the diameter of the purified bacteriophage in the neighborhood of 5.0 milli-microns. The detailed results of this work will be reported in another paper upon completion.

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Phosphocreatine in Insulinized Frogs.

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Fiske and Subbarow[1] have isolated phosphocreatine from protein-free muscle filtrates and find "that the compound is destroyed during contraction at a rate which rivals that of glycogenolysis and lactic acid production." Modern theories of muscle contraction have as their foundation the change of glycogen into lactic acid. But it has been shown that the muscles of insulinized frogs can contract in a normal manner even if no glycogen can be found in them.[2]

To determine whether there is a correlation between glycogen and phosphocreatine we have analyzed individual gastrocnemii of very large frogs for initial phosphorus, phosphocreatine, total phosphorus, lactacidogen, glycogen, and lactic acid.

One gastrocnemius was removed with as little stimulation as possible, frozen in liquid air, and weighed portions (0.5 gm. or more) were taken for each of the different estimations. The other gastrocnemius was removed at the same time and stimulated at second intervals nearly to exhaustion, then frozen, portions weighed, etc.

In normal frogs we found 6-20 mgm. of phosphocreatine per gm. of tissue in resting muscles, and very little or none in exercised muscles. Changes in lactacidogen (*i. e.*, total phosphorus minus initial phosphorus and phosphocreatine) were too irregular for any definite conclusions to be drawn from the data. The glycogen content of resting muscle was 6-8 mgm. per gm. of tissue, and the loss of glycogen in the exercised muscles, 1-2 mgm., was approximately balanced by the gain in lactic acid. Normal resting muscles are, therefor, high both in phosphocreatine and glycogen, and worked muscles lose all their phosphocreatine and much of their glycogen

In insulinized frogs which had had violent convulsions for several days we found the following conditions: The phosphocreatine con-

[1] Fiske, C. H., and Subbarow, Y., *Science*, 1928, lvii, 169.

[2] Olmsted, J. M. D., and Harvey, J. M., *Am. J. Physiol.*, 1927, lxxx, 643.

tent of resting muscles was always low, many times being entirely absent. Glycogen was also low in these muscles, in many cases being undetectable. Yet the muscles were able to do approximately their normal amount of work in lifting weights. In the cases where the resting muscle was glycogen free, its worked fellow showed an increase in lactic acid comparable to that in normal worked muscles. In spite of the general statement that in the resting insulinized muscles there was little phosphocreatine and little glycogen, there is really no direct relation between them, since in some cases there was no phosphocreatine but a considerable amount of glycogen, and vice versa. This irregularity is illustrated by 2 cases: in one 1.7 mgm. of glycogen was found and there was no phosphocreatine; in the other 1.7 mgm. of glycogen was again found, but this time there was 12.8 mgm. of phosphocreatine present.

Phosphocreatine and glycogen, although low or absent in insulinized muscle, vary independently of each other and furthermore, contraction can take place when either one or the other, or both are lacking.

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Occurrence of Coccidioides Immitis in Lesions of Slaughtered Animals.

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During the course of an epidemiological investigation of *coccidioidal granuloma,* examinations were made of lesions from slaughtered animals. Specimens were obtained through the cooperation of the Bakersfield Packing Company, Kern County, California. A total of 38 such specimens were examined over a period of 3 months. The following table gives the details.

Six of the positives were from cattle and one was from a sheep. The lesions seem to be localized in the upper respiratory tract and apparently no other lesions are to be found in the animals. Whether the disease would become generalized in time cannot be stated as there is no evidence available at present. A study of the histories

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