

**ICMR AND ITS CONTRIBUTIONS IN THE FIELD OF AYURVEDA –
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ABSTRACT

The Indian Council of Medical Research (ICMR), New Delhi, the apex body in India for the formulation, coordination and promotion of biomedical research, is one of the oldest medical research bodies in the world. The Council's research priorities coincide with the National health priorities such as control and management of communicable diseases, fertility control, maternal and child health, control of nutritional disorders, developing alternative strategies for health care delivery, containment within safety limits of environmental and occupational health problems; research on major non-communicable diseases like cancer, cardiovascular diseases, blindness, diabetes and other metabolic and haematological disorders; mental health research and drug research (including traditional remedies). All these efforts are undertaken with a view to reduce the total burden of disease and to promote health and well-being of the population. The Council promotes

biomedical research in the country through intramural as well as extramural research. Over the decades, the base of extramural research and also its strategies have been expanded by the Council.

KEYWORDS: Ayurveda, Research, Institutes, Guidelines.

INTRODUCTION

The ICMR has always attempted to address itself to the growing demands of scientific advances in biomedical research on the one hand and to the need of finding practical solutions to the health problems of the country, on the other. ICMR is one of the oldest medical research bodies in the world and the apex body in India. The Indian Council of Medical Research (ICMR) is the premier national agency for the – planning, Formulation, Co –ordination, Implementation, Conduct or promotion of biomedical research in India.



Logo of ICMR

Materials and Methods - All material collected through papers of *Ayurveda*, online database.

History

In 1911, the Govt of India set up the Indian Research Fund Association (IRFA) with the specific objective of sponsoring and coordinating medical research in the country. After independence several changes were made in the organization and activities of the IRFA. It was redesignated the Indian Council of Medical Research (ICMR) in 1949, with the expanded scope of functions and responsibility. The ICMR is funded by the Govt of India through the Ministry of Health and Family Welfare. The Council not only plans and promotes medical research and emerging health problems of the country but also is expected to build a strong national group of professional persons in the organization of skilled biomedical scientists. ICMR from its very inception has played an active role in research on indigenous drugs. The Council's support to various research programs in the area of medicinal plants and Traditional Medicines is well known since 1929.

OBJECTIVES

- ICMR provides financial assistance to promote biomedical and health research.

- The council promotes biomedical research in the country through intramural research (through its own institutes) and extramural research (through grants –in-aid given to projects in non ICMR institutes).
- Aim to strengthen or generate research capabilities in different geographic areas of country.

Vision - Translating research into action for improving the health of the population.

Mission

- **Generate**, manage and disseminate new knowledge.
- **Increase** focus on research on the health problems of the vulnerable, the disadvantaged and marginalized sections of the society.
- **Harness** and encourage the use of modern biology tools in addressing health concerns of the country.
- **Encourage** innovations and translation related to diagnostics, treatment, methods/ vaccines for prevention.
- **Inculcate** – a culture of research in academia especially medical colleges and other health research institutions by strengthening infrastructure and human resource.
- **Mandate** – Apex body in India for formulation, coordination and promotion of biomedical research.
- Conduct, coordinate and implement medical research for the benefit of society.
- Translating medical innovations into products/ processes and introducing them into the public health system.

RESULT

Headquarter - New Delhi

Secretary and director general - Dr. Rajiv Bahl

Website - <http://www.icmr.nic.in/>

Policies of ICMR- Control and management of communicable diseases., Fertility control, Maternal and child health, Control of nutritional disorders, Developing alternative strategies for health care delivery., Safety limits of environmental and occupational health problems., Non communicable diseases including cancer, ophthalmological, cardiovascular, neurological disorders.

Governing bodies- The supreme authority of ICMR is headed by Ministry of health and family welfare, Govt of India. The governing body which is the chief executive and decision making authority of the ICMR. It is headed by the director general Union health minister, Scientific advisory board, Scientific advisory committees, Expert groups, Task forces.

ICMR 26 National institutes address themselves to research on specific health topics like

Tuberculosis, Leprosy, Cholera and diarrhoeal diseases, Viral diseases , Malaria, Kala azar Vector control, Nutrition, Food and drug toxicology, Reproduction, Immuno - haematology Oncology, Medical statistics, Covid – 19.

Intramural research - Intramural research is carried out currently through the councils 30 research institutes. 19 mission oriented national institutes.

- National institute of Malaria research Delhi.
- National institute of pathology, Delhi.
- National institute of medical statistics, Delhi.
- National institute of immuno-haematology, Mumbai.
- National AIDS research institute, Pune.
- Enterovirus research centre, Mumbai.
- Institute of cytology and preventive oncology Noida.
- Rajendra memorial research institute of medical sciences Patna.
- Vector control research centre, Pondicherry.
- National institute of virology Pune.

