Animals of Group D showed localized tubercular lesions at the site of infection and involvement of the adjacent lymphatics. Practically all of these animals developed discharging purulent infections at the injection site. They showed no gross splenomegaly, liver involvement or kidney involvement. There was no macroscopic evidence of generalized tuberculous lymphadenitis; in no instance did the disease process extend beyond the periaortic glands at the bifurcation of the aorta.

Conclusions. 1. N^1-dodecanoylsulfanilamide inhibits the growth of tubercle bacilli *in vitro* at a concentration of 10 mg/100 cc in beef infusion-dextrose-glycerine media over a period of 90 days. 2. N^1-dodecanoylsulfanilamide inhibits the development of the tuberculous process in guinea pigs infected subcutaneously with a human strain of tubercle bacilli.

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Production of Pneumonia in Rats by Intravenous Injection of Pneumococci.*

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Rake[1] demonstrated that pneumonia could be produced in mice when the pneumococci were introduced by the intravenous route. The important factors were the strain and dose of the organism, and the breed of mice. Twelve of 87 mice had macroscopic lesions; 6 of the 87 failed to show any microscopic lesions. The pathology of the various stages encountered was clearly described.

Prior to this work, with a few exceptions, intravenous injection of pneumococci has failed to give rise to pneumonia. Although it has long been postulated that the origin of the infection might be by way of the blood stream, there has been little evidence to support it.

Employing the Schwartzman phenomenon, Witebsky, Neter, and Ward[2] were able to localize pneumococci injected intravenously in dermal lesions of rabbits.

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1 Rake, Geoffrey, *J. Exp. Med.* 1936, **63**, 191.

2 Witebsky, Ernest and Neter, Erwin, PROC. SOC. BIOL. AND MED., 1938, **38**, 187.

TABLE I.
Type I Pneumonia Resulting from Intravenous Injection of Pneumococci

Sterile Mucin Intrabronchially* cc	Pneumococci Intravenously cc	No. of rats Inoculated	Dead	% of Animals with Macroscopic Consolidation†
0.1	10^{-1}	4	4	100
0.1	10^{-2}	21	14	62
0.1	10^{-4}	5	2	0
0.1	10^{-5}	3	1	33
0.1	10^{-7}	4	1	25
0.0	10^{-2}	5	4	0
0.1	0.0	5	0	0

* Animals which did not develop pneumonia were shown to have small atelectatic lesions, evidence of intrabronchial inoculation.
† From one-fourth to an entire lobe was involved.

In our experiments, rats were inoculated intrabronchially with 0.1 cc of sterile mucin according to a technic previously described;[3] immediately thereafter, the animals were injected intravenously (using the tail vein) with various amounts of culture. The data are presented in Table I.

In interpreting these results it must be remembered that these animals received only one inoculation of organisms, many of which were distributed throughout the body and removed by the fixed phagocytic cells. It is noteworthy that in at least one rat, the disease was produced with as small an inoculum as 10^{-7} cc of culture.

Although in the past it has been generally impossible to produce pneumonia in experimental animals by intravenous injection of pneumococci, this may be accomplished in rats following intrabronchial inoculation of sterile mucin. The presence of mucus material in the lung or some comparable condition is a necessary predisposing factor for the localization of the pneumococci.

[3] Nungester, W. J. and Jourdonais, L. F., *J. Infect. Dis.*, 1936, **59**, 258.