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"Nucleoprotein" and Non-Protein Substance Isolated from the Gonococcus. III. Immunological Reactions with Anti-Meningococcus and Anti-Pneumococcus Sera.

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Using the "nucleoprotein" and the non-protein fractions prepared from 5 strains of gonococcus[1] positive precipitin reactions were obtained with anti-meningococcus and anti-pneumococcus sera, using the technique described in the preceding paper.[2] The sera were obtained from 3 commercial firms and from the laboratories of the New York State Board of Health. The table shows representative precipitin titres for one of each kind of serum employed.

TABLE I.
Titres of Precipitin Reactions.

Precipitinogen	Immune Sera			
	Anti-pneumococcus			Anti-meningococcus
	Type I	Type II	Type III	
"Nucleoprotein" strain 1	+++	+++	+++ +	+++ +++ +
" " 3	+++	+++	+++ +	+++ +++
Non-protein fraction strain 1	+++ ++	+++ +	+++ +++	+++ +++ +
" " " 3	+++ +	+++ +	+++ +++	+++ +++ +

The plus marks (+) indicate the dilutions as multiples of 10, thus: +++ = 1:1,000; +++ + = 1:10,000, etc.

The cross reactions with the anti-meningococcus sera were not unexpected, but those with the anti-pneumococcus sera were quite surprising. It should be noted that whereas our anti-gonococcus sera were precipitated by gonococcus "nucleoprotein" in higher dilution than by the non-protein fraction, the ratio was reversed in the case of the anti-pneumococcus sera.

Precipitin reactions qualitatively similar to those given in the table were obtained with filtrates of broth cultures which had been submitted to no chemical treatment. The titres of such filtrates cannot be estimated because the concentration of antigen has not yet been determined.

[1] Boor, A. K., and Miller, C. P., PROC. SOC. EXP. BIOL. AND MED., 1931, **28**, 1046.

[2] Boor, A. K., and Miller, C. P., PROC. SOC. EXP. BIOL. AND MED., 1931, **28**, 1048.