

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION No. 4060  
ANSWERED ON 19/03/2021**

**EFFORTS TO PROMOTE BASIC SCIENCES**

**4060. DR. ARVIND KUMAR SHARMA:**

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

- (a) whether India is lagging behind in promoting basic sciences as compared to developed countries;
- (b) if so, the details thereof; and
- (c) the details of the concrete efforts thought of and proposed to be made by the Government to fill the gap?

**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) to (c): India does not lag behind in promoting basic sciences as compared to developed countries. The Government has been constantly engaged in promoting basic sciences in the country through various measures such as successive increase in plan allocations for scientific departments, setting up of institutions for science education and research, creation of Centres of Excellence and Facilities in emerging and front-line areas of Science & Technology (S&T), supporting Mega Facilities for Basic Research, launching of new schemes and fellowships. As per National Science Foundation (NSF), USA 2020, in terms of scientific publication, which is a primary outcome indicator of basic science research, India ranked 3<sup>rd</sup> in 2018 as compared to 6<sup>th</sup> in 2014. This indicates that India is ranked ahead of many developed and developing countries including BRICS except China. India has witnessed significant increase in research output from 74,143 in 2011 to 1,35,788 in 2018 as per NSF database. India's growth rate of scientific publication as per the NSF database was 10.7% as against the world average of 3.8% during 2008-18.

The Department of Science and Technology (DST) including its statutory body, Science and Engineering Research Board (SERB) has been implementing several schemes and programmes such as Fund for Improvement of S&T Infrastructure (FIST), Sophisticated Analytical Instrument Facilities (SAIF), Nano Mission, Innovation in Science Pursuit for Inspired Research (INSPIRE), Women Scientist Scheme (WOS), Core Research Grant (CRG), Intensification of Research in High Priority Areas (IRHPA), Start-Up Research Grant, National Postdoctoral Fellowship, Research fellowships such as JC Bose and Swarnajayanti etc. to elevate the basic research in country to higher levels. Department of Biotechnology (DBT) has been promoting basic research in Modern Biology, as a separate programme to create a knowledge driven biotech sector and constantly supporting basic research projects in life sciences at various institutions/

**organizations for understanding the fundamental biological processes/ mechanisms of cellular biology as well as their application for the benefits of the mankind. The Council of Scientific and Industrial Research (CSIR) is also promoting fundamental research across all its constituent laboratories. CSIR is implementing basic research in specific categories such as CSIR-Fundamental & Innovative Research in Science of Tomorrow (CSIR-FIRST) and Focussed Basic Research and Niche Creating Projects.**

**In elevating the quality of basic research, the Ministry has constantly been introducing new schemes and programmes to address and attend changing needs of S&T landscape. This includes institution of schemes like SERB-SUPRA (Scientific and Useful Profound Research Advancement) which looks for projects beyond normal core research and purposefully designed for high quality proposals consisting of new hypothesis or challenge existing ones, and provide 'out-of-box' solutions. DBT is planning to establish multiple DBT-Partnership Centres in basic research in leading Institutes/ Universities of India in a Hub and Spoke model wherein top ranking institutes/ universities will act as Hub and its nearby institutes may act as Spokes to ensure capacity and infrastructure building in terms of basic research at these institutions.**

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