ESA/STScI: Antonella Nota

NASA/GSFC: Vladimir Airapetian, Mark Clampin, Shawn D. Domagal-Goldman, Avi M.

Mandell, Robert Petre

NASA/JPL: Todd Gaier, Charles R. Lawrence

NASA/MSFC: Martin Weisskopf

Naval Research Lab: Paul Ray

New York University: Federica Bianco

NSF: Jean Cottam Allen, Pedro Marronetti, Joe Miller, Allena Opper, Randy Ruchti, Jim

Whitmore

Princeton University: Cristian Galbiati

UC Santa Cruz: David Williams

**Resilience to Natural Disasters:** 

DOE: Charles Taylor

FEMA: Jess Bratton, Amanda Smith, Chris Vaughan

Florida International University: Rita Teutonico

George Mason University: Jong-On Hahm

Library of Congress: Fenella France

NASA: Gerald Bawden

NASA/JPL: Cinzia Zuffada, Frank Webb

NGA: Barbara Berrie

National Research Council: Elizabeth Eide

NOAA: Fredrick Branski, William Murtagh

NPS: Marcy Rockman

NSF: Joe Miller

**NSF/NHERI:** Julio Ramirez (Purdue University)

**USEPA:** Katherine Buckley

USGS: Michael Blanpied, Thomas Cecere, Charles Mandeville, Alice Pennaz, Ingrid

Verstraeten (Co-Chair)

World Bank: Barbara Minguez-Garcia, Jay Newman

ICT:

AFOSR: Sofi Bin-Salamon, Misoon Mah

Army Research Laboratory: Shashi Karna

DOE: Claudette Rosado-Reyes

General Electric: Paul Hughes

General Motors: Harry Lightsey

Johns Hopkins University: Sharon Gerecht, Larry Nagahara

National Academy of Sciences: Franklin A. Carrero-Martinez

National Cancer Institute: Michael Espey

NIST: Katya Delak, Michael Garris, Christopher Greer, Amy Mahn, Adam Sedgewick, Carl

Williams

NSF: Khershed Cooper, Chenzhong Li

Pennsylvania State University: Isabella Cattadori, Sahin Ozdemir

Stanford University: Claudio Pavone

Texas A&M University: Ozden Ochoa, Zhijian Pei

University of Maryland: Wolfgang Losert, Kate O'Neill

# ANNEX II

## SELECTED SIGNIFICANT BILATERAL PROJECTS

| #    | PI ITA   | Area | INSTIT. ITA   | Title  | PI USA  | INSTIT. USA   |
|------|----------|------|---|--|---------|---|
| 6164 | CARRI'   | HLS  | Fondazione<br>SANTA LUCIA,<br>IRCCS   | Whole transcriptome<br>analysis in models of<br>extended healthy life-<br>span after spermidine<br>treatment                                     | Casero  | The Johns<br>Hopkins School<br>of Medicine                  |
| 6198 | MEDICO   | HLS  | Fondazione del<br>Piemonte per<br>l'Oncologia, FPO-<br>IRCCS  | Uncovering therapeutic vulnerabilities of aggressive transcriptional subtypes of colorectal cancer   | Draetta | University of<br>Texas MD                                   |
| 6071 | FEDERICO | HLS  | Istituto Superiore<br>di<br>Sanità_MinSalute  | Anti-cancer immunotherapy through an innovative vaccine platform based on endogenously engineered exosomes                                       | Sukumar | Johns Hopkins<br>University                                 |
| 6263 | BLANDINO | HLS  | IFO-Istituti<br>Fisioterapici<br>Ospitalieri, IRCCS   | Validation of the Next Generation Sequencing data on TP53 alterations from liquid biopsy of HNSCC patients by the Safe- Sequencing System method | Agrawal | The University<br>of Chicago<br>Medicine                    |
| 6251 | FELLI    | HLS  | Istituto Superiore<br>di Sanità -<br>Dipartimento di<br>Oncologia e<br>Medicina<br>Molecolare_<br>MinSalute | Drug resistance in metastatic melanoma: development of nanoparticles for therapeutic microRNA tumor delivery                                     | Calin   | The University<br>of Texas, MD<br>Anderson<br>Cancer Center |

