

THE CHINESE UNIVERSITY OF HONG KONG

FORTY-FOURTH CONGREGATION

Conferment of the Degree of Doctor of Science, *honoris causa*

A Citation

Professor Tsui Lap-Chee, OC, DCL, DSc, FRS

Conventionally when a patient seeks medical attention, treatment is based on the patient's symptoms. However, in recent years the medical and biological sciences have advanced so far that one can actually go beneath symptoms and look for the root causes of various complaints. Professor Tsui Lap-Chee's work is concerned with the latter approach as he has been credited with opening one of the secret doors to the mysteries of genetic disorders.

Cystic fibrosis is a chronic disease of the glands of external secretion. It affects respiratory passages, pancreas, liver and sweat glands. Between one and ten in every thousand children born in the United States alone are inflicted with this hereditary disease which results in respiratory infection, infertility among male patients and early death. Tracking down the deadly gene is, however, no easy task. It has been likened to looking for a needle in a haystack or, to use a more contemporary phraseology, a house without a number and without even its street name in a town that the scientist has never set foot in. The only thing the scientist has to go on is that patients of cystic fibrosis tend to have high sodium chloride in their sweat, but identifying this abnormal gene that blocks the movement of chloride in and out of cells -- causing water to be drawn into the cells, and so the cell surface to be covered with mucous -- requires state-of-the-art expertise, perseverance and originality. Professor Tsui has been hailed rightly as one of the pioneers to identify the gene. Furthermore, the technique used in his research also has significant implications for other hereditary diseases as well. Small wonder that Science Year chose Professor Tsui's findings as one of the most memorable, exciting, and important discoveries of the year (1990).

Professor Tsui was born in Shanghai and received his education in Hong Kong. He read Biology at both undergraduate (B.Sc. 1972) and postgraduate (M.Phil. 1974) levels at The Chinese University of Hong Kong. He was already known for his determination in his approach and charm in dealing with people around him -- qualities which

are essential in his future research which requires perseverance and leadership in a major research project. After he had finished his doctoral studies at the University of Pittsburgh, he moved to Canada in 1981 to work with Dr. Jack Riordan and Dr. Manuel Buchwald at the Hospital for Sick Children in Toronto. In 1983, Professor Tsui joined the Genetics Department and Research Institute at the Hospital for Sick Children and was appointed to Sellers Chair in Cystic Fibrosis Research in 1989. He also holds concurrent appointments in the Department of Medical Genetics and Medical Biophysics at the University of Toronto. From 1991 he was also named Howard Hughes International Scholar. Professor Tsui's publications exceed a hundred, including one book, numerous papers, chapters in books and reviews. For his achievement, he has since 1989 received numerous prestigious awards and honours, including among others: Royal Society of Canada Centennial Award (1989); Fellow, Royal Society of Canada (1990); Fellow, The Royal Society of London (1991); Order of Canada (Officer) (1991); The Cresson Medal, Franklin Institute (1992); and Elected Member, Academia Sinica (1992).

One often thinks of a scientist's work as being specialist in nature and confined to a laboratory. In Professor Tsui's work, however, we see not only a successful probe into the most fundamental and microscopic component of the human body, but also imminent cures for both cystic fibrosis as well as other hereditary diseases. For his outstanding achievement and his dedication to the well-being of innumerable patients, may I ask you, Mr Chancellor, to bestow upon our distinguished alumnus, Professor Tsui Lap-Chee, the degree of Doctor of Science, *honoris causa*.

15th October, 1992