Southern Branch

Tulane University, May 12, 1926.

3197

The fate of two synthetic amino acids.

RALPH C. CORLEY.

[*From the Department of Biochemistry of the Tulane University School of Medicine, New Orleans, La.*]

The mode of catabolism of the diamino acids is obscure. It has been shown that ornithine is a sugar former in the diabetic organism, while lysine is not. It appears that alpha-amino acids are frequently broken down through the stage of a fatty acid having one less carbon atom.[1] If ornithine and lysine took this route, they would form gamma-amino butyric and delta-amino valeric acids respectively. As it seemed of interest to determine the fate of these substances in the diabetic animal, they were synthesized and administered to phlorhizinized dogs. The results would indicate that delta-amino valeric acid fails to form extra glucose while gamma-amino butyric acid is a sugar former. The possibility is therefore to be considered that one of the paths of catabolism of the diamino acids is through the stage of mono-amino acid with one less carbon atom and with the amino group in the terminal position.

---

[1] Dakin, H. D., "Oxidations and Reductions in the Animal Body," 2nd ed., 1922, Longmans, Green & Co., London.