PHYSIOLOGY

Locate Cells That Produce Anti-Blood-Clotting Heparin

HEPARIN, a substance of sugary nature that can keep blood from clotting, is produced by a special kind of body cells called mastcells, Dr. Hjalmar Holmgren of the Caroline Institute, Stockholm, reports.

Because heparin can retard or check the coagulation of blood, it is much used in experimental work and scientists hope that it will prove practically useful in cases where it is desirable to prevent blood clotting, such as transfusions, and to prevent dangerous blood clots that sometimes occur after operations. It is most easily obtained from the liver and was originally discovered by Dr. William H. Howell of Johns Hopkins University.

The mastcells which Dr. Holmgren believes to be producers of heparin were discovered in 1876 by Paul Ehrlich, the German scientist who developed the drug that cures syphilis. They have been studied by a number of scientists since then but their function has not until now been known.

Mastcells are found in great quantities in the liver and the veins. These cells have the same reactions as heparin when submitted to metachromatic staining (with toluidinblue). Dr. Holmgren has studied the proportion between mastcells and heparin in organisms, and found that the proportion is direct, so that in an organism with few or no mastcells there is only a little heparin or a total lack of it.

Science News Letter, July 17, 1937

PHYSICS

New Heavy Atomic Particle Was Predicted by Japanese

THE NEW heavy electron, weighing about fifty times as much as the ordinary kind, was predicted by the Japanese scientist H. Yukawa as early as 1934, it is disclosed. (*Physical Review*)

Prof. E. C. G. Stueckelberg of the Institut de Physique, Geneva, Switzerland, reports that both he and scientist Yukawa independently arrived at an explanation of the forces within the atom which predicts such a heavy electron as is now exciting the research physicists. Drs. J. C. Street and E. C. Stevenson of Harvard University, and Nobelist Dr. Carl Anderson and Dr. Seth H. Neddermeyer of California Institute of Technology form two research teams that have found indications of the heavy electron.

The heavy electron, states Prof. Stueckelberg, is predicted by equations which describe matter by a mathematical operator known as a spinor, having 16 components or parts. Four components refer to the electron state of the atom, four more to the neutrino state of the atom, another four to the proton state and the last four components to the neutron state of matter.

According to Prof. Stueckelberg's theory the new-found heavy electron is very unstable and can only be of secondary origin created out of some of the particles now known. Four other particles, yet undiscovered, are also predicted by the theory, states the Swiss scientist.

Science News Letter, July 17, 1937

PSYCHOLOGY

American-Trained Scientist Studies Yoga For Year

A MEANS for attaining a "radiant personality," and for tapping the hidden reserves of mental and emotional power that lie in the ordinary individual's personality is the contribution that the Yogic practices of the East can bring to the Western World.

This appears to be the promise of a new scientific appraisal of these ancient teachings of India under the auspices of Yale University's Institute of Human Relations by Dr. Kovoor T. Behanan.

Living for a year as a student disciple of Swami Kuvalayananda, of Lonavla, India, Dr. Behanan learned the peculiar exercises of the Yogic discipline, which include controlled breathing so as to increase oxygen consumption and special tricks of concentration that in some ways resemble self-hypnotism. He then returned to the laboratory at Yale and subjected what he had learned to scientific scrutiny and appraisal.

Tearing away the veil of superstition and ignorance that have for so long kept the Western World in the dark concerning Yoga, Dr. Behanan has exploded many popular misconceptions about it.