

great interest. Tables III and IV represent typical values. They show clearly that the amount of adrenaline present in the medulla alone is about 82 per cent. of the total amount of this hormone present in the whole gland and actual experiments carried out in this laboratory on the recovery of adrenaline from the separated medulla have confirmed this observation. It will also be noted that the disparity between the values for adrenaline by the Folin and Persulphate methods is considerably larger in the cortex than in the medulla—a disparity which is too great to be explained merely by the difference between the vitamin C contents of the cortex and the medulla.

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REICHERT VALUE OF BUTTER-FAT

FROM time to time investigators in various parts of India publish Reichert values and other constants, determined on butter-fat, prepared from the milk of single animals. These figures often suggest that the Provincial standards for Reichert value are too high and they are much quoted by the defence in prosecutions for the sale of adulterated butter or ghee.

I think the explanation may be a very simple one. A chemist wishing to determine such figures will usually ask a local cattle owner to bring an animal to his laboratory for milking under supervision. Quite a small amount of milk will provide the amount of fat needed for analysis; but if the cattleman is told that this is all that is required he will, quite naturally, send an animal which gives only a small yield. It is an accepted fact that the Reichert value of butter-fat falls rapidly as the animal approaches the end of the period of lactation; so that butter-fat obtained in this way is not representative of the butter-fat from normal animals.

Published figures purporting to be the Reichert values of the milk of single animals should be accepted only with the greatest reserve in the absence of a precise statement of either the stage of lactation of the animals, or the daily yield of milk at the time of sampling.

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2-N¹-SULPHANILAMIDO-5-ISOPROPYL-THIAZOLE IN MONKEY MALARIA

In a previous communication¹ effectiveness of (i) 2-N¹-Sulphanilamido-5-ethylthiazole and (ii) N¹-methyl-sulphathiazole in monkey malaria was reported. In the course of study of several 2-N¹-Sulphanilamido-5-alkyl-thiazoles in monkey malaria, 2-N¹-Sulphanilamido-5-isopropylthiazole has been found to be effective in eradicating the malarial infection in monkeys. These compounds were prepared by Ganapathi *et al.*² in the Chemotherapy Department of the Haffkine Institute and supplied by that department.

Rhesus monkeys infected with K, strain of *Plasmodium knowlesi* were used for the purpose of the experiments. Parasites in the peripheral blood were enumerated daily and when the infection had reached a moderate degree (about ten parasites per 10,000 R.B.C.'s) the drug was administered orally, in the form of tragacanth suspension through a stomach tube. The dose administered was 1 gm. given once a day for three consecutive days. It was observed that after administration of the drug the parasites disappeared completely from the peripheral blood in four days. In a second set of experiments a dose of 1 gm. was administered orally only once, and here also the parasites disappeared from the peripheral blood in four days. In a third set of experiments a dose of 0.5 gm. was administered orally only once and in this case also the parasites disappeared from the peripheral blood in four days. It was further observed that there was no relapse in monkeys treated with this drug while the controls similarly treated with atebirin showed a relapse. The question of radical cure was, therefore, investigated in case of animals treated with this drug. The blood of animals treated with a dose of 1 gm. given only once was found to be non-infective to normal animals three weeks after the disappearance of the parasites from the peripheral blood, and the animals so treated were as susceptible to fresh infection as normal animals. The progress of the infection on reinfection was same as in the first infection, showing thereby that the monkeys did not acquire any immunity due to the previous infection.

It was, therefore, concluded that 2-N¹-Sulphanilamido-5-isopropylthiazole causes a disappearance of parasites from peripheral blood and probably produces a radical cure in Rhesus monkeys infected with *P. knowlesi*. The dose required for the eradication of the parasites indicates the therapeutic usefulness of the drug in the treatment of human malaria. Investigations on this point along with the pharmacology of this drug are in progress and will be reported later.

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