ocular micrometer method as devised by S. H. Gage. In man the average ranged from 154 to 190; in the stallion, the number averaged in one instance 156 to 165, in another instance 21 to 35. Samples from five different bulls gave quite variable results. In bull No. 1 the particles averaged from 35 to 53; in bull No. 2, 51 to 127; in bull No. 3, the average was 60; in bull No. 4, 19; and in bull No. 5, the range was from 7 to 20. Some of the specimens showing the lower number of particles were obtained from young bulls which had not been in service long. Whether there is any correlation between the number of particles and the age of the animal; or whether there is possibly some relationship indicating the degree of fertility of the fluid are problems still to be solved.

The term spermatomicrons is suggested as an appropriate name for the designation of these particles.

Similar particles (galactomicrons) have been observed in the milk of a number of different species of animals, but in the examination of the other secretions of the body, saliva, urine and bile, I have not yet been able to find them.

Experiments are in progress to determine the nature of these particles. The indications thus far are that they are not composed of fat, but further work is necessary.

In the examination of available literature no reference has as yet been discovered relative to the presence of these particles in the semen.

284 (2816)

Certain pathological tissue changes in thyroidectomized sheep.

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Of ten lambs that were thyroidectomized early in life, five showed marked lesions. The others were either operated on too late in life or were too young at the time of death. The duration varied from 8 months 4 days to 2 years 5 months after the removal of the thyroids. The lesions were subcutaneous and sub-

serous edema with, in most cases, ascites and hydrothorax. The kidneys showed parenchymatous nephritis with hyaline casts in the collecting tubules. The most striking changes were in the thoracic and abdominal aortæ, and in the pulmonary arteries. These showed hyaline degeneration and calcification of the media in the form of placques. These were separated by thickened areas containing numerous fibroblasts and devoid of elastic fibres. Some of the smaller vessels near the aorta showed proliferation of the intima. There was a striking absence of fatty degeneration in any of the vessels. The controls, usually twin lambs of the same sex, did not show any of these tissue changes.

Scholz (1906) describes general edema and the kidney lesions in human cretins, without mentioning the aorta or pulmonary arteries.

Von Eiselsberg (1895) describes the changes in thyroidectomized sheep as being calcification of the intima without fat.

Experimentally, arteriosclerosis is generally produced on a mechanical basis. In this case it seems to be more of a chemical nature, perhaps due to senile changes occurring early in life as a result of complete thyroidectomy.

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285 (2817)

The reason for failure to obtain growth of an obligatory anaerobe (Actinomyces necrophorus) on plate cultures incubated in an anaerobic jar.

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In their work on *Bacillus (Actinomyces) necrophorus,* Mohler and Morse[1] reported difficulty in inducing the organism to grow on plate cultures incubated anaerobically although they were suc-

[1] Mohler, J. R., and Morse, G. B., Bull. No. 167, B. A. I., U. S. Dept. of Agric., 1905.