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**ISTPCanada Announces 10 Joint Science and Technology Initiatives Between Canadian and Indian Companies Valued at More than \$17 Million**

*New research partnership initiative with Department of Biotechnology in India also launched*

**Ottawa, Ontario – June 15, 2008 – International Science and Technology Partnerships Canada Inc. (ISTPCanada)** today announced 10 joint research and development (R&D) initiatives involving Canadian and India companies and researchers valued at more than \$17 million.

Eight of the initiatives are joint research projects while the other two initiatives are Partnership Development Activities (PDA). ISTPCanada's PDA initiatives foster joint activities aimed at generating new or expanded research and technology-based partnerships between countries and may include such activities as scientific seminars, conferences, symposia and workshops, and activities that involve exchanges of scientists, technical experts and academics.

All the projects are co-funded by the federal government's International Science and Technology Partnerships Program, which is delivered through ISTPCanada and its counterpart in India, the Global Innovation and Technology Alliance (GITA). ISTPCanada and its Canadian Partners are awarding \$3.82 million to co-fund the Canadian side of these projects. The remaining funding is provided by India and the companies involved.

The Honourable David Emerson, Minister of Foreign Affairs & International Trade and Minister for the Pacific Gateway and the Vancouver-Whistler Olympics, today made the federal government announcement in Toronto with the Honourable Kapil Sibal, Union Minister of Science & Technology and Earth Sciences for India.

"Our government understands the importance of establishing international research partners and the critical role science and technology plays in the new economy," said Minister Emerson. "These joint projects will enhance the collaboration between our scientists and commercialize their discoveries."

“ISTPCanada’s mission is to build productive partnerships and today’s announcement is the result of close collaboration between officials in Canada and India,” added Henri Rothschild, President and Chief Executive Officer of ISTPCanada. “We are grateful that both governments have made science and technology a priority and we know that these agreements will result in clear and measurable economic benefits for both sides. Indeed, it is a fundamental characteristic of technology cooperation that it delivers true positive-sum outputs both socially and economically.

Mr. Rothschild further said, “I am pleased to announce that ISTPCanada will be following up this current award with a forthcoming call for proposals which unite ISTPCanada and Department of Biotechnology (DBT), Government of India to seek out the support of Indo-Canada R&D partnership in the life sciences and give special attention to next generation technologies that reflect multidisciplinary approaches including ICT, Optics, Material Sciences and nanotechnology”

The 10 joint initiatives announced today will lead to an increase of commercially-viable research and development initiatives, and contribute to the organization of scientific seminars, conferences and workshops, Rothschild said. Details of the eight research projects are:

***An Intelligent System for Aboveground Storage Tank Bottom Assessment:***

This project will develop and apply technology to use acoustic emission monitoring to provide a quantitative methodology for integrating acoustic emission into the tank bottom maintenance management program for the oil and gas industry. A major area of concern of the oil and gas industry in India and Canada is to assess the condition of AST bottoms or floors. Aboveground Storage Tanks (ASTs) can contain large quantities of dangerous materials whose release can have major consequences. Tank bottom (or floor) inspection is a special case. The sides and roof can be conveniently inspected with conventional nondestructive methods and releases are readily detectable. Tank floors are less accessible and evidence of release remains largely hidden from view until the extent of the release is large. The resulting technology will minimize the dependence on specialized inspectors; make it easier to train inspectors to a rigorous inspection and interpretation protocol; and provide consistent and reliable interpretations and recommendations of the status of tank floors. This project is led by **Tisec Inc** (Montréal, Quebec) with the National Metallurgical Laboratory, Material Science & Technology Division, Council of Scientific & Industrial Research, Jamshedpur, India.

***In Situ Repair of Ocular Tissues to Restore or Improve Sight:***

According to the WHO, corneal damage is the second leading cause of blindness worldwide behind cataracts with a very high proportion of these occurring outside the developed world. Treatment in most cases is the transplantation of a human donor cornea, which worldwide are in very short supply. For example, in India alone it is estimated that the demand exceed the supply by a factor of 10. This project’s proposed solution will be new bio-mimetic materials that affect repair by seamlessly integrating into the host tissue. The innovation is a novel method for making local repairs to the cornea, in the same manner that dental amalgam is used for fillings. However, unlike dental amalgam, which is

merely biocompatible and robust filler, the project plans to reproduce the natural properties of the cornea by inducing tissue repair and regeneration. This project is led by **Evasight Instrument Inc.** (Ottawa, Ontario), in partnership with **University of Ottawa Eye Institute** with the L.V. Prasad Eye Institute, Reddy Campus LV (Hyderabad) in partnership with Polymer Tech Intl., India.

***Mobile Asset Application to achieve Pollution Control:***

The project proposes to deliver the technology for creating an economically-viable solution for setting up the framework of intelligent transportation systems which manages traffic by understanding the use and capacity, without corresponding increase in investment in road infrastructure. This will lead to saving of transit time, reduced emissions, and reduced dependency on fossil fuels. The core proposal is for carrying out research based on the platform of having to (retro fit) attach one specially-designed passive commercial transponder (RFID Tag) to every vehicle capable of carrying significant, safe, secure and accurate information pertaining to the vehicle itself, including but not limited to its identity. The information collected would be used to manage transportation flows on highways and roads. If the proposed system is implemented, and it leads to reduction of fossil fuel use by 10 per cent, the corresponding value delivery would be of the order of US \$ 220 billion and the corresponding reduction in greenhouse gases could be of the order of 4,800 Teragrams of carbon. This project is led by **McMaster RFID Applications Laboratory** (Hamilton, Ontario), in partnership with **IPICO Inc.** (Burlington, Ontario) and the Indian Institute of Technology, New Delhi in partnership with **Strategic Consultants**, New Delhi, India.