Regional medical research centres

- Regional Medical Research Centre, Bhubaneswar.
- Regional Medical Research Centre, Port Blair
- Regional Medical Research Centre, Jabalpur
- Desert Medicine Research Centre, Jodhpur
- Regional Medical Research Centre, Belagavi.

5 unit/ centres

- Food and drug Toxicology research centre, Hyderabad.
- National centre of laboratory sciences, Hyderabad.
- ICMR, virus unit Kolkata.

- Genetic research centre, Mumbai.
- Microbial containment complex, Pune.

Extramural research- Promoted by ICMR through setting up Centres of advanced research in selected departments of colleges, universities and other non – ICMR research institutes. Task force studies with goal oriented approach with clearly defined targets. Open ended research in non- ICMR research institutes, medical colleges, universities etc located in different parts of country.

Divisions and units under ICMR

a) Administration division – The division is headed by senior DDG (deputy director general) Responsible for the management of- Health research scientist, Technical. Administrative, finance and accounts matters relating to the condition of service of –

- council employee
- Official language
- Welfare of the reserved categories.
- Coordination of parliament related work.

b) Finance and accounts division- Responsible for

- Overseeing the control of budget.
- Maintenance of accounts and internal audit.
- Preparation of the council annual receipt and payment account, income, expenditure account. Balance sheet and investment of the council funds.

Epidemiology and communicable disease division- It include research in the area of.

- Bacterial diseases
- Diarrhoeal diseases

Outbreak investigations

- 1) National AIDS Research institute, Pune.
- 2) National institute of medical statistics, Delhi.
- 3) National institute of Malaria research, Delhi

Other division and units under ICMR

- 1) Reproduction and child health.
- 2) Nutrition.

- 3) Publication and information.
- 4) Bioinformatics centre.
- 5) Human resource division.
- 6) Research methodology cell.

Intellectual property rights unit- IPR units provides technical legal & all other support on IPR related issues in respect of all ICMR supported research.(intra mural & extramural). The technologies of ICMR are showcased through various means like publication technologies for commercialization and also at various seminars. The technologies generated by the ICMR also commercialized through the national research development corporation, New Delhi.

Medicinal plant unit- The unit is engaged in bringing out series of publication/monographs in the area of medicinal plants. Quality standards' of medicinal plants. Phytochemical reference standards of selected Indian medicinal plants and monographs on diseases of public health importance. Other initiatives include development of marker phytoconstituents and establishing the identity of selected controversial ayurvedic plant drugs.

Research methodology cell- Create awareness among new researchers specially those belonging to state medical colleges and other academic institutions located in the periphery of different states about the different methodologies being used by researchers in different fields of medical science. Enable them to develop the skills to be able to choose the right research methodology. Help them in the formulation of specific research proposals in their chosen field of interest.

Fellowship and schemes- ICMR encourages human resource development in biomedical research through various schemes such as.

- a) Research fellowship – i.e. Junior and senior fellowships and research association ship.
- b) Short term visiting fellowship- which allow scientist to learn advanced research technique from other well established research institutes in India.
- c) Short term research studentship- for undergraduate medical students to encourage them to familiar themselves with research methodologies and technique.
- d) Various training programme and workshops conducted by ICMR institutes.

Grants and Funding

INTRAMURAL GRANTS

Indian Council of Medical Research (ICMR) provides financial assistance to ICMR institutes to conduct research based on its mandate and priorities. The intramural programme of ICMR intends to encourage high risk, high reward research from ICMR scientists.

There are two types of Intramural Research Grants:

1. Early-career Small Research Support Grant (Ignition Grants).
2. Intra-Mural Research Grant.

EXTRAMURAL GRANTS

Indian Council of Medical Research (ICMR) provides financial assistance for Indian scientists working outside ICMR institutes to conduct research in the fields of medicine, public health, and allied disciplines aimed at improving health of Indians under its Extramural Research Programme.

There are three types of Extramural Research Grants.

