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NEWS

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* * * * * *New research program to probe symmetry, proportionality and performance.

DALLAS--A new research program has been established at The University of Texas Health Science Center at Dallas to investigate brain and nervous system structure and symmetry as it relates to human physiology and performance.

The program was made possible by grants totaling \$118,000 from the Biological Humanics Foundation of Dallas. The new scientific venture will be carried out under the auspices of the Eugene McDermott Center for Human Growth and Development with Dr. Donald J. Woodward, professor of Cell Biology and Physiology, as principal investigator.

It was the late Mr. McDermott, an electronics industrialist, who developed a lively interest in symmetries and asymmetries of the human body and their possible correlation with brain and nervous system structure as well as human performance. The well-known philanthropist was co-author of a book titled, "The Atlas of Men" and co-author of "Varieties of Delinquent Youth." He sponsored a study of Olympic athletes during the Rome games.

Mrs. McDermott today is acting president of the sponsoring Biological Humanics Foundation.

The new scientific effort would enlist the aid of a number of disciplines in an effort to gain new knowledge in the field, according to Dr. P.O'B. Montgomery, chairman of the McDermott Center Advisory committee. Other committee members are Dr. Heinz Eichenwald, chairman of the Department of Pediatrics, and Dr. Kern Wildenthal, dean of the Graduate School of Biomedical Sciences.

In a general sense, symmetry involves the proper proportion of brain and body parts to one another. Specifically, it more commonly relates to right-left or mirror considerations, said Dr. Woodward.

It may be that unique talents--musical, artistic, literary, etc.--or unique deficiencies could be due to differences from normal in proportionality of brain parts, he added. The new program will deal with the basic structural and chemical reasons for such intriguing questions as why verbal skills are generally stored in the left brain and the whys of right and left handedness.

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Dr. Woodward will employ a laboratory-based approach to experiments in the following areas:

Quantitative Morphology--Queries will be made into how variations in form, structure and symmetry of the nervous system are related to overall body structure and performance. This effort will involve development of a system for computer graphics in biology.

Visual System Neurobiology--Eye dominance and other visual phenomena of the brain will be investigated.

Biophysical Pharmacology--The possible relationship of brain and nervous system neurotransmitter chemicals to such things as right and left handedness would be explored.

Motor Systems Neurophysiology--Studies of the brain and nervous system as related to physical activity.

Interinstitutional Projects--Collaboration with laboratories at The University of Colorado Medical School at Denver, Karolinska Institute in Stockholm, and University of California at Irvine on various questions of brain structure.

Dr. Woodward's plans are to facilitate maximum interaction between the program and faculty of the health science center who may wish to conduct experiments in cooperation with a "core" of personnel and equipment.

Regular monitoring of research proposals and program effectiveness would be carried on by the advisory committee.

Prior to joining the Department of Cell Biology at the UT Health Science Center in 1975, Dr. Woodward was associate professor with the Department of Physiology and the Center for Brain Research at the University of Rochester. He holds a Ph.D. in physiology from the University of Michigan and has been recipient of National Institutes of Health and National Science Foundation awards.

He has been a member of the advisory panel to the Neurobiology program of the National Science Foundation, and has been appointed to a review panel for the National Institute for Drug Abuse.