the saliva of two of the calves, but after 24 hours none of the antibiotic was found in any of the calves.

Since the Aureomycin was found in the saliva, some of the antibiotic would necessarily pass into the rumen and consequently might have some effect on the rumen microflora. The effects of antibiotics on rumen microflora and on efficiency of digestion *in vitro* and *in vivo* have been studied, and reports are in preparation. In the continuation of the work of Rusoff *et al.* (*2*), it was reported by Hester *et al.* (*7*) that Aureomycin could not be detected in the rumen following intramuscular injection of Aureomycin. It is possible that the failure of the latter authors to detect Aureomycin in the rumen contents of slaughtered animals might be ascribed to the considerable dilution of saliva after it passes into the rumen, to the smaller amounts of Aureomycin injected, to a possibly less sensitive assay technique than that described in the saliva analyses reported here, or to a combination of all three factors.

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References and Notes

1. J. J. Radisson, thesis, Michigan State College (1952).
2. L. L. Rusoff *et al.*, *J. Dairy Sci.* 37, 488 (1954).
3. Aureomycin is the trademark of Lederle Laboratories Div., American Cyanamid Co., for the antibiotic chlortetracycline. The Aureomycin used in these experiments was obtained through the courtesy of R. F. Elliott, Lederle Laboratories.
4. I. B. Bender, R. S. Pressman, S. G. Tashman, *J. Dental Research* 32, 435 (1953).
5. This paper is contribution No. 234, Department of Dairy Husbandry, Kansas Agricultural Experiment Station. This work was supported in part by a grant from Lederle Laboratories.
6. Culture of *B. mycoides* was obtained through the courtesy of H. P. Broquist, Lederle Laboratories.
7. H. H. Hester, F. T. Landagora, L. L. Rusoff, *J. Animal Sci.* 13, 988 (1954).

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Methylpentynol (Oblivon) in the Treatment of Epilepsy

In 1952 R. W. Schaffarzick and B. J. Brown [*Science* **116**, 663 (1952)] published reports of experimental and clinical trials that suggested that methylpentynol might be of use in the treatment of epilepsy. They also noticed that two of the six patients under treatment developed strongly positive cephalin flocculation tests, which rapidly became negative when the drug was discontinued, suggesting that this drug might have toxic effects on the liver. As a result of this report the effect of methylpentynol on patients with epilepsy was further investigated and the effect of the drug on liver function tests was observed.

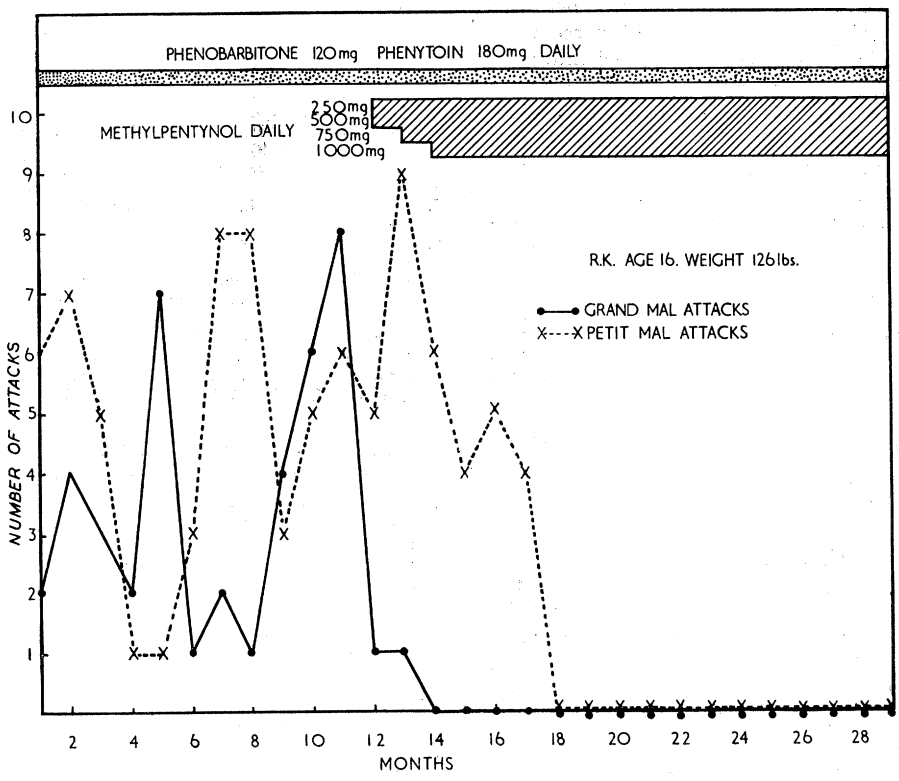

Fig. 1. Effect on epileptic patients of treatment with methylpentynol.

Six children of ages between 11 and 16 years and 18 adult males were treated. All but one of the patients had both grand and petit mal; five had, in addition, psychomotor attacks; the remaining one had psychomotor epilepsy only. Methylpentynol was given by mouth, the dosage being increased up to 1000 mg daily, and treatment was continued for 3 months. In only one patient, a boy of 16, did methylpentynol appear to control the epilepsy; the number of attacks and effect of treatment are shown in Fig. 1. He has now been under treatment with methylpentynol for a further 9 months as an outpatient and has had no further fits. Full empirical liver function tests were performed on all the children at regular intervals up to 3 months and on 10 of the adults at the end of 3 months. No abnormality was found.

Two of the children became sleepy and depressed while they were under treatment; they were inclined to stagger and fall easily. When the drug was omitted they rapidly regained their former wakefulness and spirits.

It is concluded that methylpentynol is unlikely to be useful in controlling epilepsy in patients who have proved resistant to the more usual form of treatment, but that it has no toxic effects on the liver, as far as these tests have shown.

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γ-Sitosteryl Glycoside in Tobacco

The Indian Cancer Research Centre has been interested for the last 10 years in determining the role of tobacco in the production of oral cancer (*1*). With this object in view, a detailed study of the chemistry of tobaccos that are used for chewing purposes by the people of India has been in progress for the last 2 years. One of the varieties of tobacco extensively used for chewing by the people living in Malabar (southwest coast of India) is known as "Vadakkan" (*Nicotiana tabacum*).

We have now found that it contains a sterol glycoside (I) not so far isolated from tobacco. The glycoside (I) is insoluble in water, sparingly soluble in nonhydroxylic solvents, and crystallizes from alcohol in colorless plates, mp 215°–235°C (found: C, 72.1; H, 10.4; calcd. for $C_{35}H_{60}O_6$: C, 72.8; H, 10.5 percent). Yield 0.01 to 0.02 percent. It yields tetraacetyl derivative, crystallizing from dilute alcohol in lustrous plates, mp 149°C