- 1. Investigator Initiated Research Proposals - Small Grant
- 2. Investigator Initiated Research Proposals - Intermediate Grant
- 3. Centre for Advanced Research (CAR)

National Health Research Programme - ICMR proposed the establishment of a National Health Research Programme, initially outlining research related to ten disease conditions. Following extensive deliberations, the research priorities were expanded to encompass eleven critical disease conditions

- 1. Antimicrobial Resistance (AMR)
- 2. One Health
- 3. Tuberculosis
- 4. Vector-borne Diseases
- 5. Cancer
- 6. Ambulatory Non-Communicable Disease (NCD) Care,
- 7. Mental Health
- 8. Anemia, Stunting and Wasting
- 9. Neonatal Mortality
- 10. Acute Emergency Care
- 11. Oral Health

Under these areas, large decisive multi-state projects will receive funding, with a strong emphasis on addressing programme needs. Approval was granted to undertake the National Health Research Program, encompassing these eleven specified disease conditions. Furthermore, a proposal to initiate up to 33 projects, with funding of up to 25 crores for each project, through a call for proposals, was agreed upon.

Junior Research Fellowships (JRF)[until 2023 batch] - The program has been now revised as Biomedical Research Eligibility Test (BRET) from the year 2024 onwards, for details please visit DHR website.

Post Doctoral Research

ICMR, with its 27 state-of-the-art Institutes/Centers, is amongst the foremost research organizations in the field of Bio Medical Sciences. Over the years, the ICMR has helped in making a scientific milieu in India, creating and nurturing talent in many disciplines such as communicable and non communicable diseases, basic medical sciences, reproductive health including nutrition, human resource developments etc.

ICMR PDF Scheme is being instituted to foster high quality research opportunities to promising fresh Ph.D./ MD/MS holders in the cutting edge areas of basic science, communicable and non communicable diseases, and reproductive health including nutrition at ICMR Institutes /Centers. Special focus will be on fundamental research in areas of science and other priority areas identified by ICMR from time to time. ICMR intends to offer fifty (50) such fellowships every year for working in ICMR Institutes/Centers with state-of-art R&D facilities. These fellowships will be allocated by Director General, ICMR, depending upon the needs of the ICMR Institute/Centre.

Nurturing Clinical Scientists Scheme – This is to inform, that this program has been merged with the "DHR-ICMR MD-PhD program" and there will be no new calls advertised for NCS program. The details about the revised MD-PhD program may be seen at <https://schemes.dhr.gov.in> on DHR website under HRD schemes. The guidelines given below is only for referral for the ongoing fellows to complete their respective tenure.

Research Support

ICMR offers financial assistance to biomedical scientists for paper presentations, workshops, and other research-related opportunities.

Policies

Aggressive scale up of active case finding and treatment could be the best TB control strategy among Saharia Tribes, Madhya Pradesh.

Long term follow up of treated tuberculosis patients.

Effective interventions for smoking cessation services for patients with tuberculosis under national tuberculosis elimination programme, India.

ICMR/DHR Policy on biomedical innovation & entrepreneurship for medical professionals, Scientists and technologists at medical, dental, para medical institutes / colleges.

COVID- 19 stigma: correlates and mitigation strategies.

Burden of Tuberculosis among the tribal population in India.

ICMR Policy on research integrity and publication ethics.

Presumptive paediatric TB patients and gastric aspirate specimen collection in primary and secondary health care facilities in Chhattisgarh.

Family Dots to prevent Treatment loss to follow up in hard to reach areas of Kondagaon, Chhattisgarh.

Revision of tools for evaluation of programmatic management of Drug Resistant Tuberculosis (PMDT) and their use in three states of northern India.

Engaging public sector Ayush practitioners to increase referral of Presumptive TB cases for early tuberculosis case detection in Shimla and Kangra distt. of H.P.

Improving treatment adherence among Tuberculosis patients through evening Dots in Chennai, India.

How can Anthrax outbreaks be prevented in Odisha.

Oral Cholera vaccines – worth a shot.

Diphtheria

School based lifestyle intervention in school children.

Knocking down fluorosis.

Policy on contributions and partnerships Annexure 2

Policy on contributions and partnerships

ICMR Strategic plan and agenda 2030.

National Health programs

- National malaria eradication programme
- National filarial control programme.
- National leprosy control programme.

- Diarrhoeal diseases control programme.
- National cancer control programme.
- Universal immunization control programme.
- National tuberculosis control programme.

Ethical guidelines of ICMR

- Ethical guidelines for biomedical research on human participants.
- Executing research policy.
- Guidelines for good clinical laboratory practises.
- National guidelines for accreditation, supervision and regulation of art clinics in India.
- Cancer management guidelines.
- Guidelines for stem cell research and therapy.
- Guidelines for management of type 2 diabetes.
- National guidelines in the management of retinoblastoma.
- ICMR – guidelines for evaluation of probiotics in food.
- Dietary guidelines.
- ICMR should steer international collaborative health research to ensure that the country derives the maximum benefit and global goals are attained.

