which includes practically all those physicians in this country and Canada who have a direct scientific or clinical interest in the disease.

"It is also due, to a lesser extent, of course, to the fact that the Association as a unit has built up and is maintaining excellent relations with other professional groups, both in the United States and in the world at large. These inter-organizational relations are of the greatest importance, since they keep the American Diabetes Association constantly before the attention of other physicians and physician organizations, and help to keep our Association informed of new developments in various other fields, many of which are of definite interest to our own members."

In conclusion, Connelly made a series of suggestions and recommendations in respect to professional and lay education, the development of Affiliate Associations and support of research. The way in which his analyses and proposals have influenced the growth and development of the Association is now a matter of record.

Midway in his career with the American Diabetes Association, he was given tangible evidence of the esteem in which he was held by the Officers and Councilors. A plaque bearing twenty-six signatures gave

> "an expression of deep appreciation for his outstanding contribution to the Association, and to progress in the field of diabetes, through his untiring service as a skillful and imaginative administrator of the Association's program during more than a decade of unprecedented growth."

I wish to add my personal endorsement. As a past President of the American Diabetes Association, editor of the *Diabetes Guide Book for the Physician*, and first editor of the Journal DIABETES, I shared with Dick Connelly the growing pains of the young Association. On his retirement in 1973, after a quarter century of service, I know that he can look back on his career in the American Diabetes Association with satisfaction and pride.

ABSTRACTS

Arora, K. K.; Atkinson, M. K.; Trafford, J. A. P.; Sheldon, J.; and Nunn, R. (Renal Unit, Royal Sussex Co. Hosp., Brighton): CHANGES IN GLUCOSE TOLERANCE, INSULIN, SERUM LIPIDS AND LIPOPROTEINS IN PATIENTS WITH RENAL FAILURE ON INTERMITTENT HAEMODIALYSIS. Postgrad. Med. J. *49*:293-96, May 1973.

Verbatim summary. Fasting serum lipids and lipoprotein patterns, glucose tolerance, and serum insulin response to glucose were investigated in eight patients with renal failure on intermittent haemodialysis and five normal controls. The mean 0.5, 1 and 2 hour blood glucose values were significantly higher in patients compared with controls but there was no significant difference between patients and controls in respect of fasting serum insulin levels or the insulin response to glucose. Six of the eight patients showed hypertriglyceridaemia (hyperprebetalipoproteinaemia).

Baird, Joyce D.; Hunter, W. M.; and Smith, A. W. M. (Western Gen. Hosp., Edinburgh): THE RELATIONSHIP BETWEEN HUMAN GROWTH HORMONE AND THE DEVELOPMENT OF DIABETES MELLITUS AND ITS COMPLICATIONS. Postgrad. Med. J. *49*(Suppl.):132-40, February 1973.

The absence of a hypersecretion of growth hormone during oral glucose tolerance tests in (a) potential diabetic, (b) untreated diabetic, (c) treated diabetic, and (d) nondiabetic patients with pancreatic insufficiency suggests that growth hormone is not involved primarily in the development of clinical diabetes. D.K.

Rodbell, Martin (Sec. Membrane Reg., Lab. of Nutrition and Endo., Nat. Inst. Arthritis, Metab. and Dig. Dis. N. I. H., Bethesda): THE PROBLEM OF IDENTIFYING THE GLUCAGON RECEPTOR. Fed. Proc. *32*:1854-58, August 1973.

Verbatim summary. The glucagon-sensitive adenylate cyclase system in rat liver plasma membranes is composed of a regulatory component that binds specifically with glucagon and a catalytic component that converts ATP to cyclic AMP. Hormonal activation is dependent on GTP or ATP which bind reversibly to allosteric sites on the enzyme system. The nucleotides also increase both the rate at which glucagon binding reaches equilibrium and the rate of dissociation from the regulatory component. The kinetic characteristics of binding induced by the nucleotides are in the direction of the rapid, oscillatory behavior displayed by the process of glucagon activation, which is essentially immediate in both onset and offset. However, binding is still time dependent in the presence of nucleotides and only a fraction of the regulatory components occupied by glucagon can account for activation of the catalytic component by the hormone. To explain these findings, it is suggested that the regulatory component exists in two states, in equilibrium, which bind glucagon with greatly different rates of association and dissociation; only one state is competent for activating adenylate cyclase. GTP (or ATP), acting at topographically distinct sites from glucagon, shifts the equilibrium between the states in the direction of the active or competent state. The competent state, a fraction of the total, has the appropriate rate constants for binding and dissociation of glucagon to account for the rapidity of onset and offset of hormone action. Accordingly, binding studies reflect the composite kinetics of binding to both inactive and active states, whereas hormone action reflects the kinetics only of the nucleotide-induced, active state of the regulatory component.