

## **U.S.-BRAZIL JOINT STATEMENT (JULY 21, 2006)**

Representatives from the United States of America and the Federative Republic of Brazil convened the first U.S.-Brazil Joint Commission Meeting on Scientific and Technological Cooperation (JCM) on July 21, 2006, at the National Academy of Sciences in Washington, D.C.

The JCM took place in accordance with Article 8 of the 1984 Agreement on Science and Technology between the United States and Brazil, as amended and extended in 1994; and, as directed by Presidents Bush and Lula in their joint statement issued on the occasion of their meeting in November 2005 in Brasilia.

Dr. John H. Marburger III, Science Adviser to the President and Director of the Office of Science and Technology Policy, chaired the meeting for the United States. Dr. Luis Manuel Rebelo Fernandes, Deputy Minister of Science and Technology, chaired for Brazil. The meeting included delegates representing ministries and agencies involved with science and technology in each of the two nations. (A list of both delegations is included in Appendix I.)

The JCM acknowledged with appreciation the results of the Brazil-U.S. Technical Workshop in Rio de Janeiro April 24-26, 2006, and discussed a wide range of current scientific and technological topics and policies of each country.

The Commission urged the various governmental agencies and research institutions in both countries to continue the existing cooperative initiatives and develop new initiatives as appropriate. Both sides agreed that bilateral cooperation in science and technology yields significant benefits to the United States and Brazil and also plays an important role in addressing the global challenges common to all people.

The JCM also recognized the positive ongoing collaboration between the United States and Brazil on the Common Agenda on the Environment. In conjunction with the JCM, the United States and Brazil signed renewals of the Implementing Arrangement for cooperation on Environmental Scientific Research in the Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) between NASA and the National Institute for Amazonian Research (INPA), and the Biological Determinants of Forest Fragment Project (BDFFP) under the Technical/Scientific and Financial Cooperation Agreement between the Smithsonian Institution and the Brazilian Ministry of Science and Technology (MCT).

The next JCM will be held in Brazil at a mutually agreeable time. This JCM identified the following areas as ones that show the greatest potential to advance collaboration in areas of mutual interest and reviewed key science and technology issues and priorities for both countries.

### **Earth Sciences**

The JCM recognized that the Government of Brazil and the Government of the United States agreed to engage in dialogue to pursue further discussions for cooperation in the Earth Sciences. Both sides welcomed additional dialogue in order to enhance opportunities to address areas of mutual interest such as geologic reference materials; special topics of geophysics;

mercury behavior in different environments; development of environmentally sound practices to rehabilitate mined areas; and monitoring of fluvial sediments. The JCM noted capacity building workshops and scientific exchanges as possible avenues towards accomplishing these objectives.

### **Earth Observation**

The JCM acknowledged the robust character of the ongoing cooperation between the United States and Brazil in the area of Earth Observation. It recognized that, as members of the Executive Committee of the Group on Earth Observations (GEO), both Brazil and the United States are leaders in Earth Observation. As such, the JCM endorsed the need to enhance cooperation and data exchange for Earth Observation. Key areas of cooperation include satellite data reception and dissemination, based on a public data policy; Earth Observation space projects, including satellites, ground systems, and applications; regional cooperation through the Earth Observation Partnership of the Americas (EOPA), focusing on data distribution and capacity-building for Western Hemisphere countries; weather and climate forecasting, including through the Pilot Research Moored Array in the Tropical Atlantic (PIRATA) network and LBA; and continuity of moderate-resolution space-based land observation, satellite navigation signals and Global Positioning System (GPS) applications. The JCM underscored the need for cooperation on scientific and climate research activities associated with the International Polar Year.

### **Public Health and Biomedical and Behavioral Research**

The JCM expressed continued satisfaction with the collaboration between U.S. and Brazilian scientists in biomedical and behavioral research and public health matters. It endorsed continued collaboration, including joint training of researchers, and enhanced discussions to deepen the understanding of the ethical and regulatory policies in both countries. The JCM noted that research on both communicable and non-infectious diseases is an essential area for future work, including emerging, re-emerging and vector-transmitted infectious diseases.

The JCM noted that areas for future research should concentrate on avian and pandemic influenza; drug discovery and vaccine development; chronic illnesses (including cardiovascular diseases); regeneration medicine; bioinformatics, genomics and proteomics; and regulatory and bioethical aspects of research (clinical trials and approval of new products). The JCM reiterated its support for capacity building and training of scientists and researchers; for the conduct of clinical research and clinical research training; enhanced data base management of epidemiological information; and the further integration of best practices in public-health efforts and patient care.

### **Bioinformatics**

The JCM acknowledged that, in recent years, the Brazilian S&T community has greatly expanded its infrastructure for computational methods in the life sciences. The JCM recognized that bioinformatics systems are fundamentally changing investigative procedures and categorization of scientific discoveries. Noting the influence of cyber-infrastructure, as well as regional advances in bioinformatics, both governments announced that they plan to convene a meeting in Brazil in November 2006 to address research issues in bioinformatics. As part of the

Global Dialogues on Emerging Science and Technology (GDEST), this conference intends to bring together leading scientists in the hemisphere and discuss ways to attract students to the field. Finally, GDEST plans to establish a regular framework for existing and future collaboration between the two countries in bioinformatics.

