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****Hughes Institute to establish major biomedical research laboratories at UTHSCD.

DALLAS--The Howard Hughes Medical Institute will devote multimillions of dollars to develop an important new basic biomedical science facility at The University of Texas Health Science Center at Dallas.

Dr. Donald Fredrickson, president of the Howard Hughes Medical Institute, has announced that the institute will spend at least $20 million over the next five years at the Dallas facility. When the unit is fully operational expenditures will greatly exceed the initial base cost.

The Howard Hughes Medical Institute, which recently received $5 billion from the sale of Hughes Aircraft Co., is now the world's largest private biomedical research institution. When fully implemented, its research program will involve total expenditures of some $300 million per year.

On a recent visit to the Dallas health science center, Fredrickson said that Dallas will be one of 22 Howard Hughes laboratories established in 14 states.

As a medical research organization, HHMI does not make gifts or grants. HHMI buys equipment and hires its own scientists but with the proviso they are designated faculty members of the host institutions.

At the Dallas health science center, the institute will establish laboratories on two floors of the Cecil H. and Ida Green Science Building. This space of approximately 30,000 net square feet will house up to 20 to 25 scientists, each surrounded by a support group of technicians and trainees, said Dr. Kern Wildenthal, dean of UT Southwestern Medical School.

HHMI concentrates on four areas of basic medical science: genetics, immunology, metabolic regulation and neuroscience. Initial recruits to the Dallas facility will work mainly in the first three areas, but all fields will be covered eventually, according to Dr. Joseph Sambrook, chairman of the biochemistry department who has been active in planning and recruiting for HHMI.

"This institute will have a profound effect on Southwestern Medical School," declared Sambrook.

In molecular genetics, there will be an emphasis on gene expression and cell surface proteins, among other areas. Machinery is to be established which will help the scientists determine the exact sequences in protein structure.

"It will give us new science we couldn't do on our own, and it will raise the level of technical excellence in our school to the very best there is," added Sambrook.

Southwestern already has been recognized as one of the top scientific institutions in the nation. Two of its scientists, Drs. Joseph Goldstein and Michael Brown, received the 1985 Nobel Prize in Medicine in December.

"This will provide the resources to round us out. It will ensure we will have a basic research potential unexcelled anywhere," said Wildenthal. "It's especially exciting not only to attract 20 or 25 outstanding scientists, but to have the opportunity for them to interact and collaborate with our own top investigators.

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"The Howard Hughes leadership has been very concerned that collaboration will be to the benefit of everyone," Wildenthal said.

This was the latest in a series of special installations undertaken by The UT Health Science Center. A new 156-bed teaching hospital, University Medical Center, Inc., is to be built for Southwestern in the next several months. School officials say that the Hughes Institute and UMC will give Southwestern a significant impetus to the pinnacle of world medical institutions.

In his talk before the Faculty Assembly at UTHSCD on Wednesday, Feb. 19, Fredrickson lauded Southwestern as "one of the most vigorous and creative places in the country.

"We know where the excitement is and where it is liable to break out," he said, indicating that UTHSCD was chosen on that basis.

Fredrickson also announced that a few of the 22 Howard Hughes units were being considered for development of revolutionary new approaches in "structural molecular biology."

"You must be able to use the new technologies, and our intent in considering Dallas as one of the special five or six institutions is to accelerate special initiatives in structural biology," he said.

Completion of plans for the new structural unit in Dallas would involve creation of one of the best X-ray crystallography laboratories in the world.

"This would add to our potential to take advantage of the biomedical breakthroughs of the 1990s," said Wildenthal. He explained that X-ray crystallography had advanced profoundly since the 1960s, when data derived by this method contributed to determining the structure of DNA.

"This and other modern analytical techniques will enable us to work at the level of protein structure in an attempt to understand biological processes," added Wildenthal.

Fredrickson emphasized the need for scientists to have an autonomy that allows individual creativity. Fredrickson, the former head of the National Institutes of Health, is internationally known for his own scientific research into the metabolism of fats and their transport in the bloodstream.

In his president's report for HHMI, entitled "Epochal Decisions," Fredrickson recently wrote:

"All of these different kinds of biomedical research taken together have one giant message of hope. If enough of the right kinds of people are joined in appropriate arrangement, and granted the freedom from distraction to pursue the truth, there can be no questions about life or health or disease for which answers cannot be found."

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