Fredrickson To Be VP of Hughes Institute

Donald S. Fredrickson, former director of the National Institutes of Health (NIH), has been named a vice president of the Howard Hughes Medical Institute. According to Hughes president George Thorn, professor emeritus at Harvard, the 30-year-old Institute now spends about $20 million a year on research at 12 U.S. medical centers. Fredrickson's first assignment is to undertake a "complete review of the research program and administrative operation," Thorn told *Science*.

Such a review is needed in particular because the Institute has yet to finally resolve a long-standing battle with the Internal Revenue Service (IRS) over whether it should be legally defined as an "operating institute" or a "private foundation" (*Science*, 19 January 1979, pp. 250–252). The Institute, which owns 100 percent of the shares of Hughes Aircraft, currently spends its aftertax revenues on research. Were it to be ruled a foundation, it would have to divest itself of some of the Hughes stock and spend at least 6 percent of its net worth every year on research. The Institute, which long operated under a shroud of secrecy akin to that of the late billionaire recluse, has no interest in giving up ownership of Hughes Aircraft or in operating as a foundation. According to Thorn, the issue is close to resolution. "The IRS now says we qualify as an 'institute,' " he says, but the ruling is not final. Therefore, it is crucial that the Institute adopt an operating style that satisfies the IRS.

At present, the Hughes Institute supports researchers—whom it insists on describing as "employees"—in the fields of genetics, metabolic disorders, and immunology at campuses including Harvard, Yale, Johns Hopkins, and the University of California at San Francisco. Within the next year or two, the Institute, which handpicks its researchers and does not accept routine applications, plans to expand into the neurosciences. It also plans to enhance its "operating institute" status by building or renovating laboratory space at those select universities where its "employees" work as faculty. Approximately $18 million in capital expenditures will be allocated in the next 3 years, reports Thorn, adding that "Hughes Aircraft is doing very well."

Eric Poggenpohl

Donald Fredrickson

His review could help Hughes with the IRS.

Fredrickson, who described the Institute as "trying to capture a sense of itself," intends not only to review its present research programs, but also to think about ways in which Hughes, as a "private organism" can best relate to the academic world. Since leaving NIH in June 1981, Fredrickson has been a scholar-in-residence at the National Academy of Sciences, where he shepherded a study on "Government-university relationships in support of science," to be released this spring. Headquarters for the Hughes Institute are in Miami; Fredrickson will remain in the Washington, D.C., area.—**BARBARA J. CULLITON**

Biotech Firm Biogen Is Going Public

The genetic engineering company Biogen, headed by Harvard biologist Walter Gilbert, plans to go public and will offer 2.5 million shares in hopes of raising at least $55 million. The money would be used mainly to finance the clinical testing and development of interferon, a blood clotting agent, and a vaccine against foot-and-mouth disease.

Biogen filed a preliminary prospectus on 7 February with the Securities and Exchange Commission. It will be at least several weeks before the shares of common stock will be on the market.

According to the document, the international company is significantly shifting its business strategy. In the past, it has struck agreements with several other larger, established companies to research and develop products. Now Biogen says it wants to retain more rights to produce and market the products it develops.

To date, Biogen, like most other biotechnology companies, has not yet developed any commercial products. According to the preliminary prospectus, the company expects to incur a loss of several million dollars during the first quarter of 1983. Its assets for fiscal 1982 were $73.5 million, a loss of about $5 million from the previous year.

Wall Street may leap at the stock offering, given the company's staff of research superstars, but, then again, investors have become much more sober and sophisticated about gene-splicing companies. They now more closely examine the companies' business and scientific expertise.

In the case of Biogen, two top management positions have changed hands during the past year. In April, the president of the Swiss subsidiary, Robert E. Cawthorn, resigned to join the drug manufacturer Rorer International Corporation. In December, Robert A. Fildes, president of the U.S. division in Cambridge, Massachusetts, resigned to join Cetus, one of the company's major competitors.

The scientific staff, however, remains stable. Gilbert, 50, has been chairman of the board since Biogen was founded in 1978. Gilbert also has retained a position at Harvard's Department of Biochemistry, despite faculty criticism in 1981 of his concurrent job with Biogen. He presently has the title of "senior associate" at the university where he still conducts research and advises students.

Biogen is devoting much of its efforts to develop several interferon products. In particular, it plans to spend about $10 million raised from the stock offering for studies on human immune or gamma interferon. It is already testing the substance in tissue culture and plans to begin preliminary clinical trials in Europe early this year. Biogen, however, faces stiff competition from Genentech which was the first to report the expression

of gamma interferon and the first to file related patent claims.

