

Special Call for Proposals for Establishment of ICMR Centre for Advanced Research (CAR) for the Development of Priority Medical Devices and Diagnostic Technologies

**INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR), Medical Device and Diagnostic Mission
Secretariat (MDMS), Division of Development Research, New Delhi**

1. Background

The Indian Council of Medical Research (ICMR), the apex body in India for the formulation, coordination and promotion of biomedical research, established in 1911, is one of the oldest medical research bodies in the world. ICMR has been actively fostering biomedical innovation through translational research, technology development, validation, and strategic partnerships aimed at addressing national healthcare priorities.

ICMR has launched several initiatives to expedite national advancements in medical technology translation—which have successfully driven numerous technologies from conceptualization to securing formal Test Licenses, regulation compliant clinical evaluation leading to Manufacturing Licenses. Building upon these advancements, ICMR is launching a mission-mode initiative for the establishment of Centres for Advanced Research under its Extramural Research Programme. These CARs will focus on the development of priority medical devices and diagnostic technologies addressing unmet clinical needs identified by ICMR through extensive stakeholder consultations. The initiative seeks to promote the development of affordable, accessible, and indigenous healthcare technologies of national public health relevance for wider public benefit and long-term self-reliance in the MedTech sector. The priority medical devices and diagnostic technologies have been identified through a rigorous exercise involving eminent clinicians in different clinical settings across the country including clinicians from tier-1, tier-2 & tier-3 cities, resulting in a curated list of ~100 priority unmet clinical need based medical device/diagnostic technologies. The priority list of technologies is placed at Annexure-I.

2. Vision

To establish a robust national network of Centres for Advanced Research among the selected applicants from the top 25 premier institutions as designated by the National Institutional Ranking Framework (NIRF) 2025 for the rapid development of regulatory-compliant indigenous medical device and diagnostic technologies of national importance, addressing unmet clinical needs and strengthening India's MedTech ecosystem.

3. Objective

To select and support investigator-initiated Centres for Advanced Research proposals from top 25 NIRF ranked institutions for accelerated development of multiple high-quality, regulatory-compliant medical devices and diagnostic technologies addressing unmet clinical needs, from the published ICMR-curated list of ~100 priority technologies.

4. Scope

Applicants must select and propose the development of at least 8 to 10 technologies (a mixed bag of low-risk and high-risk technologies) from the ICMR ~100 Priority Technologies List (Annexure I).

Infrastructure: Implementation of the proposals must leverage existing infrastructure. Funding is restricted to product development; no grants will be provided for new infrastructure development, while specific upgradation of existing infrastructure to meet the proposed technology development needs may be permitted with appropriate justification.

5. Eligibility Criteria

This call is strictly restricted to the investigators from nation's top 25 premier institutions as designated by the National Institutional Ranking Framework (NIRF) 2025, under the Overall Category (Annexure II). Eligible applicants must be regular faculty members of the engineering and technological institutions that possess a distinguished and verifiable track record in advanced research, innovation, and product development. Beyond academic excellence, participating institutions must demonstrate robust capabilities in translating conceptual frameworks into tangible technologies, evidenced by a documented history of successful commercial prototyping, patent commercialization, technology transfers, or the active incubation of deep-tech startups.

6. How to Apply

A proposal can be submitted for financial support through ONLINE MODE ONLY by the Principal Investigator, with a regular employment in the **Top 25 Institutes as per NIRF Ranking 2025 in the Overall Category (Annexure II)**. The proposed team should be of scientists/ professionals preferably from the **Top 25 Institutes as per NIRF Ranking 2025 in the Overall Category**, with credentials for relevant skills, experience and demonstrated ability to solve health problems under consideration. Research teams with outstanding achievements, recognition and proven excellence in the area and having the necessary infrastructure to carry out further work are encouraged to apply. The institute and principal investigator will be supported to establish CAR with an aim that the facility / ecosystem so created would continue to function and deliver even after this funding gets over. CAR should develop / lead to strengthening of the workforce of trained health technology research personnel. After completion of the project, the host institute would be expected to take over activities of the center as permanent activity.

