

International Cooperation & Partnerships

ICMR recognizes that the inception of new cutting-edge health knowledge and its translation into real world applications cannot take place in isolation. Without effective international cooperation we would have limited access to breakthrough scientific knowledge generated by researchers in other countries and the quality of the scientific knowledge generated locally would decline. Medical research and technology development can be benefitted greatly through international cooperation and collaboration. Common goals can be effectively addressed by pooling both material and intellectual resources. The future of our health system depends on having a critical mass of health scientists with the international knowledge and intercultural skills necessary to meet global challenges. The potential and scope of international scientific collaboration is well recognized in almost all areas of medical and health science research.

The International Health Division (IHD) in ICMR co-ordinates international collaboration in biomedical research between India and other countries as well as with national & international agencies under specific Memoranda of Understanding (MoU) / Joint Statements. The IHD is also committed towards recognizing the importance of international engagements leading to scientific excellence and achieving ICMR's mandate. Through IHD, the Council is working towards enhancing India's performance in collaborative research. Growing collaboration in recent years is reflected by increased number of internationally funded research projects. Today, ICMR enjoys research partnerships with counterpart organizations in several countries. Successful partnerships implemented through collaborative research have resulted into benefits to both parties. They are built on a shared vision with well-defined goals. Each of these agreements bring together the top minds and technology resources of partner countries and helps progression through shared research and innovation agenda.

Earlier international collaborations have solely aimed at strengthening research capacity of individuals/institutions and transfer of technology to the partner organizations. Donor funding in India as shown through international collaborative projects has remained high, but at present most of the initiatives are based on equal footing with respect to functional requirements relevant to national conditions/circumstances and not monetary equivalents. A number of Indian Institutes particularly some of ICMR institutes have achieved international stature based on their research and training capacity.

The country has developed excellence in the area of health research. There is a great interest among various international agencies/countries in developing partnership with ICMR. ICMR is also actively involved in governance of a number of international organizations and agencies. According to Indian Health Research Policy, further efforts need to be made to develop and strengthen the linkages with international developmental partners, WHO and other UN Agencies to ensure that India plays a legitimate role as an emerging economy.

Several International arrangements of ICMR with many countries such as USA, France, Germany, Canada, Australia, United Kingdom, Sweden, Finland, Switzerland and the international agencies are progressing well. Few more MoUs are in their embryonic stage of development indicating the progressive outlook of ICMR.

The purpose of these Memoranda of Understanding (MoU) and Joint Statements is mutual cooperation, exchange of scientific information; exchange of scientists/technicians; joint execution of scientific projects and organization of joint scientific meetings, seminars, workshops and symposia in identified areas of cooperation. Joint Working Groups (JWGs) or Joint Steering Committees (JSCs) are organized with various international institutions/organizations to review, develop and finalize joint collaborative programmes, decide plans of action and identify priorities for bilateral cooperation.

The Memoranda of Understanding (MoU) and Joint Statements signed between ICMR and various collaborating global bodies are outlined below:

1. An **Indo-German programme** has been running in pursuance of Indo-FRG Agreement on Science & Technology signed in January/March, 1974 and subsequently under ICMR-GSF (now taken over by BMBF), Special Arrangement for cooperation in biomedical sciences was signed in January/February, 1976. The ICMR- GSF cooperation was renewed in May, 1990 and further strengthened by signing of an addendum in November, 2005 at New Delhi/Bonn. The areas of cooperation under this agreement cover infectious diseases including AIDS, oncology, family planning and reproduction with special emphasis on birth control, health for mother and child, prenatal medicine, research on scientific basis of traditional medicine with emphasis on composition and pharmacological properties of natural products, environmental toxicology, drug development related to tropical diseases/infectious diseases, bioethics and other biomedical research aspects related to human health.
2. An **ICMR - INSERM, France MoU** has been in place in pursuance of Indo-French Science & Technology Agreement signed in July, 1978. The ICMR-INSERM MoU was signed in February, 1989 at New Delhi and renewed in January, 2000 for cooperation in various areas of biomedical research and health sciences. The areas of collaboration are infectious diseases (tuberculosis, HIV/AIDS, malaria, leishmaniasis), human genetics/genomics, neurosciences and surveillance/epidemiology using modern techniques, stem cell research, pharmacogenetics, genetics of cancer, polymorphism, viral hepatitis, leptospirosis, epidemiological database, development of surveillance tools like registries and genetic susceptibility of infectious diseases. Newly added areas are bioethics and clinical research. Further areas of cooperation which are of mutual interest are added from time to time during the Joint Working Group meetings organized regularly in India and France.