Biogen is also pursuing two other potentially lucrative commercial products, but more research is needed. The blood clotting agent, Factor VIII, may be used in therapy for hemophiliacs. The animal vaccine could help control foot-and-mouth disease that is endemic to Europe and South America. In 1981, Biogen researchers were the first to clone the antigen of one strain of the virus, but an effective vaccine has not yet been developed.

—MARJORIE SUN

In Vino, Veritas

A federal judge has apparently ended a decade-long struggle by the manufacturers of alcoholic beverages to avoid disclosing the ingredients of their products. In a decision on 8 February, Judge John Pratt ordered the Bureau of Alcohol, Tobacco, and Firearms to require such disclosure within a year, by reinstating a regulation that was enacted under the Carter Administration but canceled by Reagan appointees in 1981, before it ever took effect.

The lawsuit was brought by the Center for Science in the Public Interest (CSPI), which said that the regulation would benefit as many as 1.7 million consumers who are allergic to chemical additives commonly used in beer, wine, and liquor. The center alleged that the regulation was canceled in response to pressure from industry and from California's congressional delegation, acting at industry's behest.

Two months before the Administration's action, 18 California congressmen challenged the regulation in a letter to Treasury Secretary Donald Regan. According to CSPI, most had received substantial campaign contributions from the industry. Senator Alan Cranston, for example, received a total of $8856 from the Wine Institute and two beer manufacturers.

Judge Pratt concluded that the "initial decision to issue the regulation was the result of years of research and careful consideration." The Administration's decision to cancel it was, in contrast, "ill-considered and superficially explained." Little or no evidence was presented in support of claims that it was unduly expensive, unnecessary, or in violation of international commitments.

The rule requires that a list of chemical additives and other ingredients appear on beverage labels, or be provided by mail to consumers who request it. Sulfur dioxide, sodium bisulfite, yellow number 5, potassium metabisulfite, calcium disodium EDTA, propylene glycol, and paraben are among the additives whose presence in various products would become known.—R. JEFFREY SMITH

Animal Welfare Bills On Legislators' Agenda

Federal legislators, who last session sponsored bills to reduce the number of animals used in research, are promising to take up the issue again, but the details of new legislation have yet to be worked out.

Both Representative Doug Walgren (D–Pa.) and Senator Robert Dole (R–Kans.) plan to sponsor measures that would further regulate the treatment of animals in research, but specific proposals probably will not be discussed until after authorization hearings this spring, according to staff aides.

A Walgren staffer said that the congressman is likely to sponsor a bill that is "pretty much the same" as the one he proposed last year. The bill mandated that federal agencies consider alternatives to animal testing and that a federal oversight group be created to accredit researchers to use animals in experiments. The bill passed the House Science and Technology Committee and was considered by another committee during the lame duck session before time ran out.

Dole sponsored the Senate counterpart to Walgren's bill. In this session, however, Dole may introduce a more moderate proposal that does not require accreditation. Such a process is too costly, an aide said. The senator may also ease the proposed requirement that scientists search for alternatives to animal testing, such as tissue culture or mathematical modeling. Dole may propose a measure that simply "encourages" scientists to consider other kinds of testing, the aide said.

Proponents of animal welfare legislation are likely to find fuel for their argument in a recent report by the National Research Council. In the testing of chemical mutagens, "There has been spectacular progress in developing short term tests that use microorganisms and mammalian cell cultures," stated the report, *Identifying and Estimating the Genetic Impact of Chemical Mutagens*. "These tests are sensitive, efficient, reproducible, and inexpensive." The committee recommended that short-term tests be used for the huge number of chemicals that currently need screening and the more expensive mouse tests be reserved for "crucial" chemicals.

—MARJORIE SUN

The Growing Corporate Role in University Budgets

Corporate funding of university research is currently running at about 6 to 7 percent of all academic R & D, according to a recent analysis by the National Science Board.* That is about twice the level that most other studies have reported.

The board's figures indicate that corporations provided between $400 million and $450 million in 1980–1981 through a combination of direct project support, donations of scientific equipment, and unrestricted funds that universities themselves channel into research. Since there have been several multimillion dollar deals since those figures were collected, the total annual corporate investment in university research now probably tops $500 million.

The report, which contains the usual discussion of the costs and benefits of the new academic-industrial complex, points out that industry is still a minor player in terms of total funding: "All available evidence indicates that private industry has neither the resources nor the intention to compensate for any substantial cuts in publicly funded academic research. . . . If the present level of academic research is to be maintained, the principal burden will continue to fall on the public purse."—COLIN NORMAN

**University-Industry Research Relationships* (National Science Board, Washington, D.C., 1983).