a simple osmotic system as proposed by Lucké and McCutcheon[2] should not be modified in the light of the wide occurrence of vacuolization in the eggs of *Arbacia punctulata*. Tests of the capacity of the eggs of *Echinometra lucunter* to be fertilized and to develop when returned to normal sea water at different times during the swelling process showed that, after the end of the first equilibrium, the eggs no longer react normally. This would indicate that vacuolization only occurs in these eggs after they have been injured and that therefore the normal, uninjured eggs may be considered as simple osmotic systems.

No detailed study of this phase has yet been completed on the eggs of Echinometra so that at this time one cannot explain the mechanism behind this vacuolization. However, Heilbrunn,[3] from observations on vacuolization in the eggs of *Arbacia punctulata*, concluded that this phenomenon is an internal surface precipitation reaction. This is solely an explanation of the mechanism forming the vacuoles and does not explain the factors which are operating to initiate and limit the vacuolization.

A detailed report of these experiments together with non-solvent volume determinations on the eggs of *Echinometra lucunter* will be published in the Papers from the Department of Marine Biology of the Carnegie Institution of Washington.

8310 P

Nucleotide Nitrogen Content of Certain Tissues of the Dog and Rabbit.

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Recent investigations have attributed several properties to the nucleotides which occur in the tissues. The most important of these properties is the participation of adenosine triphosphate in the phosphorylation of the hexose arising from the hydrolysis of glycogen. This is a very necessary procedure in the anaerobic formation of the lactic acid of the muscle.[1] However, as is well known, all tissues

[2] Lucké, B., and McCutcheon, M., *Physiol. Rev.*, 1932, **12**, 68.

[3] Heilbrunn, L. V., *Protoplasma Monographien*, 1928, **1**, Chap. XIV.

[1] Lohmann, K., *Biochem. Z.*, 1931, **241**, 50.

do not show the same behavior in their ability to form lactic acid.[2] As a method of approach to the study of this difference and its possible regulation by the nucleotide level of the tissue, a study of the quantitative distribution of nucleotide nitrogen among the various tissues has been carried out.

TABLE I.

Tissue	Nucleotide Nitrogen per 100 gm. Tissue			
	Dog		Rabbit	
	Arithmetical Mean	Extreme Variation	Arithmetical Mean	Extreme Variation
	mg.	mg.	mg.	mg.
Whole Blood	3.4	3.2- 3.9	6.6	6.4- 6.7
Whole Brain	13.3	12.5-15.5	19.3	17.7-20.7
Intestine	13.3	8.7-18.1	—	—
Pancreas	24.5	19.2-27.7	—	—
Kidney	21.8	17.6-25.5	30.9	28.0-33.6
Spleen	22.6	21.3-24.5	—	—
Liver	27.2	25.8-28.3	47.8	46.2-49.0
Whole Heart	28.9	26.0-31.0	35.0	32.0-37.9
Muscle	50.8	46.5-56.9	60.9	54.1-64.4

Table I contains the results of the analyses of certain tissues of the dog and rabbit for their nucleotide nitrogen content. The quantitative method of Kerr and Blish[3] was used. All results were obtained from duplicate check samples. A minimum of 5 animals was used for each tissue determination.

8311 C

Fibrinolytic Staphylococci.*

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Aoi[1] found that 88% of all Staphylococcus strains isolated from "pusturating foci" are capable of dissolving Congo-red-fibrin. Ap-

[2] Warburg, O., *Biochem. Z.*, 1927, **184**, 484.

[3] Kerr, S. E., and Blish, M. E., *J. Biol. Chem.*, 1932, **98**, 193.

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[1] Aoi, F., *Kitasato Arch. Exp. Med.*, 1932, **9**, 171.