

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

UNSTARRED QUESTION NO:3021  
ANSWERED ON:29.08.2013  
ACADEMICS AND INDUSTRY INTERFACE  
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**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

- (a) Whether any plan / action has been undertaken by the Government to strengthen the academics and industry interface in science ;
- (b) If so, the details thereof;
- (c) whether several large scale science projects are being undertaken at various national institutes; and
- (d) If so, the details thereof ?

**Answer**

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (SHRI S. JAIPAL REDDY)

(a)&(b) Government has undertaken several programmes / schemes under various departments to strengthen the academics and industry interface in science. The programmes of some of the key government departments/institutions which engage Universities/IITs, R&D institutions and industry are listed below:

- No. Department /Organisation Scheme / Programme
1. Department of Scientific & Industrial Research # Under section 35(2AA) of IT Act, corporate industries are eligible to claim 200% tax deduction for sponsored scientific research projects in national laboratories, universities and IITs  
# Patent Acquisition, Collaborative Research and Technology Development  
# Open Source Drug Discovery (OSDD)
  2. Council of Scientific & Industrial Research Programme New Millennium Indian Technology Leadership Initiative
  3. Department of Science & Technology Drugs & Pharmaceuticals Research Programme
  4. Department of Biotechnology # Biotechnology Industry Partnership Programme  
# Small Business Innovation Research Initiative  
# Contract Research Scheme
  5. Indian Council of Medical Research Programme for development of TB Diagnostics Research & H1N1 Vaccines
  6. Indian Space Research Organisation RESPOND (Sponsored Research and Development Programme in the area of space technology)
  7. Ministry of New and Renewable Energy Programme for Research, Design and Development in New and Renewable Energy

(c)&(d) Several Large Scale Science Projects are being undertaken at several national institutes and R&D organizations with the support of government departments. These include:

Department of Scientific and Industrial Research (DSIR)

# DSIR/CSIR has operationalized Scientific Entrepreneurship Policy with the approval of government which is a national effort to enable researchers to have an equity stake in scientific enterprises and spin-offs while still being employed in their organizations. This will help them to derive the commercial benefits from their inventions and patents. Under the policy, CSIR scientists have spun off two companies namely:

# Tridiagonal Solutions Pvt. Ltd. develops products and solutions by harnessing power of computational modeling to enhance effectiveness and efficiency of industrial processes. The company has sites in Pune and San Antonio; and

# Vyome Biosciences Pvt. Ltd. is focused on developing best class drugs for Dermatology care exploiting modern Functional

Genomics, Biotechnology, Medicinal & Polymer Chemistry and Nanotechnology.

# Council of Scientific and Industrial Research (CSIR) launched Open Source Drug Discovery (OSDD) Programme, focused at Tuberculosis, has emerged as a new platform for innovation in the domain of affordable healthcare. This CSIR-led 'Team India' consortium with global partnership has more than 4500 researchers from over 100 countries as registered participants.

# CSIR's Solar Energy Initiative – Technologies and Products for Solar energy Utilization through Networks (TAPSUN) has been conceptualized as a mega programme in partnership with Ministry of New and Renewable Energy (MNRE). It is being implemented with a number of complimentary approaches. The programme has created networks of research institutes, academia and industry with an objective to integrate various components of technology development. The programme will play a transformational role in bringing the benefits of solar energy to the people of India.

# CSIR has allowed mobility of scientists between CSIR, academia and industry. This measure is aimed at providing scientists exposure to different working environments and forging collaboration with industry.

# CSIR laboratories are allowing "Knowledge Alliance" with private industry to forge desired partnership for development of knowledge based products.

#### Department of Atomic Energy (DAE)

- # Indus Synchrotrons at Raja Ramanna Centre for Advanced Technology, Indore;
- # Variable Energy Cyclotron, Super Conducting Cyclotron and Radioactive Ion Beam at Variable Energy Cyclotron Centre, Kolkata;
- # Low Energy High Intensity Proton Accelerator and Electron Beam Centre at Bhabha Atomic Research Centre, Mumbai;
- # High Energy Physics and Detectors at CERN in Switzerland;
- # India based Neutrino Observatory in Theni Dist., Madurai, Tamilnadu; and
- # Facility for Anti Proton Ion Research at Darmstadt, Germany.

#### Indian Space Research Organisation (ISRO)

- # ASTROSAT – a multi wavelength observatory in Space;
- # Chandrayaan-2 – a unmanned mission to Moon with Lander and rover for in-situ investigations of lunar surface;
- # ADITYA for studies on Heliphsysics; and
- # Mars Orbiter Mission – A technology demonstration mission for reaching the Martian orbit and conduct few scientific experiments.

#### Defence Research and Development Organisation (DRDO)

- # Programme on Advanced Materials at Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore;
- # Transdisciplinary shock wave research and applications programme at Indian Institute of Science, Bangalore; and
- # DRDO has also established Centres of Excellence at Indian Statistical Institute (ISI), Kolkata for Cryptology, University of Hyderabad for High Energy Materials, Defence Institute of Advanced Technology (DIAT), Pune for Nanotechnology and Indian Institute of Technology Madras for Research & Innovation to undertake large scale science projects.

#### Ministry of New and Renewable Energy (MNRE)

MNRE has established three Test Centres in the area of improved biomass cook stoves at CSIR - Institute of Minerals Materials Technology, Bhubaneshwar, Indian Institute of Technology, Delhi and Maharana Pratap University of Agriculture Technology, Udaipur.

#### Indian Council of Medical Research (ICMR)

ICMR is supporting three large scale science projects on Phase-III Clinical Trial with an Intravasal Injectable Male Contraceptive – RISUG, Effect of Non- ionizing Electro Magnetic Field (EMF) on Human Health and Drug Discovery and Development in Reproductive Health at institutions such as All India Institute of Medical Sciences, New Delhi, Jawaharlal Nehru University, New Delhi, Lok Nayak Jai Prakash Hospital, New Delhi and CSIR - Central Drug Research Institute, Lucknow.