

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:6444
ANSWERED ON:06.05.2015
COLLABORATION WITH CANADA IN HEALTH INNOVATION
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether the Government has entered into any collaboration with Canada in Health Innovation Sector;
- (b) if so, details thereof and the benefits accrued from the said collaboration ; and
- (c) the steps taken by the Government in this regard?

Answer

MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (Y.S. CHOWDARY)

(a) Yes, Madam. Under the overall agreement signed between Government of India and Government of Canada in the area of Science and Technology on November 18, 2005, Department of Biotechnology, Ministry of Science & Technology and International Science and Technology Partnerships, Canada (ISTP, Canada), a non- governmental organization have agreed to foster joint international programmes in the area of health biotechnology.

Department of Biotechnology has also signed a Programme of Cooperation (PoC) with Grand Challenges, Canada (GCC) on 24th February, 2014 to address health and development needs. GCC is a not-for-profit organization handed by the Government of Canada.

(b) and (c) Three joint call for proposals have been announced jointly with ISTP and eight proposals have been funded. Joint call for proposals for Partnership Development Activities (PDAs) was announced with ISTP in 2010 to generate new or expand existing research and health technology-based partnerships between two countries and five PDAs have been funded from both sides.

As regards the benefits accrued from the collaboration, the following technologies have been developed and are in various stages of validation and have the potential for commercialization.

(i) In the ongoing project "PET-MRI Automatic Tumour Detection and Recognition", development team from SoftTeam,India & A.U.G Signals, Canada along with clinical partners SickKids, Canada, CMC,India and KMH/India have successfully completed a software product to automatically and non-invasively detect and recognize tumours with greater precision using PET and MRI images. Currently, the developed product is being validated.

(ii) In a joint project being carried out in University of Toronto and ICGEB, Delhi with LifeCare Pvt. Ltd as partners, 2 antimalarial drugs have been developed, joint patents for which have been filed. Toxicology studies on the formulations of the potential drugs are underway. The results obtained through this joint Indo-Canada effort is a stepping stone to drug development and conducting regulatory studies. The project has been extended to Phase II for a period of two years.

(iii) DNA Barcoding based Herbal Authentication System Developed in the joint project being implemented at University of Agricultural Sciences, Bangalore which allows to detect purity / authenticity of herbal products; and 60-80% adulteration in raw herbal drug trade has been detected using the DNA barcoding system.

Besides that, the following are the two international patent applications filed are under process:

Mohammed, A.; Malhotra, A.; Mundra, S.; Rathore, S.; Kotra, L. P. Antimalarial agents. US Provisional application Filed May, 2013. This patent application captures the novel inhibitors targeting ClpP, a plasmodial enzyme, for potential treatment of malaria.
Kotra, L. P.; Mohammed, A.; Malhotra, A.; Chakka, S. K.; Wei, L. Antimalarial! agents. US Provisional application# 61/821,278, Filed May 9, 2013. This patent application captures the novel inhibitors targeting falcipain-2, a plasmodial protease, for potential treatment of malaria.