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The results of the use of absorption of agglutinin on the identification of strains of influenza bacilli.

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The fact that Dr. Williams obtained abundant influenza bacilli in the pharynx of nearly all cases of influenza and that in the lungs of fatal cases she found them in pure cultures in about 20 per cent. of those taken, together with the similar results obtained in Boston and in some of the camps, strongly suggested the possibility that the influenza bacillus might be the causative agent in the epidemic. It seemed to us apparent that the different influenza bacilli from the different cases should necessarily belong to the same type if the influenza bacillus were the cause of the epidemic. We obtained, therefore, in pure culture strains from over 100 cases, and of these injected 20 individually into different rabbits. All of these strains produced a good quantity of agglutinin. In testing the strains with these twenty individual sera, we found the surprising fact that only four of the serums agglutinated any other strains beyond the ones used to immunize the rabbits. The technic of those doing this work was tested in every conceivable way without changing the results. Cultures were also passed through animals and grown on different media without altering these strains from the agglutination standpoint.

One of the investigators by accident received some of a fresh influenza culture into her throat. In forty-eight hours she developed an attack of bronchitis. The influenza bacilli found were identical in strain with those which were received from the culture. This holding of the strain characteristics in the secondary case is evidence that the strain does not quickly change. This evidence of multiple strains seems to us to be absolutely against the influenza bacilli isolated being the cause of the pandemic. It appears to us impossible that we should miss the epidemic strain in so many cases, while obtaining some other strain so abundantly. The influenza bacilli, like the streptococci and pneumococci, are in all probability merely very important secondary invaders.