

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION NO.5532  
TO BE ANSWERED ON 26/7/2019**

**RECORDED INNOVATIONS IN SCIENCE AND TECHNOLOGY**

**5532. SHRI RAVNEET SINGH BITTU:**

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

- (a) the details of the funds allocated for Research and Development during the year 2013-14 and utilised so far, institutionwise;**
- (b) the number of innovations recorded during the last five years, year and fieldwise;**
- (c) whether the research institutions in the country are unable to provide adequate facilities and competent faculty to train young brains to undertake innovations in the field of science and technology;**
- (d) if so, the details thereof and the reasons therefor; and**
- (e) the steps being taken/proposed to be taken by the Government to scale up innovations in the field of science and technology 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. हर्ष वर्धन**

- (a) The details of the funds allocated to Research & Development Institutes of Ministry of Science and Technology for Research and Development during the year 2013-14 and their utilization, institution-wise, are given at ANNEXURE-I.**
- (b) Patents are the exclusive rights granted for new innovations. Patents applied reflects innovations recorded. As per Annual Report 2017-18, 'Office of Controller General of Patent, Design and Trademarks' the trends in last five years in respect of patent applications are shown below:-**

<b>Year</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>
<b>Patent Applications registered</b>	<b>42,951</b>	<b>42,763</b>	<b>46,904</b>	<b>45,444</b>	<b>47,854</b>

Similarly, Patent applications (innovations) filed by Council of Scientific and Industrial Research (CSIR) laboratories during last 5 years in different fields are given below:

CSIR Patent applications filed in India during last 5 years					
	2014-15	2015-16	2016-17	2017-18	2018-19
Biological Science	24	28	21	27	25
Chemical Science	192	171	131	89	117
Drug & Pharma	67	58	34	24	33
Engineering	27	63	37	28	29
Others	2	7	5	3	5
<b>Total</b>	<b>312</b>	<b>327</b>	<b>228</b>	<b>171</b>	<b>209</b>

(c) & (d): No Sir. The Public Funded Research Institutions and Autonomous Institutes under the administrative control of the Ministry of Science and Technology have excellent research facilities and highly competent faculty, researchers and technologists. These institutions are continuously engaged in training of young scientists, engineers and entrepreneurs to undertake S&T related innovations in a number of incubators and research parks established across the country and many of these youngsters have successfully launched a number of promising start-ups.

National Innovation Foundation(NIF), an autonomous Institute under Ministry of Science and Technology provides adequate facilities and competent faculty to train young brains to undertake innovations in the field of Science and Technology. The interns from Engineering Colleges, Business Schools, Design Institutes and students from other courses and Institutes take up internship opportunities at NIF. NIF also facilitates mentoring of students by leading Technical Institutes of the country for students who have been successful at the State Level Exhibitions and Project Competitions.

(e) Government has taken up various steps to scale up innovations in the field of science and technology. National Initiative for Development and Harnessing Innovations(NIDHI) is an umbrella program conceived and developed by the Department of Science & Technology, Government of India, for nurturing ideas and innovations (knowledge-based and technology-driven) into successful start-ups. One of the key programmes under NIDHI is establishing Technology Business Incubators (TBIs) as an institutional mechanism at various institutions of higher learning. TBIs provide requisite infrastructure, facilities and value added services to nurture innovative ideas in the field of Science & Technology through incubation of start-ups. Under NIDHI-PRAYAS (Promoting & Accelerating Young and Aspiring Innovators & Start-ups) program, financial support of upto Rs.10 lakhs is provided to convert Science & Technology led innovative ideas into prototype. In addition, few TBI's are also supported to provide the seed support to its start-ups under incubation for scaling up innovations in the field of science & technology.

National Research Development Corporation is managing a program viz. 'Programme for Inspiring Inventors & Innovators (PIII)' for supporting and scaling up innovations in the field of S&T in the country. Major activities undertaken are awarding innovations, setting up of Innovation Facilitation Centres, Seed funding innovations and setting up of Incubation Centres.

