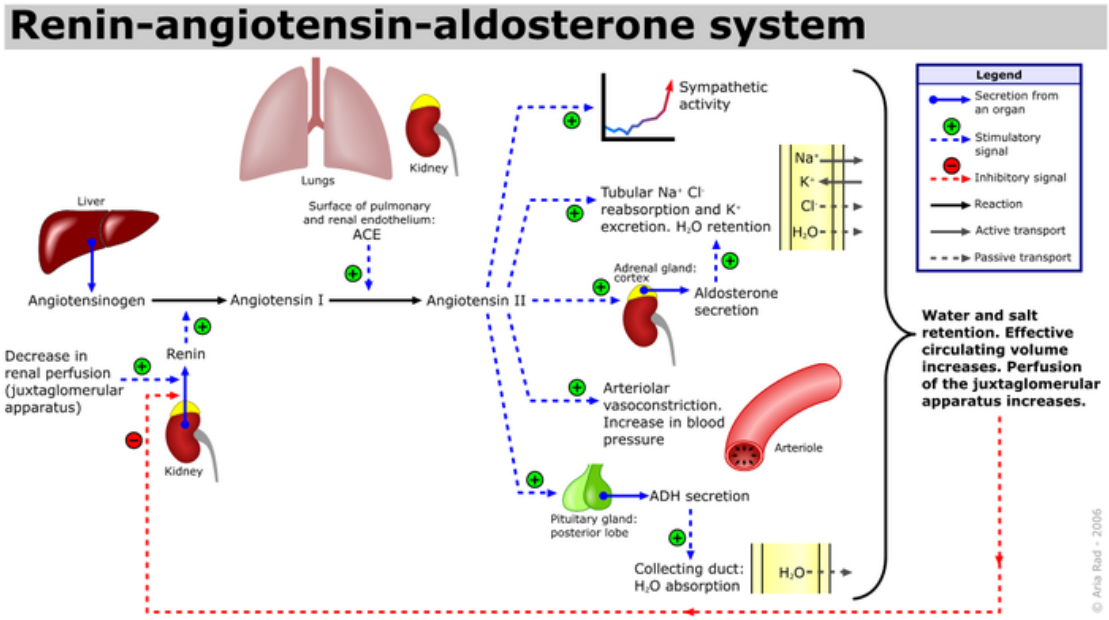

Figure 1: The renin-angiotensin-aldosterone pathway

As seen in Figure 1, The renin-angiotensin-aldosterone pathway is regulated by the mechanisms that stimulate rennin release and by natriuretic peptides released by the heart. These natriuretic peptides acts as an important counter-regulatory system.(Jia L. Zhuo, *et al.*.,2011).

Angiotensin II is an octapeptide hormone, it was named on the basis of its first main biological function that is the ability to act as a vasoactive agonist to induce contraction of blood vessels.(Mark B. Taubman, 2003), Angiotensin II exerts important actions at vascular smooth muscle, adrenal cortex, kidney, heart, and brain, and so Ang II has been shown to play important roles in mediating hypertension, heart failure, cardiac remodeling, diabetes, and the proliferative and inflammatory responses to arterial injury through these actions(Crackower, M. A. *et al.*. 2002).

Angiotensin II is a very potent pressor agent, large portion of pressor response is due to direct contraction of vascular—especialy arteriolar—smooth muscle. In addition Angiotensin II can also increase blood pressure through actions on brain and