

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

LOK SABHA
UNSTARRED QUESTION NO.5669
TO BE ANSWERED ON 06/04/2022

Theme Based Institutions

5669. SHRI ASADUDDIN OWAISI:

Will the Minister of SCIENCE AND TECHNOLOGY

विज्ञान और प्रौद्योगिकी मंत्री

be pleased to state:

(a) whether the department of Biotechnology has established 15 theme based autonomous institutions across the country to develop all aspects of biotechnology and if so, the details thereof;

(b) whether the Government has started other schemes to attract Indian origin scientists abroad to return home;

(c) if so, the reverse brain drain seen by the Government so far; and

(d) the other steps taken/being taken by the Government to develop all aspects of biotechnology in the country with the help of private sector?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) OF SCIENCE & TECHNOLOGY
AND EARTH SCIENCES

(DR. JITENDRA SINGH)

विज्ञान और प्रौद्योगिकी तथा पृथ्वी विज्ञान के राज्य मंत्री (स्वतंत्र प्रभार)
(डॉ. जितेन्द्र सिंह)

(a) Yes. The Department of Biotechnology, Ministry of Science and Technology, Government of India, has established 15 theme based autonomous institutions. The names of the institutions are as follows:

1. National Institute for Plant Genome Research (NIPGR), New Delhi
2. National Institute of Immunology (NII), New Delhi
3. Regional Center of Biotechnology (RCB), Faridabad, Haryana
4. Translational Health Science and Technology Institute (THSTI), Faridabad, Haryana
5. National Centre for Cell Science (NCCS), Pune, Maharashtra
6. National Brain Research Centre (NBRC), Manesar, Haryana
7. Center for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad, Telangana
8. Institute of Life Sciences (ILS), Bhubaneswar, Odisha
9. Institute of Bioresources and Sustainable Development (IBSD), Imphal, Manipur
10. Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram, Kerala
11. Institute for Stem Cell Science and Regenerative Medicine (inStem), Bangaluru, Karnataka
12. National Institute of Biomedical Genomics (NIBMG), Kalyani, West Bengal
13. National Agri-Food Biotechnology Institute (NABI), Mohali, Punjab
14. National Institute of Animal Biotechnology (NIAB), Hyderabad, Telangana
15. Center of Innovative and Applied Bioprocessing (CIAB), Mohali, Punjab

The details of the individual institutions is at the Annexure-I

(b) & (c) Yes. The Ministry of Science & Technology, Government of India has started following schemes to attract Indian origin scientists abroad to return home:

Ramalingaswami Re-entry Fellowship

Department of Biotechnology started Ramalingaswami Re-entry Fellowship in 2006-07 to attract high-quality Indian scientists working abroad to pursue their research interests in life sciences, biotechnology and other related areas by providing them

with an attractive avenue to pursue their R&D interests in Indian institutions. The aim of the scheme is to create a pool of highly skilled and trained researchers working on cutting edge technologies in Indian institutions, and make them available for the absorption in the Indian academic and scientific organisations. Currently DBT provides 75 fellowships / year, and total 547 fellows have been supported by the Department under this program since inception.

Biomedical Research Career Programme (BRCP)

This scheme was initiated by Department of Biotechnology and provides opportunity to early, intermediate and senior level researchers to establish their research & academic career in biomedical or clinical & public health in India. These fellowships are open to all eligible researchers from abroad who wish to relocate to India as well as to researchers in India. Total 141 fellows have been supported under the BRCP since the inception of the programme. More than 90% of the supported fellows have continued to stay back in India after completion of fellowships by taking up positions in Research, Academia and Industry.

Ramanujan Fellowship

Ramanujan Fellowship of Science and Engineering Research Board (SERB) an autonomous body under Department of Science and Technology, Government of India, aims to attract Indian scientists and engineers working abroad to take up scientific research positions in India. The scheme supports research work in all areas of Science and Technology. A total of 455 fellows have been supported under this program since inception.

In addition to above, the other schemes to retain the trained manpower in the country include the SERB-National Post-Doctoral Fellowship (N-PDF), which aims to

identify motivated young researchers and provide them support for doing research in frontier areas of science and engineering. Also, the Start-up Research Grant (SRG) scheme of SERB, MK Bhan-Young Research Fellowship Program and Research Associate programs of DBT aims to assist researchers to initiate their career in Indian institutions.

(d) Biotechnology Industry Research Assistance Council (BIRAC), a Public Sector Undertaking (PSU) of the Department of Biotechnology, through its Public Private Partnership (PPP) program support development of all aspects biotechnology including innovation ecosystem..The major thematic areas supported by BIRAC under PPP program include Devices and Diagnostics, Drugs & Drug Delivery, Biopharmaceuticals, Regenerative Medicine, Stem cells, Vaccines, & Clinical trials, Energy, Environment and Secondary Agriculture, Agriculture, and Veterinary Sciences and Aquaculture.

The BIRAC supports private as well as public institutions for various activities to develop all aspects of biotechnology including funding support, incubation and pre-incubation support, networks & facilitation, intellectual property & regulatory facilitation, validation and pilot testing at clinical sites, workshops, technical trainings, and investor connects, implementation of national missions-Make-in-India (MII) and Startup India for biotech sectors.

