

wardly directed active transport system for both sodium and chloride is also present.

### **Thyroid Tissue In The Hagfish, *Myxine Glutinosa***

Allyn J. Waterman\* and A. Gorbman  
Williams College and Barnard College

Thyroid tissue has been studied both histologically and functionally with  $I^{131}$  in female sexually mature hagfish caught off the third Porcupine Island (Frenchman's Bay) near Bar Harbor on July 27-28 and August 8, 1959 in traps baited with herring and set in over 200 feet of water. Animals measured 44.5-72 cm. in length, with weights between 96.5 and 378 gms. In animals kept constantly in subdued light, thyroid activity in terms of the uptake of  $I^{131}$  was measured at various intervals after injection of 3 and 6.7 microcuries. Radioactivity of a number of representative body tissues (blood, integumentary, digestive and reproductive systems) was also tested.

Numerous small vesicles, similar in size in any one animal but varying in size between different animals (largest measuring around 3 mm. in diameter), and scattered in the connective tissue ventral to the pharynx, produced strong radioautographs with "no screen" X-ray film. These bodies, visible to the unaided eye, probably represent the thyroid tissue. Trimmed samples of this part of the pharyngeal floor showed higher radioactivity than any other tissue mass of comparable weight. Thyroidal  $I^{131}$ -uptake was: 3-4 hours, 0.82 percent of injected dose (average of 5 animals); 23-25 hours, 2.2 percent (average of 4 animals); 48 hours, 2.3 percent (average of 5 animals); 96 hours, 2.7 percent (average of 3 animals); 144 hours, 3.4 percent (average of 4 animals); and 192 hours, 2.9 percent (average of 3 animals). The thyroid area is being studied histologically.

\*NSF-G7473.

### **Action Of Cortisone In Increasing Metastases**

Irving Zeidman, MD.  
Univ. Of Pennsylvania

It has been found by numerous investigators that cortisone will increase the number of metastases which follow subcutaneous or intravenous injection of transplantable tumor cells into mice. The hypothesis is proposed that cortisone acts by increasing the number of tumor cells trapped by the capillaries; in this way more cells will have the opportunity to develop into metastases. If this hypothesis is true, then a single dose of cortisone followed by an intravenous injection of tumor cells should lead to an unexpectedly high number of lung tumors. An experiment was performed