CSIR launched Mission Mode Projects (MMPs) in order to put concerted and sustained efforts in an identified area by synergizing the best competencies available in various CSIR labs and outside institutions. The combined and time targeted efforts will enable CSIR to cross threshold of intellectual barrier in order to deliver scientific, industrial and social goods. Within MMPs, each project will have clearly defined objectives, scopes, and implementation timelines and milestones, as well as measurable outcomes and service levels.

**ANNEXURE-I**

S. No.	Name of the Institution	(Rs. in Lakhs)	
		Amount	
		Funds released 2013-14	Funds utilized 2013-14
1.	Agharkar Research Institute, Pune, Maharashtra	1206.90	1206.90
(1)	(2)	(3)	(4)
2.	Aryabhatta Research Institute of Observational Sciences, Nainital, Uttarakhand	2300.00	2300.00
3.	BirbalSahni Institute of Palaeobotany, Lucknow, Uttar Pradesh	2648.25	2648.25
4.	Bose Institute, Kolkata, West Bengal	5904.45	5904.45
5.	Centre for Nano and Soft Matter Sciences, Bengaluru, Karnataka	560.00	375.37
6.	Indian Association for the Cultivation of Science, Kolkata, West Bengal	5847.04	5828.93
7.	Indian Institute of Astrophysics, Bengaluru, Karnataka	4977.00	4858.15
8.	Indian Institute of Geomagnetism, Navi Mumbai, Maharashtra	2515.80	2515.80
9.	Institute of Advanced Study in Science & Technology, Guwahati, Assam	1596.00	1596.00
10.	International Advanced Research Centre for Powder Metallurgy and New Materials, Hyderabad, Telangana	4783.00	4778.44
11.	Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru, Karnataka	5500.00	5500.00
12.	Raman Research Institute, Bengaluru, Karnataka	3299.75	3299.75
13.	S.N. Bose National Centre for Basic Sciences, Kolkata, West Bengal	2920.20	2916.83
14.	SreeChitraTirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala	9106.98	9106.98
15.	Wadia Institute of Himalayan Geology, Dehradun, Uttarakhand	3292.50	3103.89
16.	Institute of Nano Science & Technology, Mohali, Punjab	450.00	450.00
17.	National Institute of Immunology, New Delhi	4715.00	4715.00
18.	National Centre for Cell Science, Pune, Maharashtra	2600.00	2600.00
19.	Centre for DNA Finger Printing and Diagnostics, Hyderabad, Telangana	3400.00	3399.98
20.	National Brain Research Centre, Gurgaon, Haryana	50.00	50.00
21.	National Institute for Plant Genome Research, New Delhi	2300.00	2300.00
22.	Institute of Bioresources and Sustainable Development, Imphal, Manipur	2109.06	2109.06
23.	Institute of Life Sciences, Bhubaneswar, Odisha	2210.00	2210.00
24.	Translational Health Science & Technology Institute, Faridabad, Haryana	3700.00	3700.00
25.	Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala	2350.00	2350.00
26.	National Institute of Biomedical Genomics, Kalyani, West Bengal	4200.00	4200.00
27.	UNESCO Regional Centre for Education and Training, Faridabad, Haryana	4140.00	4140.00
28.	National Agri-Food Biotechnology Institute & Bioprocessing Unit, Mohali, Punjab	2010.00	2010.00
29.	Institute for Stem Cell Research and Regenerative Medicine, Bengaluru, Karnataka	5500.00	5500.00
30.	National Institute of Animal Biotechnology, Hyderabad, Telangana	1800.00	1800.00
31.	International Centre for Genetic Engineering & Biotechnology, New Delhi	1300.00	1300.00
32.	Centre of Innovative and Applied Bioprocessing, Mohali, Punjab	700.00	700.00
33.	Advanced Materials & Process Research Institute, Bhopal, Madhya Pradesh	1878.10	1878.10