***Design and Development of an Aircraft Integrated Development Environment Tool for a New Generation Regional Transport Aircraft:***

This project focuses on the design and development of an Aircraft Integrated Development Environment (AIDE). It will provide state-of-the-art modeling and simulation technologies to prototype and validate design concepts. This AIDE will provide a common modeling and simulation environment that will allow the integration and communication among different designers, system models and software. It also supports the integration of simulation models with actual aircraft equipment and test rigs. The same modeling and simulation environment can be used in all phases of development starting from concept, definition, development, integration and certification. The objective is to enable an efficient modeling and simulation infrastructure that maximizes the reuse of simulation models across multiple test platforms. As an initial use, the AIDE will be used in the design and development a new-generation regional transport aircraft (RTA-70) that is cheaper to acquire and operate and that is independent of expensive airport infrastructure and instrumentation. This project is led by **CAE Inc.** (Saint Laurent, Quebec) with the National Aerospace Laboratories, Kodihalli, Bangalore, Karnataka in partnership with **Macmet Technologies**, India.

***Next Generation of Interoperable GeoPortal (iGP) Solution for the emerging Spatial Data Infrastructure (SDI) market:***

The main objective of this project is to design, implement and deliver a commercial interoperable Geo-Portal (iGP) product that allows SDI developers to build geo-processing applications and deploy SDI solutions within their enterprise. A key issue with existing technology is the lack of portability among hardware and software platforms. A key design objective is to develop an iGP architecture and product that will allow SDI developers to develop and use geo-processing applications that can be easily transported across computer platforms and Portal products from different Portal product vendors. This project is led by **CubeWerx Inc.** (Gatineau, Quebec) with **Infotech Enterprises Ltd.**, Andhra Pradesh, India.

### ***Rapid Diagnostics to improve Animal Health:***

The goal of this project is to develop a simple diagnostic device using lateral flow technology (similar to an over-the-counter pregnancy test) to allow producers to test for bovine pathogens at the biological sample point (e.g. at the feedlot or farm). Due to the social and economic importance of cattle in Canada and India, the project will initially focus on developing diagnostic tests for diseases affecting cattle and dairy producers. Two proposed initial targets are bovine respiratory disease (BRD) and mastitis. The availability of the decision point diagnostic will allow both Canadian and Indian cattle and dairy producers to monitor their herd health and appropriately treat cattle at the first sign of infection. Ultimately, this will increase livestock productivity and associated social welfare. This project is led by **Vaccine and Infectious Disease Organization (VIDO)**, **University of Saskatchewan** (Saskatoon, SK), in partnership with **Safeguard Biosystems Inc.** (Toronto, Ontario) and BAIF Development Research Foundation, Warje, Pune in partnership with **Vetnex Livestock & Canine Business, RFCL Ltd.**, New Delhi, India.

### ***Application of Biofuels for Aviation:***

This project brings together industry and academic groups from India and Canada to work on the development of biofuels suitable for use in aircraft gas turbine engines. These biofuels will be developed from feedstocks specific to India and Canada and will be selected based on sustainability of supply and potential for "Green House Gas" (GHG) emissions reductions. The result will be greener sources of aircraft fuel that can be developed in Canada and India. This project is led by **Pratt & Whitney Canada Corp.** (Longueuil, Quebec), and has the following partners: **McGill University** (Montréal, Quebec), **National Research Council** (Ottawa, Ontario), **Ryerson University** (Toronto, Ontario), and **Université Laval** (Laval, Quebec) and Infotech Enterprises Ltd., Hyderabad, Andhra Pradesh, India along with HPCL, Indian Oil, Indian Institute of Science, Indian Institute of Petroleum, Indian Institute of Technology (Kanpur).

### ***Indigenization of Broadband over Power Line Technology to Connect Adjoining Villages in India using Existing Power Lines:***

The objective of this research and development project will be to develop Broadband over Power Line technology (BPL) to suit Indian conditions such that the technology can be deployed for large scale use. This technology will deliver multi-fold benefit to India. While the power utilities can use the intelligent grid for efficient power distribution management, the same infrastructure can be used for connecting rural India to the internet world at a significantly reduced investment on infrastructure and can be deployed significantly quicker than other technologies. India is at a very crucial juncture of growth and development. While the economy is growing at a brisk pace, there is a significant gap in the availability of infrastructure for sustaining this growth momentum. At this juncture, India needs to embrace all such technologies that can add capacity in all dimensions quickly and yet within the available limited resources. Broadband over Power Lines is a technology that will transform the way India is able to keep up with the demand for connecting rural India with the mainstream economy and develop another market for Canadian technology. This project is led by **Corinex Communications** (Vancouver B.C.) with Indian Institute of Information Technology (Allahabad) in partnership with Maple Leaf India Pvt Limited, New Delhi, India.