

pathological conditions with those observed in the human species. He has also tested the infectiousness of the various organs of the bodies of the animals. The animal was bled from the carotid to deprive it of all the blood possible, and then each organ was ground with sterile sand and suspended in a physiologic salt solution. The emulsions of each were brought as nearly as possible to the same density, and 5 cubic centimetres of each were injected intraperitoneally into guinea-pigs, weighing from 350 to 550 grams. The greatest virulence seemed to be in the organs that naturally contained the most blood, such as the spleen, liver, and bone marrow. In the case of the bone marrow, however, he remarks that the difficulty of its preparation increased the chances of infection, which must be considered. The kidney, however, was quite as infectious as other organs, much richer in blood, which he suggests may be accounted for by an accumulation of micro-organisms in it by reason of its excretory function. Ricketts has not heard of any authentic example of a second attack of spotted fever in man, hence it seems probable that one attack renders the body immune. This was found by experiment to be the case in the monkey, and by reasonable analogy we may assume it to be so in man. He concludes his paper with an account of his observations of the life history of the *Dermacentor occidentalis*, which, in view of the suspicion attaching to the species as the carrier of the infection, is a matter of some importance. The observations were made under laboratory conditions, and he suggests that the various stages may not quite correspond in point of time, therefore, with those in the natural state. More complete observations will be published later.

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## PATHOLOGY.

UNDER THE CHARGE OF J. G. ADAMI.

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R. L. THOMPSON. "A Study of Epidermal Fibrils." *Jour. Exper. Med.*, 1906, viii, 467.

Thompson has made a study of the fibrils passing between the epithelial cells, in the deeper layers of the skin. These fibrils represent what are commonly termed the intercellular bridges, and they serve to bind the epithelial cells together. Thompson finds that the fibrils are present in the cell body and form a network about the nucleus. He does not venture to discuss the origin of the fibrils, but states that the strands of the different cells are united. These fibrils are increased and become more distinct in certain skin tumours. He compares them with neuroglia, connective and muscle tissue fibres.