(1)	(2)	(3)	(4)
34.	Central Building Research Institute, Roorkee, Uttrakhand	3943.70	3943.70
35.	Central Drug Research Institute, Lucknow, Uttar Pradesh	13412.60	13412.60
36.	Central Electrochemical Research Institute, Karaikudi, Tamil Nadu	8318.40	8318.40
37.	Central Electronics Engineering Research Institute, Pilani, Rajasthan	7594.90	7594.90
38.	Central Food Technological Research Institute, Mysore, Karnataka	9243.30	9243.30
39.	Central Glass & Ceramic Research Institute, Kolkata, West Bengal	9504.20	9504.20
40.	Central Institute of Medicinal and Aromatic Plants, Lucknow, Uttar Pradesh	4701.90	4701.90
41.	Central Institute of Mining & Fuel Research, Dhanbad, Jharkhand	5518.60	5518.60
42.	Central Leather Research Institute, Chennai, Tamil Nadu	8110.80	8110.80
43.	Central Mechanical Engineering Research Institute, Durgapur, West Bengal	7863.40	7863.40
44.	Central Road Research Institute, New Delhi	4529.00	4529.00
45.	Central Salt & Marine Chemicals Research Institute, Bhavnagar, Gujarat	5070.40	5070.40
46.	Central Scientific Instruments Organisation, Chandigarh	6896.80	6896.80
47.	Centre for Cellular & Molecular Biology, Hyderabad, Telangana	10379.10	10379.10
48.	Central Scientific & Industrial Research, Madras Complex, Tamil Nadu	1033.90	1033.90
49.	Human Resource Development Centre, Ghaziabad, Uttar Pradesh	1129.20	1129.20
50.	Indian Institute of Integrative Medicine, Jammu, Jammu & Kashmir	8290.70	8290.70
51.	Indian Institute of Chemical Biology, Kolkata, West Bengal	9604.80	9604.80
52.	Indian Institute of Chemical Technology, Hyderabad, Telangana	16583.50	16583.50
53.	Indian Institute of Petroleum, Dehradun, Uttarakhand	6047.20	6047.20
54.	Indian Institute of Toxicology Research, Lucknow, Uttar Pradesh	4227.80	4227.80
55.	Institute of Genomics & Integrative Biology, Delhi	9054.70	9054.70
56.	Institute of Himalayan Bioresource Technology, Palampur, Himachal Pradesh	3380.30	3380.30
57.	Institute of Microbial Technology, Chandigarh	5062.60	5062.60
58.	Institute of Minerals & Materials Technology, Bhubaneswar, Odisha	5528.80	5528.80
59.	National Aerospace Laboratories, Bengaluru, Karnataka	19122.40	19122.40
60.	National Botanical Research Institute, Lucknow, Uttar Pradesh	6742.20	6742.20
61.	National Chemical Laboratory, Pune, Maharashtra	16083.50	16083.50
62.	National Environment Engineering Research Institute, Nagpur, Maharashtra	3455.10	3455.10
63.	National Geophysical Research Institute, Hyderabad, Telangana	8383.30	8383.30
64.	National Institute of Interdisciplinary Science and Technology, Thiruvananthapuram, Kerala	5727.50	5727.50
65.	National Institute of Oceanography, Dona Paula, Goa	13188.20	13188.20
66.	National Institute of Science Communication and Information Resources, New Delhi	5711.80	5711.80
67.	National Institute of Science, Technology and Development Studies, New Delhi	1486.40	1486.40
68.	National Metallurgical Laboratory, Jamshedpur, Jharkhand	6099.30	6099.30
69.	National Physical Laboratory, New Delhi	15541.70	15541.70
70.	North East Institute of Science & Technology, Jorhat, Assam	6556.20	6556.20
71.	Structural Engineering Research Centre, Chennai, Tamil Nadu	5826.80	5826.80

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