News of Science

Plasmin

A research team at Yale University has described significant progress in purifying a plasmin enzyme that dissolves blood clots. Daniel L. Kline, associate professor of physiology, and Jacob B. Fishman, research associate in physiology, report that plasmin has been tested successfully on animals and that preliminary tests on human patients are now under way.

In human patients, plasmin will be injected into the blood stream as soon as the blood clot is detected. The clot, judging from the animal experiments, should dissolve and the blood return to normal within a few hours. While there are drugs that help prevent the formation of blood clots, up till now physicians have had no drugs that will dissolve a clot once it has formed.

The big problem with plasmin, however, is purification. Plasmin is derived from the interaction of two other enzymes, plasminogen and streptokinase. Plasminogen is an inactive enzyme extracted from human blood provided by the American Red Cross. To activate plasminogen and form plasmin, streptokinase is needed. This enzyme is obtained from streptococcal bacteria that contain toxic materials which lower the supply of blood to the heart muscle, lower blood pressure, and cause chills and fever. Although the investigators at Yale have not yet achieved 100-percent purification of plasmin, they feel that they have found a method for removing enough of its toxic material to warrant tests on human patients.

It was Kline who made a major find in blood-clot research in 1953 when he developed a method for purifying plasminogen. In 1955 he and Fishman developed a method for the partial purification of plasmin.

Clinical tests on human patients are being conducted by Julian Ambrus, Joseph Sokal, and associates at Roswell Park Memorial Institute in Buffalo, N.Y. William Glenn, associate professor of surgery at Yale, and his colleagues are working on new tests with laboratory animals.

Important research on plasmin is also being carried out by scientists in other parts of the country, notably by William S. Tillett of New York University and Sol Sherry of St. Louis University. The Tillett-Sherry approach, however, differs from that of the Yale team in that Tillett and Sherry are working on methods of injecting streptokinase directly into the blood stream. This approach assumes that the body has enough plasminogen of its own to be activated by the streptokinase injection, and that plasmin will form within the blood stream and then seek out any blood clots that must be dissolved.

Neurological Research Foundation

The National Neurological Research Foundation has been established at the suggestion of some of the country's leading neurologists. It plans to found research fellowships and support research in the study of the nervous system and such diseases as Parkinson's syndrome, cerebral palsy, multiple sclerosis, amyotrophic lateral sclerosis, muscular dystrophy, epilepsy, senile psychosis, and other related conditions.

The foundation plans to give investigators full scope in studying these diseases as a whole and in relation to one another, rather than fragmented and split into isolated categories. Eight United States medical scientists will serve as members of the Scientific Advisory Committee, which will choose fellows and research projects for study in neurological disorders for which there are no known cures today. Members of the committee are as follows: Raymond D. Adams, Bullard professor of neuropathology, Harvard Medical School, and chief of the Neurological Service, Massachusetts General Hospital; Edward M. Dempsey, professor and head of the department of anatomy, Washington University; Louis S. Goodman, professor of pharmacology, University of Utah; Seymour S. Kety, professor of clinical physiology, University of Pennsylvania (on leave), and chief of the Laboratory of Clinical Science, National Institute of Mental Health; Oliver Lowry, dean and professor of pharmacology, Washington University; Horace W. Magoun, professor of anatomy, University of California, Los Angeles; James L. O'Leary, professor of neurology, Washington University; A. Earl Walker, professor of neurological surgery, Johns Hopkins Medical School.

In order to provide the research scientists with economic security, fellowships of from $10,000 to $12,000 yearly for a period of 5 years will be offered. The foundation program will in no way conflict with established efforts in the field; rather, it will concentrate effort on fellowships and research only. The foundation plans no clinical or rehabilitation centers.

Funds to finance the foundation's work will be raised through donations from the public and through other foundations' interest in medical research fellowships and research.

Contributions in any amount, however small, will be accepted. A fellowship supported entirely by a single group or donor will be named according to his or her wishes. The donor will be notified of the name of the fellow or fellows, the nature of the work, and where it is being done. Contributions will go directly to the account established for the National Neurological Research Foundation at the National Bank of Washington, Washington, D.C. Foundation headquarters are at 3255 N St., NW, Washington, D.C.

The officers of the new organization include: honorary president, Fuller Albright, associate professor of medicine, Harvard Medical School; treasurer, Barnum L. Colton, president of the National Bank of Washington; chairman, the Honorable William Marvel, vice chancellor of the State of Delaware; vice chairman, Mark D. Altschule, assistant professor of medicine, Harvard Medical School; executive secretary, Rodgers Denckla, 3255 N St., NW, Washington, D.C.

Standard Oil's 75th Anniversary Aid to Science Teaching

As one of several activities marking its 75th anniversary, Standard Oil Company of New Jersey is making a grant of $1.5 million to the Esso Education Foundation to finance a 3-year program to advance the teaching of science and engineering. Although the program covers 3 years, commitments will be made from year to year. Thus, when it is found advisable, support may be given to some new area not now contemplated. The features of the first year's program are as follows.

At the secondary level, opportunities will be provided for teachers to bring their background up to date through two summer institutes and one in-service institute. The summer institutes, to be