| 6372 | PELICCI    | HLS | Istituto Europeo<br>di Oncologia<br>(Alleanza Contro<br>il Cancro)<br>IRCCS | Set-up of an NGS-<br>based approach for<br>the simultaneuos<br>diagnosis of cancer<br>somatic and hereditary<br>variants                      | Draetta      | MD Anderson<br>Cancer Center                               |
|------|------------|-----|---|---|--------------|--|
| 6312 | BALDASSARE | HLS | Centro di<br>Riferimento<br>Oncologico -<br>Aviano -IRCCS                   | Understanding Ovarian Cancer dissemination and chemoresistance: Opportunities to improve patients' survival                                   | Draetta      | The University<br>of Texas MD<br>Anderson<br>Cancer Center |
| 6148 | ASTI       | HLS | AUSL-IRCCS di<br>Reggio Emilia  | In vivo imaging of<br>over-expressed micro-<br>RNAs for lung cancer<br>diagnosis and<br>prognosis   | Pisaneschi   | University of<br>Texas - MD<br>Anderson<br>Cancer Center   |
| 6376 | DODARO     | HLS | ENEA  | Industrialization of a<br>99mTc production line<br>for the supply of<br>innovative generators<br>to the local market                          | Centofanti   | Perma-Fix Inc.,<br>Florida                                 |
| 6121 | DEL FELICE | HLS | UNIPD   | Prevention of falls: a synergic soft exoskeleton with integrated muscle and brain bio signals to minimize gait instability in the elderly     | Bonato       | Harvard<br>Medical School,<br>Boston                       |
| 6234 | CONVERTINO | HLS | CNR   | Scalable nano-<br>plasmonic platform for<br>differentiation and<br>drug response<br>monitoring of organ-<br>tropic metastatic<br>cancer cells | Barman       | Johns Hopkins<br>University                                |
| 6291 | CURRI      | ICT | CNR   | Multi-stacked intercalating hybrid PbS quantum dot film/graphene architectures for enhanced photodetectors                                    | Vazquez Mena | University of<br>California, San<br>Diego                  |

| 6359 | LANZI       | ICT | UNIMI                             | Software Execution<br>Environment<br>Protection (SEEP)  | Lu        | Indiana<br>University  |
|------|-------------|-----|-----------------------------------|---|-----------|--|
| 6183 | GISSI       | ND  | Min. Interno                      | WUIFI-21: High fidelity<br>computational fluid<br>dynamics modeling of<br>forest fires for<br>Wildland-Urban<br>Interface communities | McDermott | (NIST),<br>Engineering<br>Laboratory, Fire<br>research<br>division |
| 6366 | CRITTO      | ND  | Università Ca'<br>Foscari Venezia | Building ND   | Lambert   | University of<br>Virginia  |
| 6034 | BATTAGLIERI | PA  | INFN                              | A triggerless DAQ for<br>the Electron Ion<br>Collider (EIC)   | Hasell    | Massachusets Institute of Technology (M.I.T.)                      |
| 6233 | CAMPANA     | PA  | INAF                              | Searching for the electromagnetic counterparts of Gravitational Waves triggers  | Cenko     | National<br>Aeronautics and<br>Space<br>Administration             |
| 6279 | CUTINI      | РА  | INFN                              | Fermi Gamma-ray<br>Space Telescope<br>follow-up of<br>gravitational wave<br>events  | Omodei    | Hansen<br>Experimental<br>PA                                       |

**HLS**: Health and life sciences (precision medicine in oncology and related biotechnologies; innovative technologies for health in aging, including robotics).

**ICT:** ICT (limited to advanced materials and manufacturing, smart cities, cyber security and quantum communications)

ND: Resilience to natural disasters PA: Physics and Astrophysics

## **ANNEX III**

## RESERVE LIST

| 6157 | TOSI       | HLS | UNIMORE                | Nanomedicine for<br>BBB-crossing in CNS<br>oncologic<br>pathologies                            | Prud'homme | Princeton<br>University                                 |
|------|------------|-----|------------------------|--|------------|---|
| 6314 | FRESI      | ICT | CNIT, Parma            | ENabling quantum<br>crYptoGraphy over<br>standard optical<br>coMmunicAtion<br>systems (ENYGMA) | Mondin     | California<br>State<br>University,<br>Los Angeles       |
| 6129 | SARGOLINI  | ND  | Università<br>Camerino | RE-LAND, REsilient<br>LANDscapes   | Stewart    | University of<br>California Los<br>Angeles              |
| 6320 | FALCONIERI | PA  | ENEA                   | Low-wavenumber<br>femtosecond<br>coherent Raman<br>spectrometer                                | Kulatilaka | TAMU-Texas<br>A&M<br>University                         |
| 6181 | TOMASI     | PA  | UNIMI                  | Next-generation<br>simulation of CMB<br>experiments  | Borrill    | L.Berkeley<br>Natl Lab<br>(University of<br>California) |

**HLS**: Health and life sciences (precision medicine in oncology and related biotechnologies; innovative technologies for health in aging including robotics).

ICT: ICT (limited to advanced materials and manufacturing, cyber security, quantum communications, and smart cities)

**ND:** Resilience to natural disasters

PA: Physics and Astrophysics