

MEDICINE

Nobel Prize Shared

Research on the chemistry of living body cells wins high award for two German-born biochemists now working in England and the United States.

► ENERGY, MADE in the living cell from chemicals from food, is the key word for the fundamental researches which won the 1953 Nobel Prize in medicine for German-born Dr. Fritz A. Lipmann of Harvard University and Massachusetts General Hospital, Boston, and Dr. Hans Adolf Krebs, also German-born, now at Sheffield University, England.

The energy influencing role of the thyroid gland in the neck, best known to the layman as a goiter when it is diseased, is Dr. Lipmann's present research concern. But he is famous for earlier work in classifying various phosphate compounds in the body as high and low energy phosphates. An example of a high energy phosphate is the chemical, adenosine triphosphate. This chemical represents the energy reserve of muscle and is the closest known compound to mechanical work.

In 1938 Dr. Lipmann discovered a brand new phosphate compound, acetyl phosphate, which is the active form of acetic acid, best known to the layman in vinegar. Chemists had long suspected that a two-carbon compound was in the center of things but it was Dr. Lipmann who showed that this was so and what the compound was.

Dr. Lipmann and his co-Nobelists worked in the same building before World War II, the old Kaiser Wilhelm Institute which is now headquarters for the Free University of Berlin. But they worked in different laboratories.

An accident of birth helped Dr. Lipmann come to this country just two months before the start of World War II. When Mrs. Lipmann, at that time a fashion artist for Danish newspapers, went to the American Embassy for her visa, she could hardly speak a word of English. But at the Embassy she was told, "You are an American." She had been born in a small midwestern U. S. town, while her parents were on their way back to Berlin from a visit to this country. With her American citizenship, she and her husband were able to come to New York where Dr. Lipmann worked as research associate at Cornell Medical College until 1941.

Dr. Krebs is perhaps best known for the "Krebs cycle" of chemical steps by which sugar is utilized in the body for energy. But he also is famous for being the first to propose and prove, in 1932, another cycle of chemical reactions in body cells. This cycle concerns the body's synthesis of urea, the chemical in which nitrogen is eliminated from the body in urine. Dr. Krebs showed that this requires the combined action of the liver and the kidney.

In England with his English-born wife,

during World War II, Dr. Krebs contributed to the scientific food policy, including the national wholemeal loaf, that kept the English people well-nourished through the war years despite food shortages.

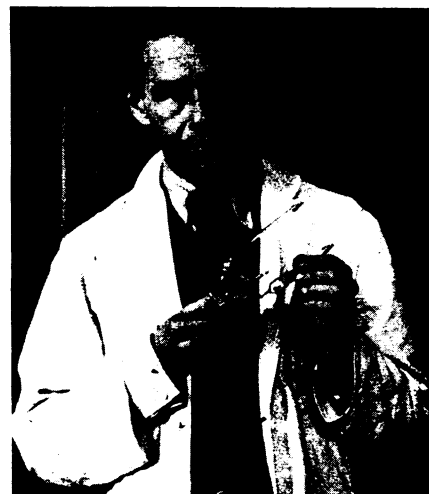
Science News Letter, October 31, 1953

MEDICINE

Body Type and Blood Tell Heart Prospects

► PICKING THE man or woman likely to have a heart attack and predicting the degree of heart artery disease long before symptoms or signs develop may be possible in the future by evaluating the person's body type and studying the pattern of fatty proteins in the blood.

Studies showing this possibility were reported by Drs. D. M. Spain, Victoria Bradess and I. J. Greenblatt of the Medical Examiner's Office, Westchester County, N. Y., and Beth-El Hospital, Brooklyn, at



NOBELIST—Dr. Fritz A. Lipmann of Harvard University who shares with Dr. Hans Adolf Krebs the Nobel Prize in medicine for 1953. He was honored for fundamental research on the chemistry of body cells.

the meeting in New York of the Association of Life Insurance Medical Directors.

The well muscled athletic type has much more coronary artery disease than other body types of the same age group.

Science News Letter, October 31, 1953



HONORED—Dr. Hans Adolf Krebs, shown here at work in his laboratory at Sheffield University, England, will share the Nobel Prize in Medicine for 1953. He will also receive the Lasker Award, medicine's "Oscar," a Winged Victory gold statuette, at the annual meeting of the American Public Health Association in New York, on Nov. 12. He is honored for his research on the chemistry of body processes.