A Million Dollars for the Magic Bullet

Armand Hammer offers cash prizes for cancer research; hybridomas have caught his fancy

The new chairman of the President's cancer panel, Armand Hammer, is offering more than $2 million of his own money toward finding a cure for cancer. The Armand Hammer Foundation will award $1 million to a scientist "who achieves a cure for cancer similar to that discovered by Dr. Jonas Salk with the polio vaccine," Hammer announced at a cancer panel meeting on 3 December. The other $1 million will be apportioned in sums of $100,000 annually for the next 10 years to scientists who have furthered medicine the most in the quest for a cancer cure. The winners will be selected by a special committee of "noted scientists" to be chosen by the foundation, said Hammer, who is board chairman of the Occidental International Corporation.

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DeVita and Hammer

Managing the cancer program

Hammer has great hopes that hybridomas may prove to be cancer's magic bullet. At the meeting he also disclosed that the Salk Institute, of which he is executive committee chairman, will host an international symposium on hybridoma research 8 and 9 March in La Jolla, California. The Hammer Foundation will pay the expenses of scientists asked to attend. Hammer's past contributions toward cancer research also include endowments that created research facilities at Columbia University and the Salk Institute.

Hammer declared, "The more I read and learn about it [hybridoma research], the more I believe in its great promise for a major breakthrough in cancer research." He said later that his enthusiasm for hybridomas stems from discussions during the past 2 months with National Cancer Institute director Vincent T. DeVita, Jr., as well as with scientists from the Salk Institute and other institutions. The cancer institute now spends about $90 million in immunological research. Seventy percent of the investigators receiving those funds are conducting hybridoma studies.

Hammer's optimism for hybridoma research seemed to get a mixed review at the meeting. DeVita, whose institute may face a 12 percent cut of the tentative $1.025 billion budget for fiscal 1982, commended Hammer for sponsoring the Salk symposium. The meeting, he said, will be important in a field that is rapidly undergoing change. But fellow cancer panel member Harold Amos, professor of microbiology and molecular genetics at Harvard, went out of his way to emphasize that Hammer's views on hybridomas were personal and did not necessarily reflect the opinion of the entire panel. (The third member of the panel is Bernard Fisher, a surgery professor at the University of Pittsburgh School of Medicine. The panel advises the President on the national cancer program and consults with the NCI director.)

Almost as soon as Hammer finished announcing the establishment of prizes for a cancer cure, several protesters in the small audience called out for Hammer's resignation. Members of a group called "Citizens Concerned About Corporate Cancer" repeatedly interrupted the meeting, charging that Hammer, as head of Occidental, is unfit to be a cancer panel member. Occidental's subsidiaries include Hooker Chemical Company. "Your chairmanship is a fraud," said one young man wearing a T-shirt imprinted with "Love Canal: Another Product Brought to You by Hooker Chemical." The demonstrators were eventually escorted out of the room. Company spokesmen at the meeting released a statement saying that Hooker has been a subsidiary of Occidental since 1968 and "has come under unjustified legal attack for chemical waste disposal practices dating back over 30 years."

The protesters are not likely to have any success in ousting Hammer, who says that he is firmly committed to his new duties. "I have no intention of resigning," Hammer said later. Moreover, panel members are presidential appointees, whose removal would require substantial political clout, something the meeting's demonstrators appeared to lack.

When the protesters departed, the panel turned its attention to two concerns: Amos challenged DeVita to consider whether the current composition of the National Advisory Board is appropriate; in addition, Fisher raised the recurring issue of whether the grants approval process needed revamping.

Until a few years ago, federal legislation mandated that the advisory board be comprised of 12 scientists and 5 nonscientists. In 1978, Congress passed an amendment, adding a stipulation that no fewer than five of the board members be specialists in environmental carcinogenesis. Although Amos acknowledged that environmental carcinogenesis is an important issue, he is uncomfortable with the current makeup of the board. Amos said that the individuals appointed to the board are implicitly understood to be "a representative and an advocate" of their own interests. "It is an unfortunate and destructive position. The plurality of the board is lost with the singularity of individuals."

