GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF SCIENCE & TECHNOLOGY
LOK SABHA
STARRED QUESTION NO.62
TO BE ANSWERED ON 05/02/2021

PATENT APPLICATIONS FOR NEW INVENTIONS

62. SHRI RAMCHARAN BOHRA

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री **be pleased to state:**

(a) the number of patent applications filed for new inventions by Indian Scientists in comparison to the scientists in other developed/developing countries during the last three years; and

(b) the steps taken by the Government to address the issue of slow progress rate in the field of research and development in the country?

ANSWER

MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES (DR. HARSH VARDHAN)
स्वास्थ्य और परिवार कल्याण मंत्री, विज्ञान और प्रौद्योगिकी मंत्री और पृथ्वी विज्ञान मंत्री (डॉ .हर्षवर्धन)

(a) & (b): A statement is laid on the Table of the House.

STATEMENT AS REFERRED IN REPLY TO PARTS (a) and (b) OF LOK SABHA STARRED QUESTION NO. 62 FOR 05/02/2021 REGARDING PATENT APPLICATIONS FOR NEW INVENTIONS

(a) As per data available from World Intellectual Property Organization's (WIPO), IP Statistics, released on January 5, 2021, India ranks 8th in patent filed by resident Scientists/Innovators from respective country. Country-wise data pertaining to patents filed by resident researchers/ scientists/ innovators at top 10 patent offices in last three years, including India, is given below:

Year			2017	2018	2019	Growth in 2019 from 2018
Country of Origin	Origin (Code)	Type				
China	CN	Resident	1245709	1393815	1243568	-10.8%
United States of America	US	Resident	293904	285095	285113	+0.006%
Japan	JP	Resident	260292	253630	245372	-3.2%
Republic of Korea	KR	Resident	159084	162561	171603	+5.6%
European Patent Office	EP	Resident	78555	81565	82584	+1.2%
Germany	DE	Resident	73345	73333	73448	+0.16%
Russian Federation	RU	Resident	23115	25333	23764	-6.2%
India	IN	Resident	14961	16289	19454	+19.4%
Australia	AU	Resident	2503	2757	2637	-4.4%
Canada	CA	Resident	4053	4349	4238	-2.5%

Source: WIPO statistics database. Last updated: January 2021 (accessed on January 27, 2021)

(b) No Sir. The progress in recent past has not been slow. The Gross expenditure on R&D (GERD), in the country has been consistently increasing over the years and has been tripled in last 10 years. The Ministry of Science and technology through its three wings i.e. Department of Science Technology (DST), Department of Biotechnology (DBT) and Department of Scientific and Industrial Research (DSIR)/ Council of Scientific and Industrial Research (CSIR) is implementing various schemes and programmes. These initiatives not only promote Science, Technology and Innovation (STI) ecosystem in the country but also reach out to various cross sections of the society through support in

- Research& Development
- Human Capacity Building
- Innovation, Technology, Development and Deployment for Socio Economic Development

Together a vast network of 70 Institutes across the country working in niche research areas of Science & Technology (S&T) has been created.

Some of the noteworthy schemes and programmes of the Ministry are

- Fund for Improvement of S&T Infrastructure (FIST)
- Sophisticated Analytical Instrument Facilities (SAIF)
- Intensification of Research in High Priority Areas (IRHPA)
- Innovation in Science Pursuit for Inspired Research (INSPIRE)
- Women Scientist Scheme (WOS) and Biotechnology Career Advancement & Reorientation Programme (BioCARE)
- Technology Business Incubators (TBI)
- National Initiative for Development and Harnessing Innovations (NIDHI)
- Technology Mission Initiative
- State Science and Technology Programme (SSTP)
- Science and Society Programme (SSP)
- Tribal Sub Plan (TSP)
- Scheduled Caste Sub Plan (SCSP)
- Mission Programme on Characterization of Genetic Resources
- National Mission on Interdisciplinary Cyber-physical Systems

Due to implementation of these schemes and programmes:

- India ranks 3rd in the No. of PhD degrees awarded (24,474) in Science and Engineering.
- India ranks 3rd in terms of No. of papers published as per National Science Foundation (NSF) database with 1,35,788 publication in Science and Engineering (2018).
- Our gender participation in R&D has increase to 16.6% (as per R&D statistics 2019-20) from 13.9 % (as per R&D Statistics 2017-18).
- No. of researchers per 1 million have increased to 255 in 2017 as compared to 110 in 2015.
- Numerous state of art research facilities have been created across country in more than 600 academic Institutes and PG College benefitting more than 1 lakh researchers.
- More than 14 lakhs school students were engaged under INSPIRE program.
- More than 45,000 scholarship /fellowship were given under INSPIRE, CSIR-NET and HRD Schemes of DBT.
- More than 2,500 young scientists were supported under National Postdoctoral Fellowships, INSPIRE Faculty Programme and Scheme for Young Scientists and Technologists (SYST).
- More than 50 accomplished overseas scientists have been identified for collaborative research visits under Visiting Advanced Joint Research (VAJRA) programme.
- Four STI Hubs for tribal population and & seven STI hubs for SC Population have been established for socio-economic development of disadvantaged section of the society.

- More than 150 Technology Business Incubators (TBI), 50 Bio-incubators, nearly 3800 entrepreneurs were supported under Innovation and Entrepreneurship development programmes of DST & DBT and it has generated more than 60,000 jobs in last five years.

Apart from the achievements mentioned above this year the during the budget announcement Government has allocated of Rs 50,000 crore over 5 years for the

National Research Foundation (NRF) and autonomous body envisaged to support researchers working across several streams of S&T especially in Universities. Besides this Rs 4000 crore was allocated for Deep Ocean Mission over five years.

These significant efforts have accelerated the progress of R&D in the country tremendously which is evident from the no. of publications, patents and PhDs awarded.

****