CLII. LIVER DIASTASE.

By E. F. LESSER.

From the Laboratorium der städt. Krankenanstalten, Mannheim.

(Received July 28th, 1927.)

IN his paper on liver diastase, Eadie [1927] says, "Lesser...has advocated another view, viz. that the glycogen and amylase are, as it were, 'locked up' in different compartments of the cell. This explanation unfortunately adds little to our knowledge because it suggests no mechanism whereby the two are kept separate."

Unfortunately Eadie quotes my researches only to the year 1921. In 1923 I showed [Lesser and Zipf, 1923] that homologous alcohols in isocapillary concentrations increase sugar formation in the perfused frog's liver by approximately the same amount, and later [Lesser, 1925] that this effect occurs under reversible conditions. Finally it has been shown [Lesser, 1926] that the effect is also similar in a perfusion fluid buffered with carbon dioxide and bicarbonate at p_H 7.4 and 7.6.

On the basis of these findings I have concluded, in agreement with Warburg [1923], that a boundary surface-phenomenon is involved, and have assumed that approximately $\frac{2}{3}$ of the liver diastase is adsorbed on the surfaces of the cell and is therefore unable to act on the liver glycogen. Similar experiments with the isolated parotid gland of the mouse [Lesser, 1927] have led to precisely the same results. Eadie is therefore incorrect in stating that I have not suggested a mechanism whereby the diastase and glycogen are kept separate.

REFERENCES.

- Eadie (1927). *Biochem. J.* **21**, 320.
Lesser (1925). *Biochem. Z.* **156**, 161.
— (1926). *Biochem. Z.* **171**, 83.
— (1927). *Biochem. Z.* **184**, 125.
Lesser and Zipf (1923). *Biochem. Z.* **140**, 439.
Warburg (1923). *Jahresber. ges. Physiol.* **1**, 136.