GORDON, DR. ROBERT
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NATIONAL HEART AND LUNG INSTITUTE

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Dr. Robert S. Gordon, Jr. of NIH has been named one of the four winners of the 1972 Stouffer Prize, Dr. Theodore Cooper, Director of the National Heart and Lung Institute, announced today.

Dr. Gordon, now Clinical Director of the National Institute of Arthritis, Metabolism, and Digestive Diseases, is cited for research on free fatty acids during the mid and late 1950's, when he was on the staff of the NHLI---then called the "National Heart Institute". He is the first to win this large and unusual prize for research done at NIH.

The Stouffer Prize consists of a medal, citation and $50,000. It is awarded yearly from funds of the Vernon Stouffer Foundation to the person or persons chosen by an international prize selection committee for achievement in prevention, understanding and treatment of arteriosclerosis and hypertension, the diseases most responsible for heart attacks and strokes. The 1972 Prize will be given at an award dinner in Cleveland, October 20.

In the words of the Prize Committee, "The 1972 Stouffer Prize is awarded to Dr. Robert S. Gordon, Jr. for original work on the isolation of free fatty acids from plasma and the demonstration of their origin, hormonal control and importance as a source of energy. These discoveries have laid a foundation for better understanding of fat transport and metabolism, a subject highly relevant to prevention of premature arteriosclerosis".

Photos available on request

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Sharing the 1972 prize with Dr. Gordon will be Dr. Vincent P. Dole, Jr. of Rockefeller University in New York City, Dr. John W. Gofman of the Laurence Radiation Laboratory in Livermore, California and Dr. John L. Oncley of the University of Michigan in Ann Arbor. All four are being honored for scientific achievements concerning the blood lipids, or fatty substances, which have become most familiar because of their involvement in arteriosclerosis, diabetes and related diseases.

Dr. Dole and Dr. Gordon are both being honored for their discovery, independently, of the importance of a tiny fraction of the fats in blood---the free fatty acids. Beginning about 1956, from their separate studies emerged a coherent picture of an energy transport mechanism featuring this almost unknown fraction of the circulating fat as the major fuel for life processes in muscle, liver and other body tissues during times when the supply of non-fat calories runs low. Thus, as the calories entering the blood from a digested meal are exhausted, body fat, or adipose tissue, is prompted to release stored calories to the tissues in the form of free fatty acids. Without this energy transport mechanism the calories stored in adipose tissue would be unavailable to the organs and starvation would impend between meals, even in the presence of obesity.

They also showed that an emotional stress such as fear, by increasing adrenalin, releases free fatty acids; and that insulin blocks their release. (It is now known that excess free fatty acid release is one reason for the dangerous acidosis which develops in diabetics without enough insulin.)

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The nature of gross body fat, or adipose tissue, is illuminated by their research in an especially interesting way. In the words of the Stouffer Prize Committee, "Perhaps the most important single achievement of the work of Dole and Gordon was to turn the image of adipose (fatty) tissue as simply an inert storage place into one of central importance in the regulation of the body's energy metabolism. Free fatty acids stay in blood only a minute or two and their turnover greatly influences the concentration of other fats, and hence lipoproteins, in blood. They are thus related not only to arteriosclerosis, but to diabetes, obesity, stress and other metabolic diseases."

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