

PRESS RELEASE
WINNERS ANNOUNCED
1986/1406H KING FAISAL INTERNATIONAL PRIZE
FOR
SCIENCE

Topic: BIOCHEMISTRY

The Committee of the King Faisal International Science Prize met in Riyadh from 2/4/1406 to 4/4/1406 H. (14/12/1985 - 16/12/1985). It noted that the Prize had been advertised throughout the World in specialized international scientific publications as well as in as in newspaper, and the details had been communicated to Scientific Institutions, Universities and Learned Societies. Nominations, were received by the Secretariat General, were on behalf of research workers from around the World. These nominations were scrutinized by an international panel of experts. The Science Committee studied all the cases and decided to award the King Faisal International Prize in Science for 1406 H. (1986) to **Dr. Michael John Berridge** (Senior Principal Scientific Officer, Unit of Insect Neurophysiology and Pharmacology, University of Cambridge, England) for his outstanding work in Biochemistry and in particular for his discovery of a new 'second messenger' responsible for the regulation to cellular activities.

The way in which cells respond to external signals is a major problem in cell biology. Many of these signals act through calcium the biochemical mechanism responsible for generating this signal as long been a mystery.

Dr. Berridge achieved a major breakthrough by the discovery of a new system for regulating cell activity. The precursor for the signal is a lipid component of the cell membrane which is cleaved by the external signal to give a water-soluble messenger. As this messenger diffuses into the cell, it excites a great variety of cellular processes including those occurring in muscles, glands, liver, eyes, nerves and eggs. Since many growth factors use this signal, it is evident that this new pathway is fundamental to our understanding of how cells grow. The discovery of a new second messenger has attracted world-wide attention because of its relevance to all aspects of cell regulation in both health and disease. The knowledge emerging from this

discovery will benefit mankind through the new insights it gives into a number of disorders such as blood pressure, defects of blood clotting, inflammation, manic-depressive illness and cancer.