New evidence for the role of glutamic γ-semialdehyde as a major precursor of proline, but not of ornithine, and for the role of N^{α}-acetylornithine as a major precursor of ornithine has now been obtained from "isotopic competition"[8] experiments.

REFERENCES

1 H. J. VOGEL, *Proceedings of the 6th International Congress of Microbiology*, Rome, in press.
2 H. J. VOGEL, *Proc. Natl. Acad. Sci.*, in press.
3 W. K. MAAS, G. D. NOVELLI AND F. LIPMANN, *Proc. Natl. Acad. Sci.*, to be published.
4 P. H. ABELSON, E. T. BOLTON AND E. ALDOUS, *J. Biol. Chem.*, 198 (1952) 165.
5 V. DU VIGNEAUD AND C. E. MEYER, *J. Biol. Chem.*, 98 (1932) 295.
6 E. T. BOLTON AND P. H. ABELSON, 1952, unpublished.
7 H. J. VOGEL AND B. D. DAVIS, *J. Am. Chem. Soc.*, 74 (1952) 109.
8 R. B. ROBERTS AND I. Z. ROBERTS, *J. Cell. Comp. Physiol.*, 36 (1950) 15;
D. B. COWIE, E. T. BOLTON AND M. K. SANDS, *J. Bact.*, 62 (1951) 63;
P. H. ABELSON, E. T. BOLTON AND E. ALDOUS, *J. Biol. Chem.*, 198 (1952) 173.

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DISTRIBUTION OF XANTHINE OXIDASE IN ORGANS OF THE FROG (*RANA HEXADACTYLA*)

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The most common organ containing xanthine oxidase is the liver[1,2]. Pigeon, dog and hedgehog are the only exceptions recorded to date[1]. THUNBERG experiments[3] on the complete breakdown of ATP by liver preparations of various animals showed[4] that added ATP caused no decrease in methylene blue decolorisation time in the case of aqueous frog liver extract. This was traced to the absence of xanthine oxidase in frog liver extracts and homogenates. Results were consistently negative with one day old liver preparations [1:10] from ten well-nourished frogs, using xanthine as substrate and borate as buffer (pH 7.6). The enzyme was also absent from frog spleen, pancreas, lung and ovary. It was present in kidney. The ability of the frog to oxidise xanthine has been known only from *in vivo* studies[5]. Fresh frog liver homogenate contained no xanthine oxidase inhibitor when tested on purified milk xanthine oxidase. Addition of *kochsaft* from fresh frog liver homogenate to the milk enzyme caused slight methylene blue decolorisation. Frog liver may prove a convenient alternative to pigeon liver for studying hepatic purine synthesis. The reducing power of frog liver extract on methylene blue is much less than that of pigeon liver extract. No specimens of *R. temporaria* and *R. esculenta* were available for comparative experiments.

REFERENCES

1 E. J. MORGAN, *Biochem. J.*, 20 (1926) 1282.
2 M. FLORKIN AND G. DUCHATEAU-BOSSON, *Enzymologia*, 11 (1943) 24.
3 H. VON BULER AND B. SKARŻYNSKI, *Z. physiol. Chem.*, 263 (1940) 259.
4 H. C. FRIEDMANN, Thesis, University of Madras, 1950; *J. Madras Univ.*, Sec. B, 23 (2) (1953) in press.
5 ST. J. PRZYLECKI, *Arch. internat. de physiol.*, 24 (1925) 238.

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