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.

M. DORTHY BECK.* (Introduced by W. H. Kellogg.)

From the California State Department of Public Health.

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

* Acknowledgement is made of the courtesies extended by Doctor Joe Smith, Health Officer of Kern County, California, in providing laboratory facilities for carrying on this investigation in the field.

TABLE I.

Showing Types of Lesions, Number Examined, with Number and Percentage Found Positive.

Type of Lesion in Slaughtered Animal.	Number Examined	Number Positive	% Positive
Skin abscess	1	0	0
Sub-maxillary gland	5	0	0
Mediastinal lymph gland	7	5	71.4
Bronchial lymph gland	5	2	40.0
Retropharyngeal lymph gland	3	0	0
Lung	7	0	0
Liver	8	0	0
Mesenteric glands	1	0	0
Tongue abscess	1	0	0
Totals	38	7	18.4

of the infected animals reveals no common factor. The geographical distribution of these animals is as wide as that of the human cases recorded.

The method of examination was as follows: each specimen was given a serial number when brought to the laboratory. A direct smear of the pus was made using 10% KOH to demonstrate the presence of double contoured capsules. Another smear was made and stained by the acid-fast method for the presence of tubercle bacilli. This was done to eliminate tuberculosis. Some of the pus was stained with 1% hematoxylin. Cultures were made on Sabouraud's agar slants and in plain broth. These were incubated at 37.5° C. for 7 days. The average incubation for these strains was 4 days and the maximum was 6 days. The cultures were inoculated into guinea pigs as a final test in order to determine that the fungus growth was *Coccidioides immitis*. The autopsy specimens from these animals were examined by the same methods as above.

TABLE II.

Summary of Laboratory Examinations With Results.

Laboratory Number	Direct Smear	Acid-fast Stain	Hematoxylin Stain	Cultures	Sections of Original Lesions	Guinea Pigs (3)
9	Negative	Negative	D. C. C. (1)	Fungus in 5 days	Positive	Positive
14	"	"	(2)	" " 4 "	(2)	"
18	"	"	D. C. C. (1)	" " 3 "	(2)	"
19	"	"	" (1)	" " 3 "	Positive	"
22	"	"	" (1)	" " 6 "	"	"
26	D. C. C. (1)	"	" (1)	" " 4 "	"	"
29	"	"	" (1)	" " 3 "	(2)	"

(1) Double contoured capsules.
(2) Insufficient material, *i. e.*, pus on swab.
(3) Cultures and smears from lesions positive.

Through the help and cooperation of Doctor E. C. Dickson, Stanford Medical School, San Francisco, sections were made of the original animal lesions and also of the infected guinea pigs. The results confirmed the cultural findings. Table II is a summary of the laboratory examinations made, with the results.

It may be concluded from the above table that the lesions from 7 slaughtered animals, *i. e.*, 6 cattle and 1 sheep were proven to contain *Coccidioides immitis.* Giltner[1] encountered the infection in bovine bronchial and mediastinal lymph glands from an animal slaughtered in San Diego, California. Although very little is known of the mode of infection of *coccidioidal granuloma* it does not seem likely that humans are infected from animals; but, rather that both man and animals are infected from the same source.

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Experiments with Reference to the More Heat-stable Factor of the Vitamin B Group (Factor P-P, Vitamin B_2 or G).*

H. C. SHERMAN AND M. R. SANDELS.

From the Department of Chemistry, Columbia University, New York.

Sparing solubility of this substance in alcohol. Extraction experiments with 80% alcohol were deemed of special interest because of the use of such alcohol extracts by Goldberger and associates[1] and because alcohol of almost the same concentration (79%) had been used by Osborne and Wakeman[2] for the precipitation of their "fraction II" which contained a relatively high concentration of both of the recently differentiated water-soluble factors required in the growth of rats.

In the present experiments, 400 gm. of air-dry baker's yeast were treated with 1500 cc. of alcohol (80% by weight), thoroughly stirred, and allowed to stand at room temperature (20°-25° C.) for 24 hours; then filtered with suction, and the yeast washed on a Büchner filter with 750 cc. of alcohol of the same strength; then again stirred with 1500 cc. of the alcohol, allowed to stand 24 hours,

[1] Giltner, L. T., *J. Agr. Research*, 1928, xiv, 533.

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[1] Goldberger, J., Wheeler, G. A., Lillie, R. D., and Rogers, L. M., *United States Public Health Reports*, 1926, xli, 297.

[2] Osborne, T. B., and Wakeman, A. J., *J. Biol. Chem.*, 1919, xl, 383.