"Venture Capital" for Biomedical Research The Strategic Role of the Private Foundations

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Purnell Choppin observes in this issue (p.16-17) that the "health of the biomedical research enterprise [in the United States] is inseparable from the health of the NIH." Since two-thirds of federal support for biomedical research in this country goes into or through the NIH, and since that amounts to one-third of total national support for basic research in biomedicine, one can only agree with the statement of the Howard Hughes Medical Institute.

Nonetheless, the Hughes organization, which will disburse about \$230 million in 1988, is certainly making a mark on the course and character of U.S. biomedical research. With assets of \$5 billion and an annual budget comparable to that of a mid-sized institute at the NIH, HHMI has focused professional and public attention on non-governmental funding sources.

Besides government and industry support for biomedical research, and that of HHMI (a medical research organization), private nonprofit foundations play an important role. These include both operating foundations (largely disease-specific charities that rely on voluntary contributions, such as the American Cancer Society) and private founda-

tions. A newsworthy example of the latter is the Lucille P. Markey Charitable Trust, which last month gave \$75 million to 11 universities and research organizations (see p. 4). Between now and 1997, when the Markey Trust expires, it will hand out over \$400 million—all for biomedical research.

The Pew Charitable Trusts

Another private foundation supporting biomedical research is the Pew Charitable Trusts, a collection of seven individual funds established between 1948 and 1979 by the children of Joseph Newton Pew, founder of the Sun Oil Company. Headed by neurosurgeon Thomas W. Langfitt since February 1987, the Trusts disbursed \$138 million last year in seven areas: health, education, culture, religion, public policy, human services, and conservation. Approximately 20%, or \$28 million, went for biomedical research and education. Since 1980, the Trusts have become one of the largest private supporters of biomedical research in America, eclipsed only by the special cases of HHMI and the Markey Trust.

The Pew Trusts make grants in health areas both in response to requests and, increasingly, for programs they initiate. In this case, the Trusts' staff design a program and then seek out those organizations that would most successfully participate in the initiative. Three current trust-initiated efforts in the biomedical sciences are the Pew Scholars Program in the Biomedical Sciences (\$13 million) for the support of young investigators in basic and clinical research over four years. The Pew Neuroscience Program (\$8.3 million) for the clinical applications of new biomedical knowledge at five research centers, and the Pew National Nutrition Program (\$5.9 million) for multidisciplinary research and education in nutrition at five centers of excellence.

To ensure that their contributions would be distributed most effectively. the Trusts conducted a study of biomedical research funding by the federal government, operating foundations, and private foundations. Last month they published their findings in U.S. Funding for Biomedical Research by Zoe E. Boniface and Rebecca W. Rimel. Crisply written and illustrated with numerous tables, this 65-page report gives a concise overview of biomedical funding institutions and some of their respective strategies. (The report is available without charge from The Pew Charitable Trusts, Suite 501, Three Parkway, Philadelphia, Pennsylvania, USA, 19102-1305; telephone (215)587-4048. Limit of five copies per request.)

Funding Risk in Research

After mapping out the role and extent of support for biomedical research by government agencies and by some 14 operating foundations, the report focuses on the history and current status of private foundation support. Of special interest are Tables 15-16, which provide statistics unavailable elsewhere on biomedical funding in fiscal year 1985 by 19 private foundations (compiled from their annual reports).

The authors note that in contrast to government and industry, private foundations are only a "minor sector of the community which funds biomedical research." However, they continue, "foundations can maximize the value of their comparatively small funds by addressing areas which the NIH is neither able nor best suited to support" (p. 41). They refer to the "cutting edge of in-novation," the support of "untried researchers" and of "politically controversial" research such as contraceptive technology, as well as to health problems of the Third World which have low priority in this country. "Foundations therefore can make substantial contributions through the support of young researchers at the beginning of their careers and/or of emerging or underfunded areas of inquiry which suit a given organization's purpose and goals" (p. 41).

The Pew Trusts aim to leverage their funding to ensure the greatest impact. The trust-initiated programs are designed specifically to "foster collaboration between the basic and clinical sciences as a counterweight against the momentum of specialization which causes the foci of research to drift apart," while the establishment of centers of excellence encourages innovation. "The Pew Charitable Trusts," state the authors, "feel a duty to take risks which other sectors of the funding community cannot afford" (p. 43).

The "venture capital" invested by the private philanthropies is a vital but often overlooked component of the biomedical research system in this country. I suspect that the impact of these risktaking private foundations will far exceed the size of their outlays and that their strategic role will become increasingly apparent.