These experiments are still in progress, and only one phase is ready for report; namely, that concerning the germicidal action upon pneumococci of the various drugs studied. In this work the author has been so fortunate as to secure the co-operation of Dr. John A. Kolmer, of the University of Pennsylvania, in whose laboratory, and under whose direct supervision the observations have been made, with the assistance of Dr. George D. Heist.

A detailed report will be published elsewhere (*Transactions Association of American Physicians*). For the present it may be stated that the research has been carried far enough to show a distinct germicidal influence *in vitro*, of all cinchona derivatives, upon the three distinctive types of pneumococci. Certain differences appear in the relative values of the various salts of quinine, all of which are much less potent than ethyl hydrocuprein, but all of which show distinct and high germicidal activity—not only inhibiting growth, but also killing the pneumococci of all three types observed (I, II and III). Quantitative differences in the germicidal values of the different agents tested, with respect to the different types of pneumococci, have also been observed but these are much slighter than were expected.

Cross observations with other germicides (*e.g.* mercuric chloride, phenol. and arsenobenzol) show that while these exert some bactericidal effect upon pneumococci it is insignificant in comparison with that of the quinine group. Similarly, while the cinchona derivatives not only inhibit the growth of other bacteria (*e.g., Bacillus typhosus, Staphylococcus aureus*) but also destroy them, the concentration necessary is very many times greater than that fatal to pneumococci. It may thus be positively stated that the experiments show a distinctive relation (bacteriotropism) between cinchona derivatives and the three types of pneumococci. So far as *ethyl hydrocuprein* is concerned, these observations merely confirm the work of previous observers (Fränkel, Morgenroth and Levy, Moore and others) signalizing this drug as the pneumococcus-slayer *par excellence*. Clinical studies, however, do not show the same superiority of ethyl hydrocuprein over quinine in the treatment of any type of pneumonia, even when the former is reinforced by a specific serum—and this, notwithstanding the fact that such reinforcement has been shown to increase its germicidal value enormously in experimental pneumococcus infection in rabbits. (Moore.)

Moreover, ethyl hydrocuprein is much more toxic than quinine, causing in laboratory studies upon normal animals much greater central depression of blood-pressure and earlier cardiac paralysis. (Smith and Fantus.) A further fact to be noted in passing is