

UC's Howard Hughes Bonanza

By David Perlman
Science Correspondent

Medical research at the University of California here has reaped a bonanza of nearly \$4 million from the empire of the late Howard Hughes, it was disclosed yesterday.

The money, committed at the rate of \$780,000 a year for the next five years, is financing a new laboratory to study human genetic diseases and paying the salaries of five outstanding researchers.

The funds have been awarded by the Howard Hughes Medical Institute of Miami, a little-known and controversial organization that owns all the stock of the giant Hughes Aircraft Corp. and that may inherit far more when all the legal battles over the Hughes wills have ended.

The Hughes Medical Institute, which has been supporting about 60 young scientists around the coun-

try in recent years, was founded in 1953. It is now greatly expanding its research awards, apparently to forestall complications with the Internal Revenue Service, according to recent reports in the scientific community.

Whatever the institute's tax problems and politics may be, the result is a big windfall for medical research, and UC is sharing in it.

Dr. Julius R. Krevans, dean of the UC medical school here, announced the new awards yesterday.

A total of \$480,000 a year is going to a newly-created genetic disease laboratory at San Francisco General Hospital, headed by Dr. Yuet Wai Kan, UC associate professor of medicine.

Kan has recently developed and successfully applied a new prenatal test to diagnose such major hereditary blood diseases as sickle cell anemia and the lesser-known thalassemia, which is widespread

and lethal in many Mediterranean countries.

The five researchers, whose combined financing from Hughes totals about \$300,000 a year, are working at UC Medical Center on a variety of basic research projects in genetics and endocrinology. The scientists are:

Dr. David W. Martin Jr., a biochemist and UC's chief of medical genetics. His studies of inherited enzyme defects in cells cultured in the laboratory have already led to new efforts aimed at treating similar defects in human patients.

Dr. Stanley Prusiner, a neurologist. His studies of rare nerve diseases in animals and humans have led him to investigate a mysterious class of virus-like particles that may act as infectious agents and at the same time insert themselves into the genes to become hereditary disease-bearers as well.

Dr. John D. Baxter, a biochemist, is studying how hormones act on cells to influence the way they express genetic information. These processes are involved in problems as varied as the development of drug resistance in leukemia, the synthesis of growth hormones, and perhaps even the genetics of high blood pressure.

Dr. Charles J. Epstein, a specialist in genetic counseling, is researching the ways in which chromosome abnormalities give rise to birth defects and is seeking new techniques for diagnosing genetic disorders early in pregnancy.

Dr. Herbert W. Boyer, a biochemist who is one of the leaders in the new research field where genetic material has been experimentally transferred from one species of organism to another.

This kind of "genetic engineering" is believed to hold great promise for correcting hereditary illnesses, for the creation of hybrid bacteria to serve as vaccines, and for the development of new plant species capable of synthesizing their own fertilizers.

The Hughes institute also finances investigators at 11 other American medical centers, including Stanford. Four Stanford researchers are being supported by about \$200,000 a year from the Florida organization.