DeVita conceded that the board membership as mandated has posed some difficulties because it fails to allow enough flexibility to keep abreast with new advances—for example, in recombi-

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nant DNA research. The board, he said, "can't make good judgments because the technology of science is changing so rapidly. The board doesn't reflect that [change]." Acting deputy director Jane Henney said later that, in the opinion of some NCI officials, the cancer institute has sufficiently expanded its program in environmental carcinogenesis so that it now needs to concentrate its efforts in other areas.

The panel then discussed Fisher's concern that the grants approval process is tangled in bureaucratic red tape, a belief held by many researchers. By his staff's own estimate, Fisher said that he has spent 4 of the past 11 years in research just dealing with the mechanics of the grants system such as filing applications. The phenomenal growth in applications "has strained the system," he said. "There is dissatisfaction and unhappiness by researchers, but how much of the criticism is valid is not known. Is it time to make changes?" Amos added that he would like to see imaginative grants funded more often.

Fisher said that researchers "may have to live with what we have," but proposed that another evaluation be made of the grants system, including the merits of the peer review system. He suggested that the current system may not allow the most knowledgeable scientists "with the scope and orientation needed to review the application properly."

DeVita replied that hearings may be tentatively scheduled across the country at major medical centers to give researchers a chance to voice their complaints.

All in all, the cancer panel appears to be taking on a more active role than it has in its recent past. The new chairman is off to a flashy start by offering a $1 million purse for a cancer cure. But the money is unlikely to speed up the discovery of an ultimate weapon against cancer, given the billions of federal dollars that have been pumped into the cancer program so far and given the complexity of the disease. What remains are tougher issues: whether the direction of research at the institute is appropriate, how the grants system can be improved, and whether the advisory board should be changed. They are questions that a million dollar cash prize cannot answer.

—MARJORIE SUN

Consensus on CT Scans

An NIH consensus panel believes that too few CT brain scanners are available, not too many

"CT is a remarkable new development in radiographic imaging which, in only 8 years, has transformed the diagnosis and much of the management of structural disease of the brain and its surrounding tissue." So begins the report of a recent consensus development conference* on computed tomographic scanning of the brain. The consensus development panel, convened by the National Institutes of Health, was extremely enthusiastic about CT scans, concluding that the main difficulty with them is not overuse, as was feared by health planning agencies when CT was first introduced, but rather that too few scanners are available.

> "CT to a neurologist is like chest x-rays to an internist."

During the 2-day conference, speakers told the extraordinary story of the evolution of CT scanners from experimental devices to machines that have become indispensable. "CT to a neurologist is like chest x-rays to an internist," said Ronald G. Evens of Washington University School of Medicine. There is now one CT scanner for every 60,000 persons in the United States. Despite the fact that the states have limited the availability of the machines by requiring that hospitals submit certificates of need before receiving permission to buy CT scanners, the United States is surpassed only by Japan in the number of scanners per capita. Of the 4000 scanners worldwide, one-third are in the United States, one-third are in Japan (which has half the population of this country) and the remaining third are scattered throughout the rest of the world.

When CT scanners first became commercially available about 8 years ago it took 5 minutes to scan a patient's head and 5 minutes for each computerized reconstruction of an image from the x-ray data. Now, because of advances in the design of the scanners and in computer technology, the newest machines can scan a head in just 10 seconds and can reconstruct an image virtually instantaneously. According to Jay Thomas Payne of Abbott Northwestern Hospital in Minneapolis, the Mayo Clinic's first CT scanner, which is only 5 years old, has been relegated to the clinic's historical museum.

The primary indications for CT scans, the consensus panel said, are to diagnose brain tumors, brain hemorrhages, the effects of major head injuries such as occur in auto accidents, and certain infections of the brain, such as encephalitis.

As an example of how useful CT scans have become, Donald T. Becker of the Medical College of Virginia, Richmond, discussed the machine's impact on the diagnosis and treatment of blood clots in the brain following head injuries. "Previously, we would wait for neurological signs of a lesion, but by that time the patients would almost always have remaining neurological deficits," he said. Once there were signs of a lesion, Becker continued, "we used to do angiography, which is invasive and takes at least an hour, or pneumoencephalography, or we would bore holes in the skull and look for the clot. Now, with CT, we don't do those things anymore. CT can

*The Consensus Development Conference on Computed Tomographic Scanning of the Brain was held on 4 to 6 November 1981, and was sponsored by the National Institute of Neurological and Communicative Disorders and Stroke and the National Cancer Institute.

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