GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO. 3132
ANSWERED ON 11/03/2026

HIGH-IMPACT RESEARCH AREAS

3132. DR. K SUDHAKAR:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the details of progress made after the first Governing Board meeting of Anusandhan National Research Foundation (ANRF);

(b) the details of the grants awarded and high-impact research areas supported;

(c) whether the Department has assessed innovation ecosystem boost and proposes additional missions; and

(d) if so, the details thereof?

ANSWER
MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) to (b): Prime Minister Shri Narendra Modi chaired the first meeting of the Governing Board of Anusandhan National Research Foundation (ANRF) on 10th September, 2024. The meeting focussed on discussion about India's Science and Technology landscape and redesigning of research and development programmes. The board discussed several areas of strategic interventions of ANRF which include India's international status in important sectors, aligning R&D with national priorities, promoting inclusive growth, capacity building, driving scientific advances and innovation ecosystem, as well as bridging the gap between academic research and industrial applications. The major programs initiated by ANRF since its inceptions are given below:-

- **Mission for Advancement in High-impact Areas (MAHA) program of ANRF addresses priority-driven, solution-focused research in mission-mode that would catalyse multi-institutional, multi-disciplinary and multi-investigator collaboration to address scientific challenges and advance the frontiers of technology in key scientific areas. So far, ANRF has identified and launched Electric Vehicle (EV) Mission, 2D Innovation Hub, MedTech Mission, AI for Science and Engineering and**

CRM Research Program as the priority areas of focus under MAHA program.

- **Several broad-based programs like Advanced Research Grant (ARG), Prime Minister Early Career Research Grant (PMECRG), Inclusivity Research Grant (IRG) launched by ANRF to providing financial assistance to researchers and scientists in academic institutions in order to create supportive environment for doing research in frontier areas of science and engineering all across the country.**
- **Convergence Research Centres of Excellence (CoE) to establish "convergence" research Centres of Excellence (CoEs) launched by ANRF to undertake cutting edge, innovative and impactful research at the interface of Science, Technology, Humanities, Social Sciences and Society. These Centres will address complex societal challenges that require integrated perspectives from both technical and social sciences/humanities domains.**
- **ANRF launched Centre of Excellence for Science, Technology and Innovation Indicators and Analytics (COE-STIIA) with the aim to strengthen the institutional mechanism for STI indicators with an end-to-end system. The key objective is to enhance the quality, contextual relevance and applicability of India's STI indicators, their analysis, interpretations and dissemination of information and insights at various levels of policy and program planning, as well as foster alignment with the global indicator frameworks to position India effectively in international indices.**
- **ANRF launched PAIR (Partnerships for Accelerated Innovation and Research) program which is designed to boost the research capability of those institutions including State Universities where research is at a nascent stage but which have the potential to perform well, in a mentorship mode by pairing them with well-established top-tier research institutions in a hub and spoke framework.**
- **The ANRF Translational Research and Innovation (ATRI) initiative will bring together all key stakeholders to channelise the expertise and resources for unlocking the tremendous innovation potential. Under this initiative, ANRF will establish ATRI centres to provide targeted support for advancing potential technologies from TRL 4 to TRL 7, thereby strengthening the innovation pipeline from lab to market.**
- **ANRF has launched National Post-Doctoral Fellowship (NPDF) program to support young researchers after finishing Ph.D. which is effective to retain them in the country. ANRF launched Ramanujan Fellowship to attract brilliant scientists and engineers of Indian origin working abroad to return and take up scientific research positions in India.**

- **The ANRF has launched programs such as the National Science Chair, JC Bose Grant and Prime Minister Professorship programs to recognise eminent senior scientists for their outstanding contributions at both national and international levels. These initiatives also aim to leverage the expertise of scientists and faculty from reputed academic institutions, research laboratories and industry.**

The details of the grants awarded in high-impact areas are given below:

Sr. No.	Project Title	Institute Name	Total Cost (₹ in Crore)
1	Development and Demonstration of Materials and Fabrication Technologies for Tropical Batteries	International Advanced Research Centre For Powder Metallurgy And New Materials (Arci), Hyderabad	68.38
2	Te-MobiX: Safe and Degradation-controlled Batteries with Efficient Charging for Tropical e-Mobility Excellence	Indian Institute Of Technology (Banaras Hindu University), Varanasi	47.77
3	Grid Readiness for EV: Enablers and Technological developments (GREET)	Indian Institute Of Technology Kanpur	47.45
4	Empowering Research in Indigenous Development of EV Sub-systems (E-RIDES)	Indian Institute Of Technology Bombay	56.56
5	Development of high-power Grid-friendly Conductive and Static Wireless Chargers for Electric Vehicles	Indian Institute Of Technology Kharagpur	18.37
6	Rare Earth Magnet-Free Axial Flux Synchronous, Radial Flux Switched Reluctance Motor and their Controllers for EV Applications	National Institute Of Technology Karnataka, Surathkal	7.76
7	Development of wide-bandgap semiconductors based highly efficient power electronics systems for Electric Vehicle	Csir-Central Electronics Engineering Research Institute(Csir-Ceeri), Pilani	18.41

(c) to (d): The Department has launched several mission-mode initiatives to strengthen the innovation ecosystem and promote high-impact research in emerging technology areas. The National Quantum Mission (NQM), approved by the Union Cabinet with an outlay of ₹6003.65 crore for a period of eight years, aims to support research and development in quantum computing, quantum communication, quantum sensing and quantum materials.

Under the Mission, four Thematic Hubs have been established in September 2024: Quantum Computing at the Indian Institute of Science (IISc), Bengaluru; Quantum Communication at the Indian Institute of Technology (IIT) Madras in association with C-DOT; Quantum Sensing & Metrology at IIT Bombay; and Quantum Materials & Devices at IIT Delhi. These Hubs are undertaking activities in technology development, human resource development, entrepreneurship development and industry collaboration, as well as international collaborations, to strengthen the quantum innovation ecosystem in the country.

The National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) supports the development of Cyber-Physical Systems technologies through a network of Technology Innovation Hubs (TIHs) across academic institutions, focusing on areas such as AI, robotics, autonomous systems, smart manufacturing and advanced communication technologies.

In addition, the Anusandhan National Research Foundation (ANRF) has initiated several mission-mode programmes, including Drones, Water, 6G and Leapfrog Demonstrators, to promote solution-oriented and translational research in priority technology areas.

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