

# Insulin assay test developed by YSU and YHA scientists

A new method for assay of insulin antibodies of blood using radioisotopes, especially for insulin-treated diabetic patients, has been developed by scientists at YSU and Youngstown Hospital Association.

William D. Gennaro, M.S., head of the Division of Cybernetics of the YHA Department of Laboratories and Dr. John D. Van Norman, Ph.D. chemistry, report a new procedure for the clinical laboratory in an article recently accepted by *Clinical Chemistry*, official journal of the American Association of Clinical Chemists.

The new test, adopted by YHA clinical laboratories, allows the clinical chemist to assay blood of insulin-treated diabetic patients for free insulin, antibody-bound insulin and total insulin.

Both scientists view this achievement as a significant step in diabetic treatment. Previous methods of measuring insulin levels did not yield meaningful results for patients on insulin therapy since externally

administered insulin interferes with the examination. The assay of this free insulin is most useful for physicians since it controls metabolism of sugar in diabetic patients.

The new method involves chemical pretreatment of blood serum before adding radioisotopes for final measurement. The test can be completed in 18 hours.

The research and investigation was performed by Gennaro,

under the guidance of Van Norman, as part of the YSU master's degree program in chemistry. Collaborating in the work were Dr. Arthur E. Rappoport, M.D., head of YHA clinical laboratories and associate member of the YSU graduate faculty, Dr. Herbert Thompson, Ph.D., biochemist and Dr. Milton M. Yarmy, M.D., YHA staff physician.

Gennaro, a Warren G. Harding  
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High School graduate, served at the Warren Trumbull Memorial Hospital prior to joining the YHA in 1963. He has a bachelor of science in medical technology degree, a bachelor of arts degree in chemistry, all from YSU.

Van Norman, a YSU faculty member since 1969, received a Ph.D. degree in analytical chemistry from Rensselaer Polytechnic Institute. He has worked as a research associate at Brookhaven National Laboratory and specializes in the electrochemistry and spectrophotometry of molten salts. His current research involves other bioanalytical studies such as diabetic monitoring systems done in cooperation with YHA and funded in part by the Health Education and Welfare grant to the YSU chemistry department.