Speech of Professor

M.F. Greaves

On the Occasion of the Awarding of the
King Faisal International Prize 1988 (1408.H.)

Your Royal Highness Prince Nayif bin Abd Al-Aziz

Your Highnesses, the Princes
Your Eminences, the Ulama
Your Excellencies
Ladies and Gentlemen

I am greatly honoured that your Committee has awarded me the 1988 King Faisal International Prize for Medicine, jointly with Professor Rowley.

During the fifteen years that I have carried out research into Leukaemia, I have had the good fortune to collaborate with many outstanding physicians and scientists throughout the United Kingdom and, in more recent years, in many other parts of the world. I should also like to acknowledge the support of my family and of the medical charities that have sponsored my research. in the U.K. — the Imperial Cancer Research Fund and, since 1984, the Leukaemia Research Fund. My early training was as a zoologist but I had the good fortune to be introduced to the subject of immunology by the late Sir Peter Medawar, a Nobel laureate and one of my country's most outstanding scientists. In the late 1960's and 70's, immunological science was at the forefront of bio—medical research as we began to understand for the first time the basic cellular and biochemical mechanisms underlying the body's immune response to infections. My studies at this time focussed on the fundamental properties of blood white cells, called lymphocytes, and set the foundation for the work on Leukaemia and lymphoma which$_1$ I and others were then able to embark upon in the early 1976's.

Using immunological techniques, we were able to identify different types of lymphoid cells and to isolate and characterise important molecules from these cells. These studies led to the appreciation that childhood Leukaemias were of diverse cellular origins and that the Leukaemic cells represented different varieties of normal lymphoid cells, as in a family tree or pedigree. Furthermore, the Leukaemic cells were discovered to be permanently immature; their development had been arrested. These and similar observations on adult Leukaemia and lymphoma were important in that they provided the biological basis for some of the considerable variability in prognosis that exists. They led also to the introduction of new diagnostic techniques for clinical and epidemiological studies, as well as to the introduction of novel forms of therapy using antibodies.

In 1984, aided by a most generous gift from your Majesty, the Leukaemia Research Fund established, in London, the Centre for the study of the Cellular and Molecular Biology of Leukaernia of which I am Director. This enabled us to expand our efforts to investigate the control of normal blood cell production and to identify molecular changes in Leukaemic cells. Discoveries in these fields are now helping us to better understand the biology of Leukaemia and provide us with exciting new approaches to diagnosis and therapy.

Much remains to be done. Despite major advances in the treatment of some forms of Leukaemia, especially in children, other types of the disease remain difficult to treat successfully. We still do not know the cause of most forms of are relatively common in Saudi Arabia and other countries of the Middle East. We can look forward however with optimism to the next decade during which a combined attack by molecular, immunological, epidemiological and clinical techniques will, I am sure, enable us to control these once lethal forms of cancer.

I thank you for your kind hospitality and your most generous support and encouragement for my work.

Finally, on behalf of medical research workers throughout the world, may I take this opportunity to thank your Majesty and all Saudi people for the immense support that you have given and continue to give which enables us to fight disease and suffering.