News
The University of Texas Health Science Center at Dallas
5323 Harry Hines Boulevard Dallas, Texas 75235 (214)688-3404

Feb. 25, 1983

CONTACT: Liz Willding
Office: 214/688-3404
Home: 214/481-6601

***World authority on transplant and tumor rejection to speak at UTHSCD Feb. 28 and March 1.

DALLAS--One of the world's leading experts on why our bodies reject solid transplants and tumors will give two lectures at The University of Texas Health Science Center at Dallas.

Professor N. Avrion Mitchison, fellow of the Royal Society and Godrell Professor of Zoology and Comparative Anatomy at the University College, London, will speak Feb. 28 at 4 p.m. in Room D1.502 on "Solution of the Major Histocompatibility Problem." March 1 he will speak at 5:30 p.m. in L4.152 on "Immunoregulatory Allospecific T Cells."

Mitchison is invited to speak as the first Visiting Professor of Immunology. His visit is sponsored by the Cancer Immunology Training Program and the Graduate Program in Immunology. Funds for the professorship, which will become an annual event, were given by the Texas Chapter of the Ladies' Auxiliary, the Veterans of Foreign Wars.

J. Wayne Streilein, M.D., professor of Cell Biology and Internal Medicine and chairman of the Graduate Program in Immunology, hosts the guest lecturer during his health science center visit.

Mitchison trained in the laboratory of 1960 Nobel Prize winner Sir Peter Medawar. Medawar shared the Nobel Prize with McFarlin Burnett for the demonstration of neonatal transplantation tolerance in mice.

"They showed that, if you introduce foreign tissue into a newborn mouse, you could 'fool' its body into tolerating tissue from the same source throughout its life," Streilein explained.

Mitchison was working in Medawar's lab about the same time that he and Dr. R.E. Billingham, now chairman of the Department of Cell Biology at UTHSCD, were working on their neonatal tolerance studies.

Mitchison first proved that lymphocytes (now known as T cells, a type of white blood cell) are responsible for rejection of solid tissue transplants and tumors.

"If the body's immune system is functioning properly, these T Cells, commonly thought of as the killer white cells, recognize transplanted and tumor cells as foreign substances and attack and destroy them," Streilein explained.

"T cells are able to distinguish between normal and foreign cells by specific markers, or antigens, that are present on the surface of each cell."

Streilein said having proved this to be true, Mitchison has spent the last 15-20 years trying to understand how T cells recognize these antigens, especially on tumor cells. His most recent work focuses on the role of cell surface markers coded by genes of the major histocompatibility complex.

The major histocompatibility complex, in humans called "HLA," is known to restrict antigen recognition by T cells. "Every species has a major histocompatibility complex," Streilein explained. "Generally, the components of my HLA system are foreign to you; yours are foreign to me. One's own HLA components are used to guide one's own T cells to recognize all other environmental (foreign) antigens."

-over-

This is ideally how our systems should function; however, such is not always the case, especially with cancer. "Cancer may be a case," Streilein said, "where disease results from a failure in the T cell system's ability to discriminate between 'self' and foreign 'non-self' tissues."

Mitchison's work explores this question, focusing on defects in the major histocompatibility complex as a possible factor.

Mitchison and the Ladies' Auxiliary, the Veterans of Foreign Wars, will be honored following the 4 p.m., Feb. 28 lecture in the A.W. Harris Faculty-Alumni Center. The reception is sponsored by the Cancer Immunology Training Program and the Graduate Program in Immunology.

####

DISTRIBUTION: AA, AB, AC, AF, SC