How to Succeed in Biomedical Research

A new foundation has given a boost to a revival of private philanthropy in the field of biomedical research by announcing a substantial program of awards to help young scholars establish themselves in research careers. The Lucille P. Markey Charitable Trust will offer both salary and research support during the scholars' postdoctoral training and the first 5 years of faculty membership. The plan is to appoint 16 scholars annually, eight with Ph.D.'s in one of the biomedical sciences and eight with M.D. or Ph.D./M.D. degrees.

The program is designed to enable the scholars to devote full time to research and prepare to compete successfully at the end of the award period for research support from the dominant federal granting agencies. The buildup of federal funding for biomedical research after World War II caused private foundations to shift their resources to other endeavors. Tight federal research budgets in recent years have made it especially difficult for young scientists to establish themselves in research careers and the Markey program is designed to help meet that problem.

On the personal income side, the program observes current market differentials. Stipends for Ph.D.'s will start at $25,000 for the first postdoctoral year and those for M.D.'s at $30,000. In the first faculty year, Ph.D. salaries will be set at $35,000 and M.D.'s at $45,000 with each increasing by $5,000 increments in every subsequent year. Research support in the two categories will be equal. Support has been set at $15,000 a year during the period of postdoctoral study. In the first faculty year, such support will jump to $60,000, declining to $15,000 in the fifth year on the theory that the scholars should be ready by then to make their own way in the competition for grants.

The Markey trust was established in the will of Lucille P. Markey who died in 1982 (*Science*, 3 February, p. 267). Concentrating on basic medical research, the trust will disburse its assets over 15 years. The Markey estate is still in the process of settlement, but is expected to provide for outlays averaging $40 million a year over that period.

The trustees and their advisers are still engaged in designing the overall program for the trust. In April, however, the trustees approved grants totalling $5.4 million to 15 institutions for partial support of three consecutive classes of predoctoral students in the biomedical sciences. The individual institutions will receive $360,000 over the period. Earlier, the trust made grants totaling $5.6 million to institutions in which Mrs. Markey had been a contributor during her lifetime, including $5 million to the University of Kentucky Medical School.

—JOHN WALSH

Nam P. Suh Named to Head NSF Engineering Program

Massachusetts Institute of Technology (MIT) professor Nam Pyo Suh has been tapped by the White House to be an assistant director of the National Science Foundation in charge of NSF's expanding engineering research and education program. Suh's appointment, which requires Senate confirmation, will fill a post that has been occupied by an acting assistant director for a year.

Suh, 48, is a professor of mechanical engineering at MIT and director of the Laboratory for Manufacturing and Productivity there. His main research interests are in such fields as manufacturing, materials processing, and tribology (study of the phenomena associated with friction). He has served frequently as a consultant to industry and to government agencies and is chairman of the board of the Axiomatics Corporation and Mixalloy Corporation. Suh, who was born in Korea, is a graduate of MIT and earned his Ph.D. at Carnegie-Mellon University.

The NSF engineering directorate, which Suh is to head, will be responsible for spending some $147 million in the fiscal year that starts on 1 October, about 10 percent of the total NSF budget.

Although funds for engineering have increased nearly 50 percent in the last 2 years, NSF has been under pressure from the engineering community and its partisans to make a stronger effort to meet the special needs of engineering.—JOHN WALSH

Cohen-Boyer Patent Finally Issued

Stanford University and the University of California have finally prevailed in their long struggle for a key biotechnology patent. The new patent, which was awarded on 28 August, covers hybrid plasmids that are used to transfer genes from one organism to another. It complements and strengthens a broad patent awarded to the universities in 1980 covering the basic techniques used in gene splicing.

The new patent, which is based on the work of Stanley Cohen of Stanford and Herbert Boyer of the University of California at San Francisco, was first applied for in 1974. The Patent Office rejected the application 2 years ago but has now approved most of the universities' claims. (Cohen and Boyer have waived their rights to personal royalties; the proceeds are used to support education and research at the two institutions.)

The application was initially rejected on three chief grounds: a claim by a third scientist to be a coinventor; doubts about whether information in the claim enables others to duplicate the plasmids; and a dispute over whether the claim should be restricted to plasmids that function in prokaryotic cells or whether it should also cover plasmids that function in yeast cells.

The first two issues were decided in the universities' favor; the third was not resolved. In order not to hold up the process any longer, the universities withdrew their claims covering use of yeast plasmids and are now pursuing them in a separate patent application. Thus, the patent issued last month applies only to plasmids used to transfer "foreign" genes into bacteria and other prokaryotes.

In essence, the patent covers any bacterial plasmid into which foreign genes have been spliced and which is capable of replicating in a prokaryotic cell. Since, for the near term at least, commercial applications of gene splicing are likely to involve bacteria rather than yeast, the universities have claimed that the combination of the original gene-splicing patent and the new patent on hybrid bacterial plasmids provides proprietary control over the basic techniques and tools used in biotechnology.—COLIN NORMAN