A Letter of Intent (LoI) between ICMR and INSERM for collaboration and setting up of an International Associated Laboratory (IAL) in the field of Immunology/Haematology was signed in December, 2010 at New Delhi between Secretary, Department of Health Research, MOH&FW, GoI & Director General, ICMR and CEO, Chairman, INSERM during the visit by a delegation led by His Excellency, the President of France to India.

3. The **Indo-US Joint Statement on Emerging and Re-emerging Infections and Disease Surveillance** was signed in June, 2005 (and further expanded in November, 2005) and other

three **Joint Statements on HIV/AIDS, Maternal & Child Health and Human Development & Research and Environment & Occupational Health** were signed in 2000/2002 and were renewed in June, 2006 by the then Hon'ble Minister for Health and Family Welfare, Government of India during his visit to USA. The Joint Statement on HIV/AIDS was further renewed in October, 2011, whereas other two Joint Statements are being processed for renewal. Another **Joint Statement** between the Department of Health and Human Services of USA and the Ministry of Health and Family Welfare of India **on collaboration in Diabetes Research** was signed in June, 2012 at USA. The collaborative research projects under these programmes through Call for Proposals (CFP) are mainly aimed for capacity building through scientific knowledge, technology transfer, identifying training needs, developing scientific tools for disease control and prevention such as vaccine development and treatment for elimination of diseases.

4. The **Indo-US Joint Statement for Establishment of International Centre for Excellence Research (ICER)** at National Institute for Research in Tuberculosis, Chennai was signed in June, 2003 and further extended in May, 2008. The scientific focus of the agreement is to continue ongoing activities and to expand cooperation in the areas of epidemiology, molecular biology, medical entomology, parasitology, immunology bacteriology, microbiology, virology etc. with emphasis on techniques for the prevention, diagnosis and treatment of tropical infections and allergic diseases.
5. An MoU was signed between **ICMR and Canadian Institutes of Health Research (CIHR), Canada** for cooperation in the field of biomedical sciences at New Delhi in January, 2005 wherein areas such as lifestyle diseases, public health & disease surveillance were identified for collaboration. Certain new areas of mutual interest such as human development, child and youth health, infection immunity, neurosciences, mental health & addiction have been included in the renewed MoU for collaboration signed in March, 2011 at New Delhi.
6. An MoU between **ICMR and Helmholtz Association (HGF), Germany** for cooperation in Medical Research was signed in April, 2006 at Hannover, Germany during the visit by Hon'ble Prime Minister of India to Germany. The areas of interest which have been identified for cooperation are infectious diseases, oncology & biomedical research related to health. Under this MoU, a virtual Indo-German Science Centre for Infectious Diseases (IG-SCID) was inaugurated in April, 2007 which is located at the Council's Headquarters and slated to promote research in identified areas of infectious diseases through joint research projects with Indian and German funding. The organization of joint workshops, exchange of scientists/researchers and execution of twinning projects are the modes of cooperation. Five areas of collaborative priority namely genetic susceptibility, vaccines & anti-infectives, viral diseases (HIV/HCV), animal models of infectious diseases and zoonoses have been identified under this programme.

This Indo-German collaboration was extended and pushed further in the area of infectious diseases especially in translational research by signing the renewed MoU between ICMR and HGF in May 2011 by the Secretary, Department of Health Research, MOH&FW, GoI & Director General, ICMR from Indian side and the Scientific Director, Helmholtz Centre for Infection Research (HZI) from German side at New Delhi in the presence of Hon'ble Prime