Periodic Publication

- Indian journal of medical research.
- ICMR bulletins.
- Annual reports of ICMR headquarters & other ICMR institutes & other institutes.
- Health research policies.

Books

Common protocol of uniform Evalion of Public Health Pesticides for use in vector control.

Beginner's Guide for systematic Reviews.

Standard Treatment workflows of India: volume 3 (2002 edition)

Standard Treatment workflows of India: volume 3 (2002 special edition on Paediatric and Extrapulmonary tuberculosis)

Standard Treatment workflows of India: volume 1 (2019 edition)

Standard operating procedure (SOP) for anthrax

Abstract Book special technical session : Building a resilient biomedical disaster response learning from the Covid – 19 Pandemic.

Training Manual on Cervical cancer screening using visual inspection with acetic acid (VIA)

Handbook on intellectual property rights & technology transfer.

Definition of terms used in limitation of treatment and providing palliative care at end of life.

Touchinh life – Improving health through Research.

Portals

ICMR Data repository portal.

ICMR Research infrastructure sharing ecosystem.

TB kit validation portal.

National one health mission.

Medical Device and Diagnostic mission secretariat.

Med Tech Mitra – A Niti Aayog – ICMR CDSCO Initiative.

DISHA – Diagnostic service Availability in healthcare : Geo Mapping of Laboratory services in India.

IEC material on Snakebite awareness and management.

ICMR Foodnet.

Mycology Diagnostic Research Centre Network (Myconet)

Indian Clinical Trial and Education network.

Vanita portal.

Electronic Product Management system.

ICMR Covid – 19 Data Portal.

ILI – SARI Surveillance Dashboard.

I – Regved registry portal.

National Consortium for Research and Development on therapeutics for rare diseases.

ICMR bioethics unit.

Antimicrobial Resistance surveillance and Research initiative.

Cancer portal.

Clinical trials registry India.

Department of Health Research.

DHR – ICMR – Dashboard for Analytical Review of projects across nation. (DARPAN)

Influeza surveillance Datsa.

National Ethics Committee registry for Biomedical and health research.

The Assisted Reproductive Act 2021 and the surrogacy act 2021.

Activities - Extramural research is promoted by ICMR by establishing Centres for Advanced Research in different research areas around existing expertise and infrastructure in selected departments of medical colleges, universities and other non-ICMR research institutes. The ICMR also funds task force studies which emphasise a time-bound, goal-oriented approach with clearly defined targets, specific time frames, standardised and uniform methodologies, and often a multicentric structure. Open-ended research is conducted on the basis of applications for grants-in-aid received from scientists in non-ICMR Research Institutes, Medical colleges and Universities located in different parts of the country. Collaborative research projects with other institutes such as that between Institute of Pathology, Delhi and NCRM are also undertaken.

Analysis of ICMR- In India, Indian Council of Medical Research (ICMR) has been on the forefront to set the standards for defining the ethical requirement for biomedical and health research. Community and laboratory based research projects on – Anthropology, Biochemistry, Cardiovascular diseases, Cellular and molecular biology, Cholera and enteric diseases, endocrinology, Environmental hygiene and occupational health, Gastroenterology, Genomics, Haematology, Human genetics, Maternal and child health, Covid - 19.

DISCUSSION

ICMR is revising the Ethical Guidelines for biomedical and health research and taking several initiatives to make the process participatory so as to invite and receive feedback from variety of stakeholders involved in biomedical and health research. ICMR guidelines are looked upon by researchers from all over the country, e.g. undergraduates, MD students, faculty members, institutional ethics committees and regulators as a gold standard.

CONCLUSION

The Indian Council of Medical Research (ICMR), as India's apex body for biomedical research, plays a pivotal role in shaping the nation's healthcare sector through its extensive, multidisciplinary research, ethical frameworks, and policy guidance. Since its inception in 1911 as the Indian Research Fund Association (IRFA), and its reconstitution in 1949 as ICMR, the organization has continuously evolved to meet emerging health challenges and technological advancements. With a robust network of national institutes, regional research

centers, specialized units, and collaborative programs, ICMR addresses a wide array of health issues.

ICMR's commitment to ethical research, technological innovation, public health impact, and strategic policy implementation reflects its vision of "translating research into action for improving the health of the population." Through targeted fellowships, funding schemes, and national programmes like the National Health Research Programme, it continues to support and shape future scientists and health professionals in India.

ICMR stands as a cornerstone of biomedical research in India, consistently striving to integrate science with societal needs, foster research integrity, and ultimately contribute towards a healthier, more equitable nation.

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