7. Implementation Guidelines & Evaluation Preferences

To maximize the probability of successful commercialization within the 5-year CAR timeframe, the evaluation committee will apply the following preferences during the selection process:

1. Institutional Expertise: Preference will be given to the Institutions of National repute with established start-up ecosystem, demonstrating a proven track record and prior experience in development and commercialization of medical devices and diagnostics.
2. Technology Readiness Level (TRL): Preference will be given to proposals where the applicant is already working on functional prototypes at TRL 3 or TRL 4 (or above) for the chosen list of technologies (Annexure-I).

8. Budget and Financial Guidelines

Total Budget Limit: The maximum funding for a single CAR is ₹15 Crore for a duration of up to 5 years. The budget must be strictly formulated under the standard ICMR extramural funding heads following ICMR Extramural Research guidelines.

9. Submission Process & Format

Full proposal must be submitted electronically via the ICMR e-PMS portal as per ICMR Extramural guidelines. Please refer to:

https://www.icmr.gov.in/icmrobject/custom_data/1720159244_guidelines_for_extramural_research_programme.pdf for template for full proposal submission.

- i. Submission portal (<https://epms.icmr.org.in/>) will open from 07th October 2026.
- ii. After completing mandatory section of PI profile, go to **Proposal Submission** → Click on **'Apply Proposal'** → Select *"Special Call for Proposals for Establishment of ICMR Centre for Advanced Research (CAR) for the Development of Priority Medical Devices and Diagnostic Technologies"* from the dropdown → Click on **'Apply New Proposal'** and fill the form step by step.
- iii. Kindly ensure that all sections are adequately filled with the necessary details.
- iv. Inclusion of at least one Co-PI from PI's institute is mandatory.
- v. PIs are advised to submit proposal well ahead of the last date, since servers may be overloaded and slow to respond.

For any query related to the call, please mail to the addresses given below; other modes of communication won't be entertained.

For Technical Queries (e-PMS Portal Issues): po.epms@icmr.gov.in

For Scientific Queries (Proposal related): Dr Harpreet Singh Pawar, harpreet.pawar@icmr.gov.in

10. Tentative Timelines

Milestone	Expected Date
Release of Call for proposal	01 st October 2026
Start Date for Submission of Full Proposals	07 th October 2026
Last Date for Submission of Full Proposals	13 th November 2026, 17:00hrs
Review and Final Selection	15 th December 2026

Annexure I

List of Priority Technologies for Development

S. No	Technology Name
1	High Intensity Focused Ultrasound (HIFU)
2	Cavitron Ultrasound
3	Colposcope and Ablation Device
4	AI-based Digital Pathology & Slide Scanner
5	Handheld Portable OCT
6	Pediatric retinal imaging device
7	3D Ocular Ultrasound
8	Dry Eye Disease Diagnosis/Treatment
9	Micro-illuminated catheter for trabeculotomy
10	Portable Fundus Fluorescent Angiography
11	Portable Auto-refractometer
12	Portable non-invasive Tonometer
13	AI for optic nerve disease detection
14	AI-based technology for Amblyopia
15	Universal Eye Screening Device for Vision
16	Pupilometer
17	Piezo-surgical units
18	Intra-oral Scanner POCT for Oral Cancer
19	Ultrasonic scalers
20	POCUS with AI ML
21	OAE/BERA/Audiometer
22	Phonics speaker device
23	Operating Microscopes
24	ECMO machine and disposables
25	Transcranial magnetic stimulation

26	Transcranial Direct-Current Stimulation (tDCS)
27	Brain Computer Interface Applications
28	Continuous Glucose Monitoring System (CGMS)
29	Portable Dental X-ray
30	Intraoperative Nerve Monitoring Devices
31	Wearable Exoskeleton
32	High-quality ICU ventilators
33	AI-based Chest X-ray readings
34	Portable Oxygen Generator
35	ECG Transmission Device
36	EEG with AI ML integration
37	Electro Neuro-Myography (ENMG)
38	Amplitude Electroencephalogram
39	Dental Apex Locators
40	Spirometers
41	Portable Spirometer
42	Cooling boxes/portable fridge
43	Wireless wearable fetal monitor
44	Software for ENT data
45	pH Metry for Acid Reflux
46	Smartwatch for Epileptic Seizures
47	POCT for urine protein/creatinine ratio
48	Sleep apnea home-based testing
49	Bronchoscopy system
50	Robotic Surgery
51	ENT endoscopes
52	Endoscopic System for upper GI (side/end bearing)
53	MR and CT scanners

