and Gies [1] were begun. The differences between the above figures for nitrogen and hydrogen contents harmonize with the observation by Emmett and Gies that nitrogen is eliminated as ammonia when collagen is converted into gelatin by treatment with hot water, and also strengthen their conclusion that gelatin is not a simple hydrate of collagen.

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On the fate of elastose after its subcutaneous or intraperitoneal injection: a preliminary inquiry into the origin and nature of Bence Jones's protein.

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Bence Jones's protein and crude elastose not only have several proteose properties in common, but, unlike the ordinary proteoses, each is precipitated from its aqueous solution when the latter is gently warmed. Bence Jones's protein occurs in the urine of patients suffering from sarcoma of bone marrow or from osteomalacia.[2] Bone contains considerable elastin-like material. The senior author's study of ligament elastin and its digestion products [3] and his isolation and analysis of osseoalbumoid,[4] an elastin-like constituent of bone, led him to think that Bence Jones's protein might be a transformation product of osseoalbumoid, although there are a number of important objections to such a view. At all events, the possibility that Bence Jones's protein may be a derivative of osseoalbumoid, and the great desirability of making our knowledge of this elusive protein more definite, led us to begin a study of a preliminary phase of the work that will be necessary to determine the points at issue.

[1] Emmett and Gies: *Proceedings of the American Society of Biological Chemists*, Washington, 1907; *Journal of Biological Chemistry*, 1907, iii, p. xxxiii. Also *Proceedings of the American Physiological Society*, Washington, 1907; *American Journal of Physiology*, 1907, xix, p. xi.

[2] When such urines are warmed, Bence Jones's protein, if present, is precipitated.

[3] Richards and Gies: *American Journal of Physiology*, 1902, vii, p. 93; also, Gies and collaborators: *Biochemical Researches*, 1903, i, Reprint No. 4.

[4] Hawk and Gies: *American Journal of Physiology*, 1902, vii, p. 340; also Gies and collaborators: *Biochemical Researches*, 1903, i, Reprint No. 6.

We sought first to ascertain whether crude elastose, when injected subcutaneously or intraperitoneally, is eliminated in the urine and whether it can be detected there by the heat-precipitation test. When thus introduced in dogs, crude elastose, obtained by peptolysis of ligament elastin prepared by Richards and Gies's method, not only promptly appears in the urine, but may be identified in it by the heat-precipitation test. This observation makes it clear that if elastose is formed in bone or in any other tissue by any pathological process, the elastose thus produced may pass into the urine without material alteration of the characteristic property referred to.

Before proceeding further in this connection, osseoalbumoid (bone elastin ?) will be prepared in sufficient quantity to permit of a determination of the nature of its proteoses and their fate when injected into animals.