

Stage	No. of skins/batch	Na-K-ATP-ase activity
XII	3	0
XVIII - XIX	3	0
XVIII - XIX	2	0
XVIII - XIX	2	+
XXI - XXII	3	+
Adult	2	+

ATP-ase activity, of the order of 30-40 mMole/hr/kg. The two latter groups of skins were at the stage where a potential could be demonstrated.

Again, the results must be regarded as preliminary. A large number of ATP-ase determinations must be made under a wide variety of experimental conditions, on skins from all stages of metamorphosis, before any conclusions may be drawn. It is possible, for example, that Na-K ATP-ase activity can be demonstrated in a different subcellular fraction of early skins, or that there is a different pH or ionic strength requirement for the ATPase determination in early skins. Nevertheless, the observation is of enough interest to justify further work.

4. Morphology. Finally, a number of skins of tadpoles at different stages of metamorphosis were fixed in osmium tetroxide and embedded in epon, for electron microscopic examination at my home institution. It is possible that we may see distinct morphologic changes that parallel the physiologic changes in the skin.

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THE CONTROL OF INTESTINAL MOTILITY IN THE SPINY DOGFISH*

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The effects of serotonin, methylcholine, epinephrine, and bradykinin on the motor function of the gastro-intestinal tract of the spiny dogfish were studied. Changes in motor performance following nervous decentralization were also noted.

Preliminary interpretation of the data suggests an absence of chemoreceptors for serotonin, epinephrine and bradykinin in the gastro-intestinal as seen in mammals. Therefore, gastro-intestinal motility in the spiny dogfish is controlled entirely through the C.N.S.

If confirmed, these results are of considerable phylogenetic importance that could give insight into aberrations of intestinal functions in man that are not at present understood.

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