

Investigation of the transfer of Cl^- , Br^- and I^- across the isolated gastric mucosa of *Squalus acanthias* (see Science 129: 1224, 1959) revealed that these monovalent anions are actively transported from serosa to mucosa between identical solutions and in the absence of a significant transepithelial potential. The relative rates of transfer are very similar to those previously observed for *Rana catesbiana* though there is less discrimination between Cl^- and I^- in the case of *Squalus*. Unlike the case for *R. catesbiana*, the mucosa to serosa flux of Cl^- was not substantially greater than the D. C. conductance (previously determined). Confirming an earlier suspicion, it was definitely determined that it is necessary with this isolated tissue to work at a lower ambient temperature (15°C).

The flux of urea across the isolated uterine epithelium of *Squalus* was determined in collaboration with Dr. Bodil Schmidt-Nielsen. There was no evidence of active transport. The permeability to urea was so low ($1.10^{-6} \text{ cm. sec.}^{-1}$) that the low urea concentration of dogfish uterine fluid could be explained on this basis.

Further attempts to obtain a viable preparation of the pollack gas gland epithelium were unsuccessful.

The Metabolism of Aminobenzoic Acid Isomers in Marine Fishes

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The conjugation and excretion of three aminobenzoic acid isomers (p, m and o) were studied in three types of marine fishes (Dogfish, flounder and goosfish). The *in vivo* studies showed that all these 3 types of fishes can conjugate the aminobenzoic acid into acetyl, glycyl and glucuronyl products. In dogfish the glucuronides of the 3 isomers were excreted in greater amounts than the glycinate; while in flounder the glucuronide of the meta isomer excreted was less than that of the glycinate. The *in vitro* studies with kidney slices technique have shown that both dogfish's and goosfish's kidney can form acetyl and glycyl products from the three aminobenzoic acid isomers; while the flounder kidney synthesized the glycyl product, but not the acetyl form.

Effects of Agents Used in Cancer Chemotherapy on the Echinoderm Embryo

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Chemicals inhibiting tumor growth usually modify the growth of certain normal tissues. Chemicals of interest in cancer chemotherapy were studied on the sand-dollar embryo (*Echinarachnius parma*). Each egg, in