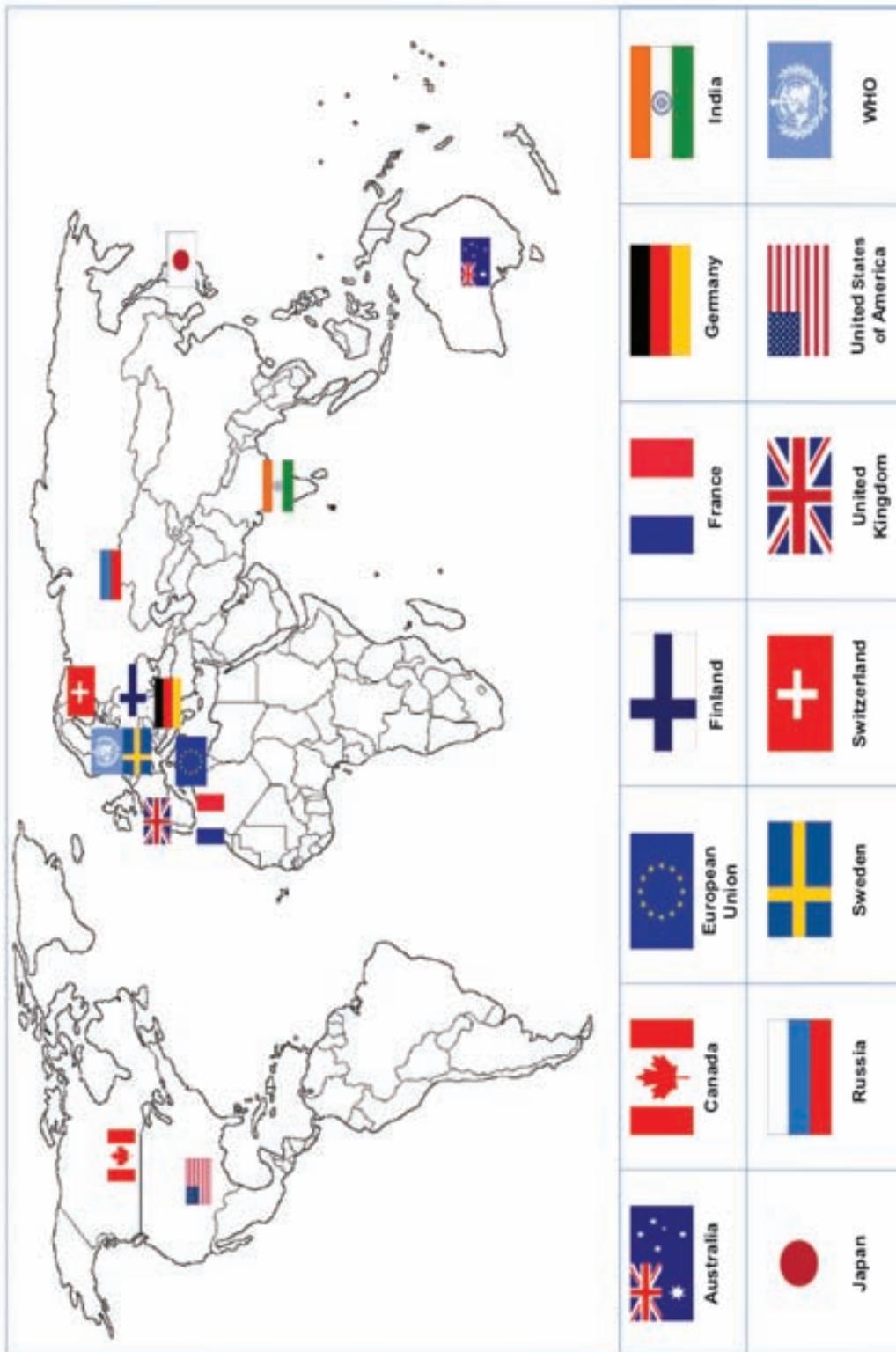
Minister of India Dr. Manmohan Singh and H. E. Chancellor of Germany Dr. Angela Merkel. This MoU would provide the active translational efforts which combine basic and clinical research and thus advance the fight against infections in biomedical research with long term capacity building for researchers and scientists, in both the countries.

