Distinguished Visitor Programme

Prof dr GertJan B. van Ommen
Head, Department of Human Genetics, Center for Human and Clinical Genetics
Director, Center for Medical Systems Biology, Leiden University Medical Center

Biography

Gert-Jan van Ommen received his Ph.D. in 1980 from the University of Amsterdam, where he studied transcription and splicing in yeast mitochondria.

From 1980-1983 he worked as a postdoctoral fellow in the Pediatrics Department of the Academic Hospital of Amsterdam to study congenital hypothyroidism in humans and a goat model system. In this time he mapped, cloned and characterized the 330 kb thyrogbulin gene. In 1983 he joined the group of Peter Pearson, head of the Department of Human Genetics of the Leiden University, to study Duchenne muscular dystrophy. In 1991 he became head of the department.

He contributed to the mapping and cloning of the DMD gene, has determined its structure and size of 2.5 Mb and is still involved in basic and clinical studies of DMD, other muscular dystrophies, Huntington disease and other neurological disorders. He has contributed to the development of Pulsed Field Gel technology, multicolour in situ hybridisation and other research and diagnostic technologies. eg. The Protein Truncation Test, a widespread mutation detection method, has been developed in his group. Besides the research interest, his group maintains the 'Leiden Dystrophy Pages' (www.dmd.nl), the worldwide website for muscular dystrophy (ca 20.000 hits/month), and runs a national genomics technology facility, the Leiden Genome Technology Center.

Lecture Abstract

26 July 2004, 30 Biopolis Way, Matrix Building, Level 4, Theatrette 3A, Singapore 138671, 6.15 pm - 7.15 pm

"From HUGO to Health Care - The Genes, The Genome and The Global Benefits"

The Human Genome Project, the sequencing all of our DNA and the functional characterisation of our 30,000 genes will have major impact on biomedical research and its translation into therapeutic and preventive health care. The increased insights into health and disease gained from applying powerful informatics to high-throughput molecular studies, jointly denoted, as "Medical Systems Biology" will open great perspective for pharmacological and genetic therapies. The rapidly expanding area of "pharmacogenomics" aims to define our diseases more precisely, as well as our person-to-person differences in susceptibility to disease and sensitivity to medication. This will allow us to develop more potent drugs, potentiate existing ones and reduce adverse drug reactions. However, the optimal benefits from the current knowledge explosion will only be realised when the basic data are made and kept publicly accessible, while at the same time ensuring the protection of intellectual property arising from downstream inventions. Similarly, the safeguarding of individual privacy must be balanced with the potential population benefit of large "biobank" studies. These issues are the focus of HUGO, the international Human Genome Organisation, established 15 years ago to assist coordinating data acquisition and exchange, and societal implementation of the genome project. Additional areas of attention in this historic endeavour are the prevention of stigmatisation and discrimination, and the safeguarding of a worldwide balance in the contribution by - and benefits to - different populations, in respect of diverse cultures and traditions.