Howard Hughes Moves into Science Education

The giant philanthropy is extending its reach with $30 million to colleges; additional millions for postdoc fellowships, IOM, Cold Spring Harbor, and Jackson Laboratory

WHEN the Howard Hughes Medical Institute* settled a decades-long tax dispute with the Internal Revenue Service last March, it agreed to establish a foundation-style grants program of $500 million to be spent over a period of 10 years. In an interview with *Science* a couple of weeks later (*Science*, 10 April, p. 141), HHMI vice-president Joseph G. Perpich speculated that science education and the public understanding of science were likely to emerge as principal areas for giving. Since then, he has received more than 1000 unsolicited letters volunteering to help Hughes unburden itself of its millions.

On 7 October, Hughes officials announced that initial decisions about the grants program have been made, with a strong emphasis on science education in private liberal arts colleges that are not affiliated with a graduate school.

Hughes announced a $30-million commitment to undergraduate education that, Perpich hopes, will give the institute real "leverage" in the education world. It seems likely it will. At $30 million, HHMI matches in one gesture the $30 million that the National Science Foundation has specifically targeted for college science education.

Hughes has just notified 94 colleges that they are eligible to compete for grants of $500,000 to $2 million each—sums that are large enough to make Hughes' influence clearly felt on undergraduate campuses. Contestants will be judged on the originality and imagination in proposals for enriching faculty teaching; stimulating students in biology and the related sciences of physics, chemistry, and mathematics; or reaching out to encourage good science in local high schools.

HHMI trustee Hanna H. Gray, president of the University of Chicago, is chief overseer of the grants program, which includes a measure to attract minority students to biomedical research. Of the 94 colleges eligible for the $30-million competition, 18 are historically black institutions. The other 76 emerged from a Hughes' number-crunching exercise in which colleges were rated according to three criteria: (i) the percentage of graduates who went on to medical school between 1978 and 1986, (ii) the percentage going on to earn biological Ph.D.'s, and (iii) the percentage who earned Ph.D.'s in physics, chemistry, or math.

The list of winners includes such well-known colleges as Cornell, Oberlin, Vassar, and Wesleyan, as well institutions with more regional reputations, including Davidson in North Carolina, Eckerd in Florida, Illinois Benedictine, and Ursinus in Pennsylvania.

Hughes also is ready to move immediately on a new grants program for individual postdocs in biomedical research through a new grants program modeled after the Science Foundation's. HHMI plans to award 3-year graduate fellowships (with an option to renew for two additional years) to 60 young researchers annually, anticipating a 300-person pool of Hughes fellows 5 years out. This year's crop will receive stipends of $12,300, plus a contribution of $10,700 toward tuition and fees. (By contrast, comparable NIH fellows get $6000 stipends.)

Aware of its inexperience in handling a grants program of this sort, HHMI has let a $356,000 contract to the National Academy of Sciences which will handle applications due on 13 November and manage the selection process. (The Academy already does this for NSF and the Ford Foundation.)

An initial exploration of the world of precollege science education comes in the form of a $600,000 grant to the Academy to initiate a comprehensive survey of past efforts and current programs aimed at improving high school biology teaching.

Hughes has also announced two new "Research Resources" grants, that are made to institutions that in some way serve the biomedical research community at large. HHMI has decided to give $7 million to the Cold Spring Harbor Laboratory to support its new neuroscience education program. The Jackson Laboratory in Bar Harbor, Maine, with its vast stocks of genetically bred mice, is getting $2 million. Half of it will go for research and half will be spent to renovate Highseas, a magnificent but run-down old mansion overlooking the Atlantic that is used to house students. This kind of money is terribly hard to get as foundations increasingly resist giving money for buildings. Hughes officials see the gift to Highseas as an exception to the rule, not the beginning of a pattern.

A $5-million grant to the Institute of Medicine, earmarked for its endowment fund, constitutes Hughes' initial effort in the areas of health policy and public understanding. The money will support ongoing IOM studies that involve assessment of new developments in biotechnology, and the social and ethical issues that surround it.

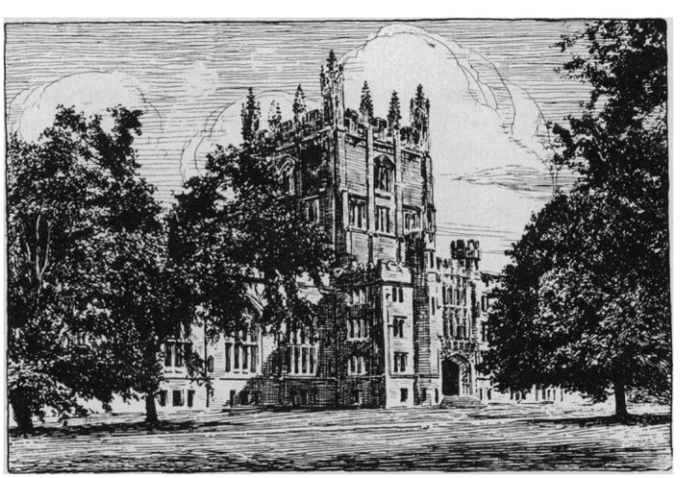
With this as a start, Hughes officials have put on hold the many proposals they have received to support television shows, book projects, and other ventures that come under the "public understanding" rubric.

These new programs will have a life of their own, quite apart from Hughes' main business of conducting biomedical research at HHMI-run laboratories on 27 major research campuses nationwide (*Science*, 13 March, p. 1318). But Perpich is hopeful that Hughes' cast of stellar investigators, which now numbers 178, can be enlisted in the education crusade. ■

BARBARA J. CULLITON

The $30-million competition.

Ninety-four private colleges are eligible to compete for $30-million worth of grants. [Etching: The Vassar Library]



*HHMI, 6701 Rockledge Drive, Bethesda, MD 20817.