definitely manifest a constitutional tendency to generally non-fatal respiratory infections, bronchitis and broncho-pneumonia, in infancy and childhood. When these two constitutional traits were combined, by the mating of the father and mother of the 13 children in the sibship under discussion, there was produced a group of children with extremely low resistance to any sort of respiratory infection, with a consequent 100 per cent incidence of pneumonia in the years of infancy and childhood.

A complete account of this investigation, presenting the detailed evidence, is now passing through the press.

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Effect of light of different wave lengths on penetration of 2,-6,-dibromo phenol indophenol into Valonia.*

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The marine alga, *Valonia,* was placed in solutions of .00035 M concentration of the oxidation-reduction dye, 2,- 6,- dibromo phenol indophenol dissolved in sea water. The dishes containing the plant were then screened with glass screens transmitting various wave lengths from 300 to 700μ and were placed in diffuse daylight before an open window or were kept in darkness. The pH of the solution was 5.4. The temperature was 22° C. with a variation of about 0.5°.

The results show that as the length of the incident light decreases towards the ultra violet end of the spectrum, the amount of dye in the sap increases.

By extrapolating the curves to equilibrium, it was found that the penetration of the dye follows the course of a unimolecular reaction.

By calculations from curves of relative energy distribution in the visible spectrum obtained from figures as given by Luckiesh[1]

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[1] Luckiesh, M., Color and its application. D. Van Nostrand and Co., New York, 1915, p. 20.

for blue sky light and other sources, it was found that the effect of light on the penetration of this oxidation-reduction dye varies, not as a function of the amount of energy, but as a function of the wave length. The details of this experiment will be published elsewhere.

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The proof that a hormone is concerned in external pancreatic secretion.

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Direct evidence has been presented by us[1, 2] which proves that a humoral mechanism is in part, at least, concerned in the stimulation of the pancreas to secrete pancreatic juice. Indirect evidence has also been presented[1] which suggests that a hormone is the exciting humoral agent.

We now have evidence which, according to our interpretation, proves unequivocally that a hormone is concerned in the genesis of the external secretion of the pancreas.

This evidence was obtained from two different preparations: In one preparation, a Thiry fistula of the jejunum and a pancreatic transplant was made. In the other preparation, a twelve inch loop of the jejunum was transplanted subcutaneously (4 inches took) and later a pancreatic transplant was made.

When N/10, or N/100 HCl, is applied to the mucosa of the intestinal transplant, the pancreatic transplant secretes copiously. When N/10, or N/120 HCl, is applied to the mucosa of the Thiry fistula, the pancreatic transplant secretes copiously. The latent period of stimulation varies from three to six minutes.

The interesting observation has also been made that fresh olive oil applied to the Thiry fistula does not stimulate the pancreatic

[1] Ivy, A. C., *Proc. Am. Physiol. Soc.*, Cleveland, Dec., 1925.

[2] Ivy, A. C., and Farrell, J. I., *Proc. Am. Physiol. Soc.*, Cleveland, Dec. 1925.