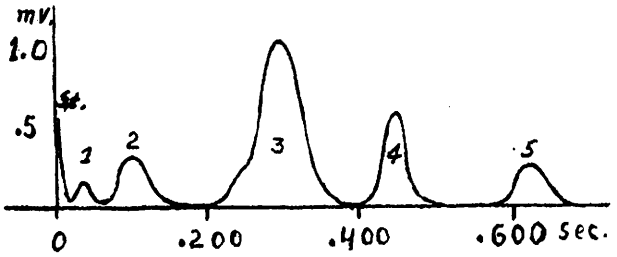

FIG. 1.

Composite analysis of series of records with different strengths of stimulus, showing 5 successive potentials in response to 1 stimulus to optic nerve.

either side and is higher on the crossed side, but is not present in other regions of the cortex. These latter regions are among the places where the spontaneous activity in the cortex is at its highest.

The normal record is presumably too complex to permit detection of the particular rhythmic function responsible for the refractoriness of the optic pathway, even if the proper region were precisely located. We believe, however, that this experiment corresponds in the intact cortex to the previous experiment in an isolated region where the phenomenon could be directly observed. The inference may be drawn from these and other experiments that certain groups of cells in the cortex are rhythmically active, probably spontaneously and automatically; that these foci originate impulses that spread over complex pathways to other regions, several pathways being represented at any one locus where a point electrode leads off a complex record; and that afferent impulses to the cortex may both modify the activity of cells that are already rhythmically active and set quiescent cells into activity.

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Note on the Determinations of Blood Fat.

HAROLD E. HIMWICH.

From the Department of Physiology, Yale University.

The technique of Stewart and White[1] for the determination of "blood fat" and its modifications by Himwich, Friedman and Spiers[2] has yielded higher figures than have the methods developed

[1] Stewart and White, *Biochem. J.*, 1925, **19**, 840.

[2] Himwich, Friedman and Spiers, *Biochem. J.*, 1931, **25**, 1839.

by Stoddard and Drury,[3] and Stewart, Gaddie and Dunlop.[4] The essential technical difference of these methods is that in the Stewart and White[1] procedure the liberated fatty acids are titrated directly, whereas, by the other methods the fatty acid precipitate is washed prior to titration. For this reason it is possible that the values obtained by the Stewart and White[1] technique may include substances washed away in the other procedures. Certain fatty acids of the blood may be among those so washed away, for example, arachidonic and other unsaturated fatty acids. On the other hand, extraneous acids may also be lost in the process of washing, such as phosphoric or organic acids.

The quantitative aspects of arachidonic and other unsaturated fatty acids of the blood are to be investigated in this laboratory. Stewart, Gaddie and Dunlop[4] suggested that phosphoric acid liberated from lecithin is the substance responsible for the difference in results obtained by these methods but we have not found it possible to determine any significant increases in inorganic phosphorus as a result of the Stewart and White[1] procedure. On the other hand, the possibility remained that inorganic acids arising from the breakdown of glucose might account for some of the divergencies in results. Therefore, determinations of the "fat content" of the plasma with and without the addition of glucose were made by the method of Stewart and White.[1] It was found that the titration value of "fat" rose when glucose was added to plasma. The effect of reducing substances in the blood, however, is not always identical with that produced by equal quantities of added glucose for the reducing substances yielded a smaller titration than did the added glucose. In view of these newer findings it becomes evident that the data hitherto obtained by these methods may require revision.

[3] Stoddard and Drury, *J. Biol. Chem.*, 1929, **84**, 741.
[4] Stewart, Gaddie and Dunlop, *Biochem. J.*, 1931, **25**, 733.