

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.

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elberg, 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.

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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. Kovoort 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.

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. Stueck-

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● RADIO

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SCIENTISTS OF THE FUTURE—Dr.
Gerald Wendt, Director of the American
Institute of the City of New York.

July 27, 4:15 p.m., E.S.T.
STRANGE WAYS OF MOSQUITOES—Dr.
L. L. Williams, Jr. of the U. S. Pub-
lic Health Service.

In the Science Service series of radio dis-
cussions over the Columbia Broadcasting
System.

Yogic breathing and concentration both have an effect on the mental processes during the time that they are being practiced, he found—the breathing having more effect than the concentration. The changes in oxygen consumption, he believes to be the clue to this effect. Mental efficiency is reduced, during this controlled breathing in much the same way that it is during relaxation.

But a more profound and lasting effect on the general personality was also observed by Dr. Behanan.

“The systematized practices of Yoga seem somehow to be able to arouse little by little as the practice progresses, this indomitable power of the human mind,” he reports in his new book “Yoga” (Macmillan).

“I have had the privilege of watching at close range the daily lives of more than a half-dozen Yogins for over a period of one year. I can testify without any reservation that they were the happiest personalities that I have ever known. Their serenity was contagious and in their presence I felt always that I was dealing with people who held great ‘power’ in reserve. If the saying ‘radiant personality’ means anything, it should be applied to them.”

Dr. Behanan does not ask for “converts,” it is pointed out by Dr. Walter R. Miles, Yale psychologist, in a foreword to the book.

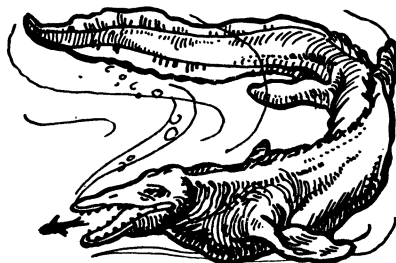
“The author of the present volume does not press the reader to accept or to reject the Yogic system,” said Dr. Miles. “He is neither over-protective and over-zealous on the one hand, nor is he coldly destructive in his analysis.”

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A one-piece steel automobile top can be formed in one operation at the rate of 90 tops per hour.

More than 1,000 cities in the United States have adopted ways of testing city water to remove undesirable tastes and odors.

PALEONTOLOGY NATURE RAMBLINGS by Frank Thone



Real Sea Serpents

SEA-SERPENT season is still with us. It's a poor beach resort (or one with a poor press agent) that can't scare up some kind of a mysterious monster, to scare bathers out of the water—temporarily—and to coax out a little extra business as the season grows late.

Sea serpents are explained in a half-a-dozen ways, from floating logs indistinctly seen through choppy waves, to schools of porpoises, basking sharks, and (in deep-water yarns) the occasional giant squid that comes up from the depths waving his forty-foot arms. And some of them are just plain imagination, aided perhaps by suitable glasses, frequently filled—and emptied.

It is characteristic of this age that prides itself on being skeptical and scientific (however readily it yields in a pinch to age-old credulities) that rationalistic explanations are sought even for sea-serpents. Former ages were not so fussy: in medieval and early modern times, when less was known about the world, imagination had a much better chance. Thus, Bishop Olaus Magnus of Upsala, not long after America was discovered, could write about a 200-foot man-eating sea-serpent, and get away with it.

It is a pity that the worthy Bishop did not live in really ancient times—say a hundred million years ago. There were creatures in the sea then that absolutely met all the specifications for the most awesome kind of sea serpents. In the seas of the Cretaceous geological period swam a group of reptiles with serpentine bodies forty feet long or more, gaping jaws armed with rows of ferocious teeth, surely able to gulp down any unlucky sailor—if there had been sailors in those remote pre-Noachian days.

They were the mosasaurs—“lizards of

the Meuse,” is what the name means, because the first skeleton of one of these giant beasts was found on the banks of the pleasant French river whose ancient Latin name is Mosa.

Mosasaurs lived in the last days of glory of the dinosaurs, but despite their formidable size and undoubtedly ferocious habits they were not dinosaurs. They were members of the same family that includes modern lizards and snakes, and hence fairly entitled to be called real sea serpents.

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ENTOMOLOGY

Gnats Survive Tomb Of Snow in Mountains

GNATS entombed in snow but still alive were discovered by a snow-gauging patrol in Yosemite's High Sierra, reports Long Garrison, one of the rangers on the patrol. Dipping up a pail of snow to melt for drinking water, the ranger discovered the insects, resembling mosquitoes. They crawled very slowly until warmed. A few of the insects were put in a match box for preservation. When the box was opened to add additional specimens, those first put in had warmed sufficiently to fly away.

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GEOLOGY

Visiting Geologists to See Huge Scientific Map of USSR

GEOLOGISTS who will gather in Moscow late this summer for the International Geological Congress will be able to see in advance what kind of territory they will traverse on the various geological field trips that will follow the meeting. A huge map, 32 square meters (345 square feet) in extent has been prepared as one of the exhibits at the Congress. It shows all geological formations that have thus far been mapped in the USSR, states Tass.

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A Japanese company will manufacture artificial indigo.

SEASICKNESS

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