

Bioinformatics Centre (BIC)



Establishment of Bioinformatics Centre (BIC) at Jamnalal Bajaj Tropical Disease Research Centre (JBTDRC), Mahatma Gandhi Institute of Medical Sciences, Sevagram was approved in May 1999 by Department of Biotechnology, Ministry of Science & Technology, Government of India, New Delhi as a part of Biotechnology Information System Network (BTISNet) to establish link amongst Scientists in organizations involved in Biotechnology related research activities. JBTDRC and

Department of Biochemistry are actively involved in Immunodiagnostics and vaccine Research and have been conducting annual National level training courses and workshops in Infectious disease diagnostics and Bioinformatics respectively. Centre also extended training and research facilities to the students doing Masters in Bioinformatics / Biotechnology for doing short term projects.

Medical/Health Informatics at Bioinformatics Centre

Medical Informatics is the art and science of using patient Information for analysis and decision making for the better patient care and management with the help of computer science, IT etc. Need for the computer in the medical field is growing every day. Considering this fact the Centre is helping in expansion of the LAN and WAN setup and computerization of this Medical Institute. An ambitious project entitled, "Development of Clinical / Health Informatics at MGIMS" is taking steady shape at this Centre. The centre has been carrying out research work on Medical Informatics, developing Database software on patients information on rural/urban health problems in particular Filaria & Tuberculosis. Further database software for collecting patient's information has been prepared for Psychiatry, Gynaecology and Obstetrics departments of this Institute. Database Software CaDB was also developed for cancer patients registry for Pathology Department and JBTDR Res Pub for research publications (Full paper) from Department of Biochemistry & JBTDRC.

Centre has launched a web portal *MGIMS-JBTDRC Health Update* – Web for current awareness on Emerging Infectious Diseases and Life Style Health Problems (<http://www.jbt-drc.org/Health-Update/>) which will be of interest to medical & paramedical professionals and public in general.

We, with a hope that this centre, with support from DBT and KHS would soon, be an **Advanced Centre for Health Informatics**, keep continuing our activities helping Medical Researchers and clinicians in their related fields.

OBJECTIVES:

- (1) Being a part of National Bioinformation System Network (BTISnet) of Department of Biotechnology and Dissemination of Biomedical information to researchers in Medical Colleges and Research institutes in Central India.
- (2) Publication of '**SEVAMED**'- a Quarterly Update on Infectious Disease Research and Traditional Medicine.
- (3) To develop Database software on diagnosis and management of certain diseases in a tertiary Hospital setting.
- (4) To promote Medical Informatics at MGIMS.
- (5) To provide In-service Training and organize National workshops on Medical / Health Care Informatics for medical Teachers, young Scientists and PG / Ph.D. students.

MAIN THRUST AREA:

Medical / Health Informatics – Development of software and databases on medical information on rural / urban health problems for better diagnosis, management, prognosis and development of Evidence Based Medicine. Online Health Information Repository.

FACILITIES & ACTIVITIES:

Hardware:

(i) Server - 3 (IBM B Xenon, Compaq Proliant 3300 PIII-1, Zenith P-III); (ii) Dell Workstations-3; (iii) PCs - 14; (iv) Laptop - 2; (v) Printers - 8 (Laser - 3, HP Color Laser Jet - 1, Canon Photo printer - 1, Dot-matrix - 3), (vi) Photocopier - ModiXerox Workcentre (model XD 155 DF), Canon iR1210 digital copier, Godrej G-1508 digital copier cum printer, Canon iR1600 Copier cum printer, (vii) Cisco Router, (viii) Patton Modem, (ix) Wireless router, (x) Switches, (xi) LCD Projector (2), (xii) Scanner Cannon 3000F, (xiii) Kodak Digital Camera, (xiv) Sony Handy cam. (xv) Spiral Binder etc.

Bioinformatics Centre, Lab-1 (Immunology) & Lab-2 (molecular biology) and Central Library are networked through LAN.

Centre has got installed BSNL 1 mbps Leased Line. This has improved the connectivity & speed. This facility has been extended to Central Library and Hospital Information System.

Software:

Scientific software packages: Windows NT with service pack 6, Microsoft Windows NT 4.0 Service pack 4, Windows 98, 2000, XP, Office 2007, SQL Svr Standard Edtn 2005 Win 32, Visual Studio Pro 2008, Visio Std 2007, Developer Training Service Pack 3, Microsoft Visual Studio 6.0 Professional Edition with MSDN Library, Adobe Dreamweaver CS3 Win 9.0, Flash Pro CS3 Win 9.0, Adobe Photoshop Extended CS3 10.0, Win Adobe PageMaker 6.5, Wings 2000, Tally 7.2,

Freely available online Bioinformatics software for sequence analysis, 3D visualization, Immunoinformatics tools etc. are also being used.

DATABASE SOFTWARE

Database Software **FilaDB**, **TbDB**, **PsySoft**, **ObSoft**, **GynSoft**, have been developed for recording & retrieval of Data on Filariasis, Tuberculosis, Psychiatry, Obstetrics and Gynecology patients respectively. We are planning to develop same kind of softwares for other health problems. SEVAMED bibliography database on Infectious Disease Research and Traditional Medicine for the year 2001 – 2005. This database is available for quick offline accessing of the bibliography. Centre has also developed a software **Cadb** for cancer patients registry being operated by Department of Pathology of MGIMS and **JBTDRC-Res-Pub** for Research publications (full papers) from Department of Biochemistry & JBTDRC (1970 – 2006).

PUBLICATIONS:

Centre launched **SEVAMED** – a quarterly Update on Infectious Disease Research And Traditional Medicine' a current awareness Journal being published by our Centre since inception has entered 9th year of its publication. This effort of disseminating information in the form of bibliographic journal with selected abstracts has been useful to the medical teachers, researchers and practicing doctors updated with latest information for furtherance of productive research and better health care.

Proceedings of National Symposium on Medical Informatics & C.M.E. on Hospital Information System (September 6-7, 2004) published from the Centre covers the interesting lectures & sessions