PRESS RELEASE
WINNERS ANNOUNCED
1994/1414H KING FAISAL INTERNATIONAL PRIZE
FOR
MEDICINE

Topic: Medical Applications of Genetic Engineering

The Selection Committee of the King Faisal International Prize for Medicine has awarded the 1994 Prize in the above topic to:

PROFESSOR WILLIAM FRENCH ANDERSON
and
PROFESSOR ROBERT WILLIAMSON

Professor W. French Anderson, the founder of gene therapy, is a US citizen who was born in 1936 in Tulsa, Oklahoma. Professor Anderson's research started with the study of gene expression in mammalian cells and the development of retroviral vectors for the transfer of genetic material in somatic cells. This innovative work led towards his interest in immunodeficiency caused by a defective gene that regulates the synthesis of the enzyme adenosine deaminase, causing what has, until now, been a rapidly lethal disease. His investigations into this distressing problem culminated in his recent pioneering study in which he was the first person to show that a human genetic disorder can be corrected by gene therapy. In September 1990 Professor Anderson infused gene-corrected T-lymphocytes into a four-year-old girl suffering from this disease. This courageous first step has opened the way to further clinical trials. Moreover, Professor Anderson has now used gene transfer to mark tumor infiltrating lymphocytes which may open the way to a completely new way of treating certain types of cancer. In addition, Professor Anderson has led the extremely important search for clear ethical guidelines for the future deployment of this radically new approach to the relief of human suffering.
Professor Robert Williamson, a British subject born in Cleveland, Ohio, in 1938, graduated in chemistry in University College, London, in 1959 and obtained his doctorate there in 1963 for research on ribosomal structure and function.

Professor Williamson's contributions have made an enormous impact on the development of human molecular genetics. His early research was on the molecular biology of the abnormal 21obins in thalassaemia which led to the demonstration of the use of beta-globin-coding DNA fragments for the prenatal diagnosis of thalassaemia. Subsequently he investigated various diseases caused by a single gene dysfunction. He was the first to develop a probe for cystic fibrosis that can be employed for screening on a community basis and is now utilized internationally. Most recently, Professor Williamson and his team have succeeded in demonstrating the existence of a gene mutation associated with familial Alzheimer's disease and the production, in this prevalent degenerative neurological disease, of an abnormal form of beta-amyloid. Thus, Professor Williamson, whose work in this field has been truly pioneering, has not only characterized the molecular aspects of several diseases but also utilised the techniques of genetic engineering to further our understanding of the clinical aspects and diagnosis of these disorders.