The Heart of the Matter

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By 1983, the primary sequence of atrial natriuretic peptide (ANP) had been published, the cDNA of pre-pro-ANP cloned, and binding sites for ANP identified. But it was still unknown whether the peptide was a local factor or a true hormone that circulates in blood.

At that time, I was working as a senior scientist in the group of Detlev Ganten at the Department of Pharmacology and the German Institute for High Blood Pressure Research in Heidelberg. Having spent many years in clinical and experimental endocrinology, I was fascinated by the revolutionary idea that the heart produces and releases a hormone to control its own load. As soon as synthetic ANP became commercially available, I started the immunization of rabbits which were extremely cooperative in producing excellent antibodies within just a few months. The subsequent work would not have proceeded so quickly without the coincidence of several favorable factors. Besides my experience in developing radioimmunoassays for the determination of plasma hormones, there was the availability of an isolated heart preparation that I was using in my studies on the regulation of neuropeptide release from cardiac nerves; the arrival of Heikki Ruskoaho, a Humboldt Fellow from the University of Oulu in Finland, who soon got addicted to the Langendorff heart preparation; and Detlev Ganten, who provided us with all of the support we needed.

In a series of experiments in the living rat and the isolated heart, we discovered ANP—a hormone that is released from cardiac nerves; the arrival of Heikki Ruskoaho, who soon got addicted to the Langendorff heart preparation; and Detlev Ganten, who provided us with all of the support we needed.

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