7. An MoU between **ICMR and University of Minnesota, USA** was signed in October, 2006 at New Delhi for the development and expansion of research, medical education and clinical programmes in the areas of medicine and public health. The purpose of this collaboration is to build upon the synergy of expertise on both sides for promotion and conduct of research. The initial research efforts will develop around areas such as field epidemiology, cardiovascular medicine, cancer, infectious diseases, immunology, metabolic diseases, obesity, diabetes and public health initiatives. Later in 2009, cancer and diabetes were identified to start with the collaborative projects through a joint call for proposals. The collaboration was further renewed in November, 2011 by both the sides at New Delhi.
8. A Letter of Intent (LoI) for collaboration between **ICMR and Boston University, USA** was signed in October, 2007 at Boston as a follow up of visit by the President, Boston University and his team to India in September, 2007. This cooperation is likely to enhance the collaboration between the two institutions in the identified areas of emerging infectious diseases and public health training. The collaboration in research and application in other areas of mutual interest in emerging infectious diseases and public health education has additional common interest and synergistic capacity under the proposed MOU. Both sides have also shown interest in developing a clinical trials network, basic and applied cancer research and cardio-vascular disease as well as risk factors such as diabetes, obesity and genetics including the linkage of population based research.
9. An MoU between **ICMR and George Institute for International Health & Faculty of Medicine, University of Sydney, Australia** was signed in November, 2007 at Hyderabad for collaboration in the areas of public health and clinical aspects of chronic diseases, HIV/AIDS, road traffic injuries as well as health systems. Subsequently in 2010, it was proposed by both parties to include maternal and child health as another area of mutual interest for collaboration. The collaboration is likely to be renewed further in 2013.
10. The **ICMR and Karolinska Institute, Sweden** signed an MoU in July/August, 2009 at New Delhi /Stockholm to collaborate in the areas of non-communicable diseases (specifically diabetes mellitus & cardiovascular diseases including control of tobacco, alcohol & junk food), maternal and child health, sexual and reproductive health, HIV, TB, malaria, emerging infections and human resource development.
11. An MoU between **ICMR and London School of Hygiene and Tropical Medicine, London, United Kingdom** was signed in February/September, 2009 at London and New Delhi to build upon the synergy of expertise of each party for the promotion and conduct of research in the areas of public health, cardiovascular medicine, cancer, infectious diseases including vector borne disease, metabolic diseases, obesity/diabetes and research support to National Rural Health Mission of India.
12. In February, 2010, **ICMR and Medical Research Council, United Kingdom** signed an MoU at New Delhi to encourage joint research in a range of health areas including persistent,

new and emerging infections, chronic non-communicable diseases, impacts of environmental change (including climate) on health.

13. A Letter of Intent (LoI) between **ICMR and European Union** for collaboration in cancer & neurodegenerative diseases was signed in March/April, 2011 at New Delhi/Brussels. A joint call for proposal was launched by ICMR in February, 2012.
14. An MoU between **ICMR and Global Alliance for Chronic Diseases (GACD)** was signed in April, 2011 at New Delhi. Some of the priority areas of collaboration proposed by GACD founding members are prevention of cardiovascular diseases, public health measures for the control of diabetes and obesity, characterization, quantification of risk factors (tobacco and environmental pollution), and development of control measures for chronic obstructive airways disease, cancer cardiovascular disease and other disorders, and implementation research of interventions to address these and other priorities. The addendum to GACD secretariat funding and collaboration agreement was signed by ICMR in November, 2012 at New Delhi.
15. An MoU between **ICMR and Foundation for Innovative New Diagnostics (FIND)** was signed in July, 2011 at New Delhi by Dr. V.M. Katoch, Secretary, Department of Health Research, Ministry of Health and Family Welfare, Government of India & Director General, ICMR and Dr. Giorgio Roscigno, Chief Executive Officer, FIND for collaboration on the effectiveness and feasibility of the introduction of new diagnostic tests for infectious diseases such as tuberculosis, malaria, HIV, leishmaniasis and other communicable diseases.
16. An MoU between **ICMR and Academy of Finland (AF)** was signed in October/November, 2012 at Helsinki/New Delhi by Professor Marja Makarow, the Vice President (Research), Academy of Finland and Dr. V. M. Katoch, Secretary, DHR & DG, ICMR, New Delhi. The MoU would promote collaboration between Indian and Finnish researchers and scientific institutions in the areas of chronic non-communicable diseases, diabetes and challenges in health services research through joint workshops and collaborative research projects.

Various activities have been initiated under these MoUs and Joint Statements. Several workshops on topics of mutual interest have been organized and many exchange visits by the Indian investigators under the approved collaborative research projects have been funded by ICMR. Under these MoUs & Joint Statements, the collaboration has fruitfully led to publication of several research papers as well as transfer of technologies and led to infrastructure strengthening of Indian research institutes. The cooperation is reviewed through annual meetings of Joint Working Group or Joint Steering Committee organized in India and respective countries from time to time.



Collaboration of ICMR with different countries/agencies in health research (flags placed in an alphabetical order)

Transfer of human biological material

The guidelines issued by the Ministry of Health & F.W, Government of India (vide O.M.No.19015/53/1997-IH Pt.) dated November 19, 1997 regulates the transfer of human biological material for research/diagnostic purposes. As per the O.M., ICMR is the nodal agency to process such requests. The guidelines for transfer of human biological material are available on the ICMR website (<http://icmr.nic.in/ihd/ihd.htm>).