54	Tumor tracking & motion management device
55	AI-based Technology for Diabetic Retinopathy
56	AI tools for Retinopathy of Prematurity
57	Simulators for Surgical Training
58	Wound Management Device
59	Non-invasive glucose sensing device
60	POCT for serum creatinine
61	POCT kit for Oral Cancer
62	DLCO test
63	Electronic Nose for VOC Detection
64	Sweat Chloride Detection Device
65	Preterm labour prediction
66	Vascular Graft
67	Artificial Cornea
68	Recombinant Bone Morphogenetic Protein
69	Hemostatic solutions (FloSeal)
70	Airway stents
71	Artificial Skin
72	Amniotic membrane-based dressings
73	Tracheal balloons and stents
74	Endoscopic metal stents
75	Vascular Stents for Various vessels
76	Deep Brain Stimulation device
77	Vagus Nerve Stimulator
78	Multi-cancer early detection kits
79	TMJ implants
80	Cochlear implant
81	Bone-anchored hearing aid

82	Celiac antibody kits
83	BioFire for multiple organisms
84	Insulin pumps and automatic insulin delivery system
85	Coronary Calcium-modifying Atherectomy devices
86	High-quality surgical instruments
87	Argon Plasma Coagulation Device
88	POCT for Acute Kidney Injury (AKI)
89	Fetal shunts
90	Gamma Knife Therapy
91	Nanotechnology for drug delivery to posterior eye
92	Restorative Materials (Alternative to dental Amalgam)
93	Dural substitutes (Duragen)
94	Newborn Transport Systems
95	POCT for TB differentiation
96	High-end Lasers
97	Endoscopic System (side/end bearing)
98	Urine-based HPV screening devices
99	Bone replacement graft material
100	Vessel Sealing Devices

Annexure II

Institutes as per NIRF Ranking (2025) in the overall Category

S. No.	Name of the Institute	Location
1	Indian Institute of Technology Madras	Chennai, Tamil Nadu
2	Indian Institute of Science	Bengaluru, Karnataka
3	Indian Institute of Technology Bombay	Mumbai, Maharashtra
4	Indian Institute of Technology Delhi	New Delhi, Delhi
5	Indian Institute of Technology Kanpur	Kanpur, Uttar Pradesh
6	Indian Institute of Technology Kharagpur	Kharagpur, West Bengal
7	Indian Institute of Technology Roorkee	Roorkee, Uttarakhand
8	All India Institute of Medical Sciences, Delhi	New Delhi, Delhi
9	Jawaharlal Nehru University	New Delhi, Delhi
10	Banaras Hindu University	Varanasi, Uttar Pradesh
11	Indian Institute of Technology Guwahati	Guwahati, Assam
12	Indian Institute of Technology Hyderabad	Hyderabad, Telangana
13	Jamia Millia Islamia	New Delhi, Delhi
14	Manipal Academy of Higher Education	Manipal, Karnataka
15	University of Delhi	Delhi
16	Birla Institute of Technology & Science	Pilani, Rajasthan
17	Amrita Vishwa Vidyapeetham	Coimbatore, Tamil Nadu
18	Jadavpur University	Kolkata, West Bengal
19	Aligarh Muslim University	Aligarh, Uttar Pradesh
20	Homi Bhabha National Institute	Mumbai, Maharashtra
21	Vellore Institute of Technology	Vellore, Tamil Nadu
22	S.R.M. Institute of Science and Technology	Chennai, Tamil Nadu
23	Saveetha Institute of Medical and Technical Sciences	Chennai, Tamil Nadu
24	Indian Agricultural Research Institute	New Delhi, Delhi
25	Siksha 'O' Anusandhan	Bhubaneswar, Odisha