

Treatment was begun seventeen days after inoculation with the tumor, except in the cases of a few animals which were treated on the tenth day, and of a few which were first rendered diabetic and then inoculated. None of the tumors at the beginning of treatment had reached the size of the largest tumors reported cured by Benedict and Lewis.

Of the rats, there were alive twenty-four days after inoculation and seven days after beginning of treatment, 81 treated animals and 89 controls. Of the treated rats, 37 per cent. showed partial or subsequently complete absorption, while 58 per cent. of the controls had undergone spontaneous absorption. The largest tumor to disappear was among the controls and measured 26×14 mm. The largest growth noted occurred among the animals rendered diabetic before inoculation.

The laboratory stock of Buffalo rat sarcoma for the past fifteen months, representing over five hundred tumors, has showed 40 per cent. spontaneous absorption.

The mice with the transplantable carcinoma showed no cases of absorption, and those treated did not differ from the controls except in the death rate. The spontaneous tumors were not affected by the treatment.

In view of the great tendency of the Buffalo rat sarcoma to undergo spontaneous absorption and the failure of the treatment in progressively growing tumors, the results of Benedict and Lewis must be considered as due to spontaneous absorption rather than to the effect of induced diabetes.

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A new principle in isolation of spirochetes in pure culture.

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In attempting to obtain pure cultures of spirochetes from the lesions of rabbits showing symptoms of generalized lues, I was confronted with extreme difficulties in the case of two strains

especially—one on the eyebrow of a rabbit infected by the intravenous inoculation of syphilitic blood and the other deriving from the condyloma on the vagina of a rabbit infected by coitus from a male rabbit having specific lesion on the prepuce. The bacterial contamination in each case was so abundant, that numerous attempts at purification using original Noguchi method failed for months. Having noticed earlier¹ that certain antiseptics in proper quantities exert a marked accelerating action upon the growth of spirochetes, I prepared media containing salvarsan in very small amounts and finally after 10 passages succeeded in isolating both strains of spirochetes, which apparently have remained pure for the last five months. In another series of experiments I tried to make use of the fact that anilin dyes, which exert marked sterilizing action on bacteria even in dilutions of 1 : 5,000 and 1 : 10,000, seem not to inhibit the growth of certain spirochetes in much greater concentrations.² The experiments in this direction are still not completed, as so far it was impossible to find a dye which would uniformly inhibit the growth of all the bacteria occurring in contaminated syphilitic material in a concentration which would allow the life of all the different strains of spirochetes.

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The demonstration of tryptic digestion by an activated serum.

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In the earlier publications it was shown, that the placenta in the Abderhalden reaction is not digested.³ It was assumed then that the dialyzable split products of protein appearing during the test originate from the serum as the result of its autodigestion.⁴ It was shown also that although the normal serum shows no digestive power, such tryptic activity may be demonstrated in

¹ *Journal of Pharmacology and Exp. Therap.*, 1913, Vol. IV, p. 333.

² *Ibidem.*

³ J. Bronfenbrenner, *J. of Exp. Med.*, 1915, Vol. XXI.

⁴ J. Bronfenbrenner, *PROC. SOC. EXP. BIOL. AND MED.*, 1914, Vol. XII, p. 7.