Editorial

Angiotensin and the Stouffer Prize

The Stouffer Prize for 1968 was awarded to four scientists, each of whom in his own way, along with his associates, has made an outstanding contribution in the area of drug and hormone development. To have available a new hormone in pure form, synthesized in adequate quantities, assures that it will be widely studied by many persons with a great variety of skills and interests. Of one thing we can be sure—that many new functions, interrelationships, and mechanisms will be found.

Angiotensin was discovered and purified in the early forties. It soon became evident that it played a key part in the mechanisms of some types of arterial hypertension. Almost concurrently, interest in clinical hypertension was growing rapidly after many years of torpor during which many clinicians and medical school teachers were under the misapprehension that elevated blood pressure was necessary for adequate perfusion of tissues containing blood vessels narrowed by atherosclerosis. The remainder of this exciting story is familiar to most cardiologists.

The bestowal of the Stouffer Prize in connection with the annual meeting of the AHA Council for High Blood Pressure Research formally acknowledges the importance of an eight amino acid-containing peptide (angiotensin).

It was not until Stanley Peart and Leonard Skeggs used the recently developed chromatographic method that a wholly pure angiotensin was prepared and the contained sequence of the amino acids identified. This was the prelude to synthesis, which was accomplished concurrently by the Cleveland Clinic group, under the immediate guidance of Merlin Bumpus, and the Swiss group, under Robert Schwyzer. It should not be forgotten that the two groups worked at a time when methods for rapid peptide synthesis were not known. Building the peptide chain was a slow and exacting task requiring great skill and perseverance. Leonard Skeggs was interested from a somewhat different viewpoint. He found that the enzyme renin does not immediately split off active angiotensin from the protein substrate produced by the liver. Rather, a 10-amino acid chain is the first scission product and, so far, few active pharmacological properties have been found for it. Skeggs then discovered an enzyme that splits off two amino acids to produce the highly active octapeptide known as angiotensin II. Furthermore, he has synthesized a 14-amino acid, straight chain peptide which...
closely resembles the naturally occurring renin substrate.

Thus, by a series of brilliant studies the essential steps to widespread use of angiotensin have been achieved. Since angiotensin is the first hormone known to be produced by enzymatic action within the body and since it occupies a key position in the regulation of blood pressure, it is easy to understand why these great contributions to cardiology are so suitably recognized. It is through such fundamental studies that understanding of the cardiovascular system and its disease is gained. By honoring the men who make such discoveries, younger students may be inspired to emulate them.

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