injection gives a straight line[1] of small slope, with slightly more activity in fæces than in urine. Fresh specimens were assayed for strontium-90 and for yttrium-90 and the relative amount of yttrium excreted was found to be greater for specimens taken a long time after the injection. Details of diet and full hæmatological, histological and radioactivity reports will be published later.

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Discovery of Iron in Tunicin-forming Blood Cells of an Ascidian

Henze[1] was the first to show that vanadium is present in the blood of certain ascidians. Webb[2] demonstrated that the metal is accumulated by the primitive families but not by the more specialized families of the Ascidiacea. Also he showed that the vanadium chromogen is located in a special type of cell which he termed a vanadocyte.

Pyura stolonifera (Heller), a member of the relatively specialized family Pyuridæ, is a common zoning animal found on the rocky shores of New South Wales and southern Queensland[3]. Blood was taken from the large vessels in the tests of these animals. Morula-shaped corpuscles, fundamentally similar in appearance to the green vanadium-containing cells of the family Ascidiidæ, comprised between 70 and 75 per cent of the total number of corpuscles. Both spectrographic examination of the ashed blood and colorimetric analysis using phosphotungstic acid gave negative results for vanadium.

The blood was then tested for other metals and it was discovered that organically bound iron was present. This was in the ferrous condition and, as evidenced by histochemical staining, was confined to the morula-shaped corpuscles. Blood from twenty individuals was pooled and centrifuged. The concentration of iron in aliquots of the pooled blood corpuscles was estimated colorimetrically using *o*-phenanthroline. The iron content of the corpuscles averaged approximately 0·5 mgm. per cent of their dry weight. Further, it was established that there was much individual variation in the iron content of the blood, which was correlated with variation in the corpuscle count from individual to individual.

The blood did not exhibit absorption bands in the visible region of the spectrum at room temperature. Additional observations suggest that the iron chromogen did not have a respiratory significance.

When the corpuscles were cytolysed in distilled water, an orange-coloured suspension was obtained and this contained the iron compound. This was non-dialysable and resembled the vanadium chromogen of other tunicates in its strongly reducing properties.

It would appear that in *Pyura stolonifera* an iron compound is present in high concentration in certain blood corpuscles, and that it may be physiologically equivalent to the vanadium chromogen occurring in primitive tunicates.

Additional work upon the species is proceeding, especially with reference to tunicin formation. In subsequent publications the synthesis of tunicin from the cytolysing contents of the morula-shaped cells will be described.

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Folin-Wu Prepared Blood-Group Specific Substance *A*

A simple method for the preparation of blood-group specific substance *A* from Difco's neopeptone by means of the *Folin-Wu* technique of preparing a protein-free filtrate was recently reported[1]. Preliminary chemical, as well as inhibition of isoagglutination, studies were made of products prepared from both hog pepsin and neopeptone[2].

A detailed study has been made[3] of the products prepared from the above substances, with particular attention to the chemical, electrophoretic and paper chromatographic properties.

Total nitrogen (micro-Kjeldahl) and carbohydrate (orcinol method) for products prepared from both pepsin and neopeptone indicate a great deal of agreement in the carbohydrate values—8·2 per cent for the former and 8·7 per cent for the latter. The total nitrogen for pepsin (8·7 per cent) was much higher than in the case of neopeptone (4·8 per cent).

The electrophoretic studies showed considerable variation in the mobilities, and no more could be deduced except that a major and minor component existed. There was no indication of isoelectric points.

Two-dimensional paper chromatography showed fifteen ninhydrin-positive areas. There were variations depending upon the source material. The blood-group specific substance prepared from pepsin appeared to have histidine instead of the hydroxyproline of the neopeptone product. Methionine appeared only in the pepsin product. Galactose, fucose, rhamnose and glucosamine were detected in both products with one-dimensional chromatography.

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