ANNUAL REPORT
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National Institute of Cholera and Enteric Diseases
P-33, CIT Road, Scheme XM, Beliaghata,
Kolkata - 700 010
Fax : 91-33-2350-5066; **E-mail:** niced@cal2.vsnl.net.in
Phone : 2350-0448/2353-7469-70

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Preface

Like that of previous years, National Institute of Cholera and Enteric Diseases, Kolkata continued to pursue its research goal devotedly on different aspects of diarrhoeal diseases, typhoid fever, infective hepatitis, *Helicobacter pylori* infection and HIV/AIDS, organized workshops, training programmes including Ph.D. programme and summer training programme for manpower development, assisted the various State Governments in conducting investigations of outbreaks of diarrhoeal disease, infective hepatitis and unknown fever and suggested control measures. Institute provided services to several national laboratories by providing *Vibrio cholerae* O1, O139 antisera and by phage typing the *Vibrio cholerae* strains isolated by these laboratories. As national HIV Reference Centre a large number of blood samples were screened for HIV antibody received from surveillance and zonal testing center of Eastern States of India.

During the year under report, emphasis was given for infrastructural development of the Institute. Construction of super structure of new NICED building at ID & BG Hospital campus is complete with provision of P2 and P3 laboratories and patient care facility. Forty kottachs of land was acquired for construction of JICA funded modern laboratory and animal house facilities. The construction of the building will start by end of this year.

Community based studies in Kolkata showed that the prevalence of multi-drug resistant *S.typhi* among children. Extensive molecular characterization of rough *Vibrio cholerae* showed increase of expression of virulence. Enterotoxin produced by *V.cholerae* non O1, non O139 had homology with N-terminal sequence of hemagglutinin protease of O1 serogroup. Self-assembly of *V.cholerae* hemolysin monomar to transmembrane b-barrel involves meting of native toxin confirmation. Fluroquinolone resistance mechanism, OMP and porin of *Shigella* spp. were investigated for the first time. Some of the enteropathogenic *E.coli* isolated from children harboured *cdtB*. A novel multiplex PCR assay was developed for the rapid detection of *H.pylori* from gastric biopsy specimens.

The collaborative project entitled “Prevention of Emerging Diarrhoeal Diseases” with Japanese International Cooperative Agency (JICA) extended into second phase to support research in molecular biology of enteric pathogens. A number of scientists and technicians of our Institute have been trained in advanced Japanese laboratories. Many Japanese scientists also visited this Institute. Two training programmes (domestic and third country) on “Molecular epidemiology of cholera” were conducted in collaboration with JICA.

This institute is about to conduct typhoid and cholera vaccine trials in collaboration with International Vaccine Institute (IVI), Korea. The support received from CSIR, DBT, WHO, UNICEF and other national and international funding agencies are gratefully acknowledged.

The guidance, support and cooperation received from the office of the Director General, ICMR and members of the Scientific and other Advisory Committees are also gratefully acknowledged. The dedicated and sincere efforts of our scientists, technical and administrative staff and research fellows in enhancing the activities of this Institute deserve my sincere and heartfelt appreciation.

Dr. S.K. Bhattacharya, MD, FNASc, FNA, FAMS, FIPHA, WBFHC
Director
National Institute of Cholera and Enteric Diseases
P 33, C.I.T. Road, Scheme XM
Beliaghata, Kolkata 700 010

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आचार्य एन. के. गांगुली
महानिर्देशक
Prof. N.K. GANGULY
MD, FRC Path. (London), FAMS, FNA, FASc, FNASc
Director General

भारतीय आयुर्विज्ञान अनुसंधान परिषद
अंसारी नगर पोस्ट बॉक्स 4911, नई दिल्ली - 110 029
Indian Council of Medical Research
Ansari Nagar, Post Box 4911, New Delhi - 110 029

Message

14th January, 2004

I am extremely happy to keep on record the contribution of **National Institute of Cholera and Enteric Diseases (NICED), Kolkata** for significant research work on diarrhoeal diseases, typhoid fever, infective hepatitis, *Helicobacter pylori* infection and HIV/AIDS. NICED is publishing scientific papers with high impact factors and contributing to development of manpower. Increasing trend of collaborative research activities with various national and international organizations is also appreciated.

As in the past, the Council will make all endeavour to help this institute to achieve its ultimate mission.

Prof. N. K. Ganguly

Tele : 26517204 (D); 26962794, 26962895 Extn. : 264 Gram : SCIENTIFIC Telex : 031-73067
Fax : 91-11-26868662, 26856713, 26514330 E-mail : icmrhqds@sansad.nic.in

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