LA JOLLA, Oct. 2 -- A scientist who pioneered the application of DNA research to the study of human disease, particularly sickle cell anemia, will receive the 11th annual Waterford Biomedical Science Award. The award is administered by the Research Institute of Scripps Clinic.

Dr. Yuet W. Kan, professor of medicine at the University of California, San Francisco, was selected in recognition of his contributions to the field of human genetics over the past 15 years.

The award will be presented at a dinner Oct. 6 at the La Valencia Hotel, La Jolla.

"While Dr. Kan has dealt primarily with abnormalities of hemoglobin genes, his work and his pioneering methodology have profoundly affected the way in which human geneticists approach all genetic disease," said Dr. Richard Lerner, Research Institute director.

Waterford Glass, Ltd., of Dublin, Ireland, established the award in 1976 to encourage fundamental research that leads to practical medical advances. The award is a crystal trophy and $15,000. Any scientist who has made significant contributions to biomedicine is eligible.

(More)
Kan's initial impact on genetics came in the early 1970s, after it became possible to detect a variability in the fine structure of DNA—before then, it was possible only to measure changes in the products of genes, not in the genes themselves or in the stretches of DNA that surround them.

In 1974, Kan discovered that alpha-thalassemia, a type of hereditary anemia common among blacks, was caused by actual deletion of the gene for the alpha-globin hemoglobin chain. Additionally, he discovered that among blacks, 30 percent of the chromosomes contained only a single alpha-gene, rather than the normal two.

Kan's further research into the genetic mutation that causes sickle disease made possible the diagnosis of sickle cell anemia without actually sampling blood from the unborn child. More recently, he developed the technology to detect prenatally the sickle mutation itself.

A 1958 medical graduate of the University of Hong Kong, Kan received further training at the Presbyterian University Hospital, Pittsburgh, the Royal Victoria Hospital, McGill University, Montreal, and served on the pediatrics faculty at Harvard Medical School, Boston, before joining UCSF in 1972.

His contributions to human genetics have been recognized previously by the Gairdner Foundation Award, the Lita Annenberg Hazen Award for excellence in clinical research, the Allan Award of the American Society of Human Genetics, and a Howard Hughes Investigatorship. Associate editor of Clinical Genetics and past member of the Sickle Cell Disease Advisory Committee, National Institutes of Health, Kan has been elected to the Royal Society, London, and the National Academy of Sciences.

Kan will present an open lecture, "Thalassemia: A Model for Molecular Medicine," at 4 p.m., Oct. 6, in the Amphitheater of the Green Hospital.