1. National Institute for Plant Genome Research (NIPGR), New Delhi

The NIPGR is engaged in the development of material, knowledge and technologies in the areas of functional, structural, evolutionary and applied genomics of plants, including crop plants. The Institute is mandated to undertake, promote and coordinate research, train workers and to serve as information resource in identified aspects of plant genomics.

2. National Institute of Immunology (NII), New Delhi

The promotion of research in basic and applied immunology forms a central mandate of the NII. The institute aims to provide immunological solutions to the many diseases that are primarily prevalent in India by focussing its research on Inflammation and Immunology, Pathogen Biology, Cancer Biology, Aging and Metabolic Diseases, Structural and Computational Biology, etc.

3. Regional Center of Biotechnology (RCB), Faridabad, Haryana

The RCB is an Institution of National Importance established by the Department of Biotechnology, under the aegis of UNESCO with a mandate to impart education and training, and conduct research in the frontier areas of biotechnology.

4. Translational Health Science and Technology Institute (THSTI), Faridabad, Haryana

The THSTI is engaged in cutting edge research in many areas of public health importance which include mother & child health, tuberculosis, dengue, SARS CoV-2, autoimmune diseases, non-alcoholic fatty liver diseases, pregnancy and its outcomes, coordination / monitoring/ supervising clinical trials.

5. National Centre for Cell Science (NCCS), Pune, Maharashtra

The NCCS research is mainly focussed in the area of cancer biology, immunology, structural biology, bioinformatics and omics, microbiology and infectious disease,

regenerative medicine and neuroscience. The institute also has facility of cryopreservation and distribution of quality cell cultures/lines and cell repository which has provided over 55000 cell cultures to over 550 academic and research institutions across India.

6. National Brain Research Centre (NBRC), Manesar, Haryana

The mandate of NBRC is to pursue research to understand brain function in health and disease, generate trained human resources to carry out interdisciplinary research in neuroscience, and promote neuroscience in India through networking among institutions across the country. NBRC is a Deemed to be University and conducts M.Sc. and Ph.D. programs besides other post-graduate and post-doctoral training programs to generate trained human resources.

7. Center for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad, Telangana

The mission of the CDFD is to carry out scientific research, services and training; to achieve global excellence in fundamental and applied research; and simultaneously endeavour to transfer the benefits of modern biology to every section of society. The main objectives of CDFD are to provide DNA fingerprinting services to the judiciary and to law enforcing agencies, to establish DNA diagnostics methods for detecting genetic disorders, to use DNA fingerprinting techniques for authentication of plant species (e.g. basmati rice), and to undertake basic, applied and developmental R&D work.

8. Institute of Life Sciences (ILS), Bhubaneswar, Odisha

The institute carries out research in the four major fields related to human health i.e. cancer biology, infectious disease biology, genetic and autoimmune diseases, and plant and microbial biotechnology.

9. Institute of Bioresources and Sustainable Development (IBSD), Imphal, Manipur

The institute focuses its research and development activities in the areas of plant resources, microorganisms, traditional foods, and animal resources for various application in phytopharma drug development, nutraceuticals in the North East region of India. In addition to its headquarter at Imphal, Manipur, IBSD has regional centre at Gangtok, Sikkim and two nodes at Aizawl, Mizoram and Shilong, Meghalaya for outreach activities.

10. Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram, Kerala

The RGCB has mandate of studying disease biology and carry out basic to translational research. The institute has proven track record in the areas of vaccine trails, drug trials, and biomarker applications in disease or diagnostic development. The primary focus of the institute is cancer research by drug discovery and clinical studies on common cancers of India including oral cancer, cervical, colon and breast cancers.

11. Institute for Stem Cell Science and Regenerative Medicine (inStem), Bangaluru, Karnataka

inStem is India's first stem cell institute committed to accelerating advances in stem cell biology & regeneration to understanding various diseases. The institute's research and development activities are mainly focused on building core strengths in area of stem cell. The institute also has developed an elaborate 'Gene therapy program' at Center for Stem Cell Research (CSCR), located at CMC, Vellore.

12. National Institute of Biomedical Genomics (NIBMG), Kalyani, West Bengal

The NIBMG is explicitly devoted to research, training, translation & service, and capacity-building in Biomedical Genomics. The research focus of the institute is to understand the molecular basis of disease using genomics and integrative biology, as well as functionalization of genomic leads.

13. National Agri-Food Biotechnology Institute (NABI), Mohali, Punjab

This institute aims to foster the transformation of agri-food sector in India and to provide food and nutritional security for all through agri-food biotechnology research and innovation. It works towards improving nutritional quality and availability of affordable food products through sustainable and novel solutions.

14. National Institute of Animal Biotechnology (NIAB), Hyderabad, Telangana

The NIAB was established with the mandate of “Animal health for human welfare”. The major objectives of the institute are to undertake basic and applied research towards technology and product development, provide incubation facilities for start-up companies, develop human resource and promote Intellectual Property (IP) development, collaborative research with both National & International partners, contribute to the national policy formulation for animal Biotechnology/

15. Center of Innovative and Applied Bioprocessing (CIAB), Mohali, Punjab

The CIAB is the unique institute in the country which works mainly on Secondary Agriculture and development of value added commercial products from different types of bio-resources. It has the mandate on R&D innovations, technology development and transfer to entrepreneurs.