### **Measurement Standards and Technology**

The U.S.-Brazil JCM acknowledged the long history of cooperation between the United States and Brazil in the area of the measurement sciences. The JCM confirmed the importance of cooperation in the fields of metrology and standards and welcomed the report on the activities agreed to by the National Institute for Standards and Technology (NIST) and the National Institute of Metrology (INMETRO) under the Science and Technology Agreement between the Government of Brazil and the Government of the United States and under the U.S.-Brazil Commercial Dialogue in measurement standards. It noted the mutually agreed desire for future collaboration in the areas of nanoscale science, postdoctoral exchanges, and measurement standards in high-priority areas such as biofuels and nano-materials.

The JCM recognized and encouraged expanded cooperation in standards and metrology activities that impact innovation and competitiveness and support economic growth and development, including in nanotechnology and biofuels.

### **Information and Communication Technologies**

The JCM acknowledged the importance of vibrant bilateral cooperative research, development, and educational activities in key enabling science and engineering areas such as information and communication technologies, given the critical role that they play in modern society. The JCM recognized that U.S. and Brazilian agencies should enhance their cooperation in the areas of cyberinfrastructure; information and communication; and systems-optimization-and-control science and engineering. The JCM also recognized that cyberinfrastructure can be used to facilitate cooperative research and education in many areas through virtual communities and shared networked resources.

### **Basic Science and Engineering Research and Education**

The JCM recognized the importance of basic science and engineering research and education to the economic development of both countries and the well-being of their citizens. Both sides agreed on the need to expose students to research experiences in a global context so that they can work with their peers in other countries, and understood that new and existing mechanisms to promote bilateral collaboration offer opportunities for advancing collaboration and development of human resources. Both sides also supported opportunities for multilateral exchanges through, inter alia, the Pan American Advanced Study Institutes (PASI), the Inter-American Materials Collaboration (CIAM), and the Partnerships for International Science and Engineering (PIRE) programs.

The JCM recognized that cyberinfrastructure-enabled science and education are currently changing the way science is done and that they have the potential to offer new ways in which researchers and educators can collaborate bilaterally, regionally, and worldwide. It also

recognized that fruitful collaboration produces benefits that flow to all parties. The JCM encouraged researcher exchanges between the two countries.

## **Energy**

The JCM heard the U.S. Department of Energy (DOE) present its major energy science and technology priorities, programs and goals, including the new goals set by the Advanced Energy Initiative and the American Competitiveness Initiative. The JCM also welcomed a DOE discussion on the formation and work under the multilateral next generation clean energy initiatives including the International Partnership for the Hydrogen Economy and the Carbon Sequestration Leadership Forum.

The JCM discussed potential new areas of cooperation and/or information exchanges such as hydrogen and biofuels. The JCM proposed a lengthier discussion and a more thorough examination of energy science and technology cooperation to be held at the next U.S.-Brazil Energy Working Group meeting scheduled in Brazil.

## **Agricultural Research**

The JCM recognized that the United States and Brazil have a substantial history of mutually beneficial agricultural collaboration, and took note of the Memorandum of Understanding to encourage cooperation on agricultural research topics of mutual interest signed in 1995. The JCM applauded the work of Labex, the virtual laboratory created in April 1998 through a specific trust agreement between Embrapa and the Agricultural Research Service (ARS), recognizing that it has been an important area of collaboration. The JCM reaffirmed the objectives of Labex: to improve agricultural research cooperation between U.S. and Brazilian institutions and to capitalize on opportunities and research trends with potential benefits for agriculture and sustainable development in both countries.

On the issue of animal and plant health, new agricultural products, and functional genomics, the JCM discussed potential collaborative research and noted that further discussions should involve appropriate U.S. agencies and their Brazilian counterparts to identify specific areas of mutual and strategic interest. On plant and animal genetic resources, the JCM encouraged an exchange of genetic materials for conservation and pledged to develop and share the second version of the genetic resources information network. The JCM noted other potential areas for collaboration, including a project to develop a tool for predicting and calculating soil carbon stock changes and soil carbon sequestration potential, as well as linking the GRACenet (Greenhouse Gas Reduction through Agricultural Carbon Enhancement network database) with a similar Brazilian database, Agrogases.

Both sides recognized that bioenergy was a research subject of mutual benefit. The JCM recognized the April 26, 2006, creation of Embrapa Agroenergia, which will be the basis of Embrapa's new network of decentralized research units. The JCM also heard the announcement of the establishment of the National Agroenergy Consortium, which will be coordinated by the Ministry of Agriculture. Working with the private sector, the consortium intends to organize and encourage research into, and the production of, alcohol fuel and biodiesel. The JCM acknowledged that both sides are interested in further exploring mutually interested agricultural research areas for bioenergy collaboration.

## **Creation of Working Groups**

The JCM endorsed the creation of a working group on public health to address, inter alia, renewing the Implementing Arrangement to the S&T Agreement regarding public health and biomedical research which expired in 2003; identifying ongoing research issues of common interest for possible joint support; sharing information on regulatory issues related to medical research; and discussing grant-processing procedures. The agenda, work plan, and participation in Working Groups will be decided by mutual agreement and reported through diplomatic channels.

Other working groups should be established as mutually agreed, to pursue work on the areas mentioned in this report. The agenda, work plan, and participation in new Working Groups will be decided by mutual agreement and reported through diplomatic channels.