

AWARD OF MEDALS

The Seventy-five Annual Award of Medals was held on Monday, June 10, 1985, at 10:00 a.m., in the presence of His Majesty the Emperor.

The function was opened with an address by the President, in which he made a brief statement of each award. Then the Medals and Prizes were presented to the respective recipients.

After this, congratulatory addresses were given by the Prime Minister and the Minister of Education, Science, and Culture.

The function was closed at 11:35 a.m.

THE RECIPIENTS OF PRIZES AND THE SUBJECTS OF THEIR STUDIES

Ryo SATO

Studies on the Microsomal Monooxygenase System

The microsomal monooxygenase (electron transfer) system is an enzyme system that is located in microsomes of various animal tissues and catalyzes the incorporation of one oxygen atom from molecular oxygen into certain lipids and a large variety of foreign compounds. It plays a crucial role in lipid metabolism as well as metabolic disposal and detoxication of xenobiotics such as drugs, food additives and environmental pollutants. It is also involved in metabolic activation of carcinogens and in attenuation of their oncogenicity as well. Despite its biomedical importance, this enzyme system had eluded the attention of researchers until Dr. Sato's intensive studies initiated in the early 1960s. It is no exaggeration to say that the wealth of information accumulated, concerning this enzyme system, has stemmed largely from his pioneering work.

In 1962, Dr. Sato discovered that a microsomal carbon monoxide binding pigment, which he termed "P-450" (now called cytochrome P-450), is a hemoprotein, in spite of its anomalous spectral properties. This discovery is of special importance, because P-450 has since been shown to be an enzyme directly responsible for many of the microsomal monooxygenase activities. By using an ingenious method, he also succeeded for the first time, in purifying a species of P-450, an unusually labile protein, to homogeneity from liver microsomes. This method and its modifications have permitted the isolation of pure