

Parental influence on behavioural and physiological development of offspring in the Mongolian gerbil, *Meriones unguiculatus*. By B. C. Payman and H. H. Swanson. *Department of Anatomy, The Medical School, Vincent Drive, Birmingham, B15 2TJ*

Is it the vasotocin or a vastocin-like peptide which is present in the mammalian pineal and subcommissural organ? By P. Pevet, J. Dogterom, R. M. Buijs and A. Reinhartz*. *Netherlands Institute for Brain Research, IJdijk 28, 1095 KJ Amsterdam, Department of Anatomy and Embryology, University of Amsterdam, The Netherlands, and *Laboratoire d'Investigation Clinique, University of Geneva, Switzerland*

It is well established that the pineal and possibly the subcommissural organ (SCO) of mammals contain a small polypeptide with biological and chromatographic properties similar to those of arginine-vasotocin (AVT) (Pavel, Goldstein & Calb, 1975). Although AVT has been chemically identified in extracts of bovine pineal tissue (Cheeseman, 1970), the reality of the presence of AVT in the mammalian pineal (and SCO ?) remains to be demonstrated (Benson, 1977).

In our radioimmunoassay system, using an antibody against AVT, no evidence was obtained for the presence of AVT in the pineal and SCO of rat (Wistar and Brattleboro) and mouse. In the rabbit SCO (a commercial sample containing the SCO; Pel-Freeze, U.S.A.) an apparent value of 3.2 ± 0.9 (S.E.M.) pg/mg wet tissue was found but this result was due to cross-reaction with arginine-vasopressin (AVP) which was present in a very high concentration (3346.3 ± 522.0 pg/mg wet tissue). Moreover, 1077.4 ± 236.8 pg/mg wet tissue oxytocin (OX) were also detected in this sample. The AVP (2.7 ± 0.8 pg/mg wet pineal tissue, 28.0 ± 5.0 pg/mg wet SCO tissue) and OX (1.3 ± 0.8 pg/mg wet pineal tissue, 16.8 ± 1.6 pg/mg wet SCO tissue) were also found in the pineal and in brain tissues adjacent to the SCO of the rat. The concentration in the SCO itself was too low for detection. An immunocytochemical study has demonstrated that these observations are probably due to the presence of AVP- and OX-containing fibres in the pineal stalk and in brain tissues immediately adjacent to the SCO removed during the dissection. Occasionally, AVP-containing fibres were also observed in the SCO.

In the radioimmunoassay system developed by the Division of Endocrinology (Geneva), an antibody against the last three amino acids of AVP and AVT, Pro-Arg-Gly(NH₂), is used. Comparing the results obtained, in the same rat pineal extract (in HCl), with this radioimmunoassay system (54 pg/pineal of AVT and/or AVP and/or related peptides) and with our radioimmunoassay system (3 pg AVP/pineal and 0 pg AVT/pineal) it is suggested that, instead of AVT, a related peptide ending Pro-Arg-Gly(NH₂) is present in the rat pineal gland. This suggestion is supported by the results obtained by Neacsu (1972), who has isolated from bovine pineal a peptide (named E5) containing 14 amino acids and presenting a biological activity similar to that of AVT.

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A new method for the separation and identification of corticotrophin and related peptides in human plasma. By Sally J. Ratter, P. J. Lowry and Lesley H. Rees. *Department of Chemical Pathology, St Bartholomew's Hospital, London, EC1A 7BE*