The above mentioned guidelines enshrine the definition, modalities and mechanism for transfer of human biological material for biomedical research as well as regulate the exchange of biological material for commercial purposes. It categorically states that if the material transfer is envisaged as part of a collaborative research project, the proposal must be routed through the appropriate authorities for evaluation and clearance.

The exchange of human biological material should be an integral part of a collaborative project, which should have been approved by the Institutional Review Board (IRB) and/or Institutional Ethics Committee (IEC) and not be a separate activity. It advocates that in order to protect the rights of the Indian study subjects as well as Indian scientists/organizations, Memoranda of Understanding and/or Material Transfer Agreement (MTA) should be entered into between the collaborating partners (both Indian and foreign). This should, according to the requirement of case under consideration, include the items pertaining to identification of the receiving/sending parties, the material to be transferred and its quantity, purpose of the transfer, the research to be carried out using the material, confidentiality, intellectual property rights, filing of patents, arrangements for future commercial exploitation, reporting, publication rights indemnification, termination of agreement, assignation or transfer of agreement/rights, safety norms to be observed, shipping arrangements, 'qualified user' information and any other matter that may be relevant to the particular exchange of material.

As per the O.M., the requests for transfer of biological material for research/diagnostic purposes in biomedical research after scrutiny and decision by the respective agencies/departments are required to be placed before the Health Ministry's Screening Committee (HMSC) for final endorsement.

Cases pertaining to transfer of human biological material are received either directly or forwarded by the Directorate General of Foreign Trade (DGFT), Ministry of Commerce and Industry and/or Directorate General of Health Services (DGHS), MOH&FW, GoI to ICMR for comments.

In consultation with DGFT & DCGI, GoI, Director General, ICMR has constituted a Committee in 2010 consisting of experts from relevant fields for deciding each proposal on a case-to-case basis for transfer of human biological material for research/commercial purposes. The cases where infectious biological material/samples are proposed to be transferred by Private Pharmaceutical Companies/Clinical Research Organizations in India or where Indian laboratories are involved in the out sourcing of biological samples for diagnostic purposes or vice versa for analysis are considered by this Committee. In addition to other experts, this Committee has representatives from Directorate General of Foreign Trade and DCGI/DGHS.

The applications are submitted to ICMR for transfer of biological material for research/commercial purposes in response to announcement on the ICMR website with deadlines for submission of applications as January 31; April 30; July 31 and October 31 in each calendar year.

ICMR International Fellowship Programme

The world is now witnessing a rapid change in the way biomedical research is being conducted. The developing countries are in the grip of formidable challenges posed by existing communicable diseases coupled with newer emerging infections as also reemergence of newer strains apart from the subtle but progressive burden of non communicable diseases. On the positive side, rapid advances in science and technology have brought forth newer technologies to understand the disease process and find strategies for prevention and cure. There are areas at the cutting edge of science such as molecular medicine, genomics, immunology etc which have revolutionized knowledge for finding rapid diagnostics, vaccine, new drugs and other therapeutic measures. There is an urgent need that researchers working in core health sectors like diagnostics, epidemiology, surveillance and cure are exposed to the latest advancements in knowledge and interact with international scientists in their respective field of work. To achieve the objective of building up of skilled pool of biomedical researchers in all aspects of biomedical research including basic, applied, epidemiological and clinical sciences, ICMR embarked upon an International Fellowship Programme for capacity strengthening of scientists of our country in 2004.

During the XIth plan period, the number of fellowships was doubled along with increase in the fellowship grant. There are twelve fellowships per year for young Indian scientists for duration of 3 to 6 months and six fellowships for senior level scientists for a period of 2 weeks to visit the foreign laboratories/institutes for scientific discussions/training. The fellowship grant has been further enhanced for Indian biomedical scientists with monthly grant of US\$ 3000 for young scientists and for 15 days for senior scientists. ICMR international fellowships have been awarded to 30 senior and 58 young Indian biomedical scientists.

The ICMR international fellowships are advertised each year in leading national newspapers, on ICMR website & some of the Indian scientific journals.

To achieve the objective of better south to south co-operation and considering India's excellence and proven leadership amongst the developing countries in several areas of research, ICMR awards five fellowships every year to the scientists from other developing countries to work in Indian laboratories for a period of upto six months. One scientist from Cuba and two from Nigeria visited ICMR institutes (RMRC, Port Blair; NJIL & OMD, Agra and NARI, Pune respectively) for training.