

the renin-angiotensin system are mediated by multiple angiotensin peptides (Ang II, Ang (1-7), Ang III, Ang (3-8)).³⁶ Ang (1-7) differs in an important way from Ang II by its selectivity. Although both peptides elicit similar actions in the brain,³⁷ Ang (1-7) is devoid of significant dipsogenic action.³⁶ The findings are also similar to those of the above-mentioned studies. Intracerebroventricular infusion of angiotensins (1-7) significantly increased free water reabsorption rates in both rat groups (Tables 1 and 2). Intracerebroventricular injection of Ang (1-7) caused no significant water intake (Fig. 3). In vivo, intrarenal infusion of Ang (1-7) produced marked diuresis and natriuresis in WKYs.³⁸ In the present study, intracerebroventricular infusion of Ang (1-7) significantly decreased absolute and fractional excretion rates of sodium in both rat groups. It is suggested that central Ang (1-7) might regulate the hydroelectrolyte balance through a different mechanism from Ang II.

Braszko and colleagues have demonstrated that Ang (3-8) and related peptides possess the unique ability to enhance memory retrieval in rats and mice.³⁹ Furthermore, Haberl et al. indicated that Ang (3-8) might participate in the regulation of cerebral blood flow.⁴⁰ The present results show that central infusion of Ang (3-8) significantly increased free water reabsorption rates and decreased absolute and fractional excretions rates of sodium in both rat groups. Therefore, it is appeared that Ang (3-8) also participates in regulation of the hydroelectrolyte balance in the brain and is involved in vasopressin release. In conclusion, the data show that central Ang (3-8) and Ang (1-7) play physiological roles in the regulation of blood pressure and body fluid.

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