carrier transport and partly to simultaneous first-order diffusion transport. Whether such a carrier-mediated transport system of these antibiotics is present or not in human intestine has not been clarified. It is conceivable that the complete absorption of amoxicillin (Spyker et al 1977), cephalexin and cephradine (Nightingale et al 1975), and an 80% absorption of cyclacillin (Warren 1976) after oral administration in man may be due to the contribution of a saturable carrier system rather than the other possibility of membrane transport of very poorly lipid-soluble and zwitterionized amino derivatives of β-lactam antibiotics.

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Pharmacological data on crinia-angiotensin II

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Crinia-angiotensin II is a natural endecapeptide recently isolated from methanol extracts of the skin of *Crinia georgiana*, an Australian frog (Erspamer et al 1979).

The formulae reported below show that crinia angiotensin differs strikingly from all other known angiotensins II in that it has a tripeptide (Ala-Pro-Gly) attached to the N-terminal Asp residue of the conventional angiotensins, and in that a Ile residue is substituted for the usual Val residue at position 6 from the C-terminus.

Ala-Pro-Gly-Asp-Arg-Ile-Tyr-Val-His-Pro-Phe
Crinia-angiotensin II
Asp-Arg-Val-Tyr-Ile-His-Pro-Phe Ile^5-angiotensin II
Asp-Arg-Val-Tyr-Val-His-Pro-Phe Val^5-angiotensin II

Pure natural crinia-angiotensin II was assayed biologically, in parallel with Val^5-angiotensin-II-Asp^1-amide (Hypertesin Ciba) on a number of test preparations. Rats and rabbits were anaesthetized with urethane (1·5 g kg^{-1}, intraperitoneally or intravenously); rats were pretreated with phenoxybenzamine hydrochloride (1 mg kg^{-1} i.v.). The results are shown in Table 1.

It may be seen that crinia-angiotensin II was approximately equiactive to Val^5-angiotensin-II-Asp^1-β-amide on all tested preparations, with the exception of the isolated guinea-pig gall bladder, on which it was decidedly more potent.

Occasionally, crinia-angiotensin II produced a slightly more sustained elevation of blood pressure, and similarly relaxation of the guinea-pig gall bladder upon washing with fresh nutrient liquid was slightly retarded, always in comparison with Val^5-angiotensin-II-Asp^1-β-amide.

Table 1. The result of parallel bioassay of crinia-angiotensin II and Val^5-angiotensin-II-Asp^1-β-amide on nine test preparations. The activity of Val^5-angiotensin-II-Asp^1-β-amide was always considered equal to 100, that of crinia-angiotensin II was expressed in percent. In parenthesis is the number of experiments.

Test preparation	Crinia-angiotensin II activity (in %)
Guinea-pig ileum	75–100 (5)
Guinea-pig gall bladder (isolated)	200–300 (7)
Rat uterus	70–110 (5)
Rat colon	100–130 (7)
Rat stomach	75–100 (5)
Rabbit urinary bladder	70–80 (3)
Human urinary bladder	70–90 (3)
Rat blood pressure	110–130 (11)
Rabbit blood pressure	115–160 (4)

It will be interesting to investigate in parallel the actions of crinia-angiotensin II and of the mammalian octapeptide angiotensins II on other preparations and biochemical parameters.

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