

**INTERNATIONAL TRAINING COURSE ON DNA FINGERPRINTING, CENTRE FOR
DNA FINGERPRINTING AND DIAGNOSTICS, HYDERABAD (INDIA),
NOVEMBER 6-19, 1997**

PARTICIPATING COUNTRIES : 8

NUMBER OF PARTICIPANTS : 20

Advances in biotechnology are poised to have a far-reaching impact on the quality of human life and environment. One of the remarkable applications of biotechnology has been with regard to the development of the technique of DNA fingerprinting. This technique of identification is today the most sensitive and reliable means available for individual identification, paternity tests and in forensics. Histocompatibility testing by DNA analysis is revolutionizing the way organ procurement agencies cross-match donors and recipients. Since the tests performed by DNA diagnostic laboratories and by crime laboratories can have a significant impact on genetic counseling and the outcome of trials respectively, it is important that the test procedures used by laboratories possess a high degree of accuracy and reproducibility. The use of appropriate standards and controls is essential in order to ensure reliable results.

The Bureau of the 7th Governing Council at its meeting in March 1997 in Cartagena, Colombia had therefore approved, and the 8th Governing Council at its meeting in Dhaka in November, 1997 had ratified the proposal of the Centre to organise an International training course on DNA Fingerprinting. In pursuance of these decisions therefore a 2-week training course on DNA Fingerprinting was held at the Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad, India during November 6-19, 1997. The course was co-sponsored by the Federation of Asian Scientific Academies and Societies (FASAS).

The participation in the training course was confined to those actively engaged in research in the field of forensic science, medicine, agriculture, molecular biology and biological sciences. Eight member countries comprising one representative each from Bangladesh (Dr. Md. Mohebbullah of Chittagong Medical College), Egypt (Ms. Somaia Mohamed Ismail Salasa of National Research center, El Dokki), Malaysia (Mr. A. R. B. A. Mutalib of the University of Putra Malaysia), Nepal (Mr. Jiwan Prasad Rijal of the National Forensic Science Laboratory, Lalitpur), Pakistan (Mr. Zia Ur Rahman of the University of Punjab, Lahore) and Zambia (Mrs. Linda Sikawa of the University of Teaching Hospital, Lusaka), and two representatives from Sri Lanka (Dr. P. K. Samarajeewa of PGRC and Dr. F. Sirimali of the University of Jayaverdhenepura) besides 12 scientists from India participated in the course. However, the nominees of Bhutan and Peru could not attend this event.

The resource persons for this course were drawn from the faculty of CDFD and the Centre for Cellular & Molecular Biology (CCMB) of the Indian Council of Scientific and Industrial Research (CSIR), which has been involved in

research and development in DNA fingerprinting for a number of years. Dr. Lalji Singh, Head of the Centre for DNA Fingerprinting & Diagnostics (CDFD), who pioneered this work at the CCMB, was the course Director and was supported by his associates. The Course comprised ten presentations covering bacterial genetics, human genetics, population genetics, statistical analysis, structure of DNA, principles and applications of DNA fingerprinting, Polymerase Chain Reaction (PCR), detection of genetic disorders by Restriction Fragment Length Polymorphism (RFLP), automated fluorescence analysis of RFLP and automated DNA sequencing. It included practical work on propagation and maintenance of bacterial strains, isolation of plasmid and bacterial DNA, vector-hot systems, molecular cloning, automated DNA sequencing and DNA fingerprinting of samples of human, animal and plant origin including isolation of DNA, restriction digestion gel electrophoresis, southern blotting, preparation of radioactive and non-radioactive probes by various techniques, blot hybridisation, autoradiography and phosphor imaging, enzymatic detection and interpretation of DNA fingerprinting patterns.

The participants had to undergo hands-on training and had to themselves also perform experiments under expert guidance. The participants in the Training Course also attended a one-day symposium on Genome Analysis: Recent Trends and Applications, which was organized at the Centre for Cellular & Molecular Biology (CCMB), Hyderabad.

Dr. Pushpa Bhargava, former Director CCMB distributed certificates to all the participants.