

SYDNEY BRENNER**A*STAR**

Dr. Sydney Brenner was born 13th January 1927 in South Africa, attended the University of Witwatersrand, Johannesburg, South Africa and obtained his D. Phil. at the Physical Chemistry Laboratory at Oxford University, England in 1954.

In 1956, he joined the Medical Research Council Unit in Cambridge, which later became the MRC Laboratory of Molecular Biology. Dr. Brenner was its Director from 1979 to 1987.

Dr. Brenner has made many scientific contributions to molecular biology and genetics and was awarded the Nobel Prize in Physiology or Medicine in 2002 (together with Dr H Robert Horvitz and Dr John Sulston) for work on *Caenorhabditis elegans*.

Dr Brenner has been associated with the development of biomedical research in Singapore from 1983 and at present is a Senior Fellow of A*STAR.

Abstract**Is Administration Necessary?**

Nearly all man-made organizations require an administrative structure, especially when they grow in size and diversity. Partly this is required to secure synchronization of action but it is also required to decrease the number of interactions between individuals in order to direct enough effort to the performance of their tasks. The number of interactions rises with the square of the number of individuals while output can only increase linearly. This is also the reason for group meetings; it is to make sparse matrices.

Biological systems have to deal with similar problems but do it without a command structure; I will discuss how this is achieved in two very different examples: one, the bacterial cell and secondly in the evolution of the retina.