

THE PINEAL RECESS IN THE *TRICHOSURUS VULPECULA*.
A CORRELATIVE SCANNING AND TRANSMISSION
ELECTRON MICROSCOPE STUDY

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The pineal organ of the placental mammal, a circumventricular organ, is not believed to release its secretory products into the ventricle (Gregorek *et al.*, 1977). This study concerns the ependymal lining in the pineal organ of a metatherian mammal, *Trichosurus vulpecula*, and its possible role in discharging pineal secretions into the cerebrospinal fluid.

The ependyma consists of three distinct zones. The central zone is lined by pinealocytes, their processes and the processes of supporting cells. The surface is knobby and virtually bare. Junctional complexes between ependymal pinealocytes are rare and cell clusters are often demarcated by loosely inter-woven cell processes. Vesiculated pinealocyte terminals are part of the supraependymal organization in the vicinity of the central zone boundary.

The central zone is surrounded by a sparsely ciliated intermediate zone of variable width. Almost the entire surface is covered by a carpet of microvilli and protruding through it is a variety of surface specializations. Superimposed upon this fundamental arrangement are supraependymal nerve processes and pinealocyte cell processes.

The peripheral zone is densely ciliated and contains supraependymal processes.

These results show that in this species the pineal ependyma has the requisite organization to permit a direct transfer of secretory products into the cerebrospinal fluid.

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References :

Gregorek, J. C., Seibel, H. R. & Reiter, R. J. (1977). The pineal complex and its relationship to other epithalamic structures. *Acta Anatomica*, 99, 425.