mococcus III polysaccharide and purified homologous precipitins), and by Taylor, Adair, and Adair[7] (serum albumin and its precipitin). The former authors explained the phenomenon on the basis of the laws of mass action which they derived for the precipitin reaction. Marrack[8] reviews the observations on this occurrence and explains it on the probable existence of non-uniformity of antigen and of antibody.

Conclusions. The occurrence of free polysaccharide in the blood of pneumonic patients is not uncommon. Its presence is generally indicative of a severe infection, with usually fatal outcome. It would appear that sulfapyridine alone may be ineffective in the control of those pneumococcic infections which are accompanied by the production of sufficient polysaccharide to reach relatively high concentrations in the blood stream, but that it may be effective in such instances if it is combined with the administration of sufficient type-specific antibody. The observations reported suggest that sulfapyridine alone may control pneumococcic infections provided there is not too much antigen present in the blood, and some specific antibody is produced.

10639 P

Group Similarity of Alpha Hemolytic Bovine Mastitis Streptococci for Lancefield's Serological Group C.

RALPH B. LITTLE. (Introduced by C. TenBroeck.)

From the Department of Animal and Plant Pathology, Rockefeller Institute for Medical Research, Princeton, N. J.

Minett and his associates[1] included in mastitis streptococcus Group II certain streptococci which usually cause a more acute form of mastitis with less tendency to a permanent infection than Group I. In the serological study of these streptococci, Stableforth[2] found that, although grouped together on the basis of cultural and biochemical similarities, they could also be regarded as a serological group because they were directly or indirectly connected antigenically. Diern-

[7] Taylor, G. L., Adair, G. S., and Adair, M. E., *J. Hyg. Camb.*, 1932, **32**, 340.

[8] Marrack, J. R., *Medical Research Council, Special Report Series*, No. 230, 1938, pp. 146-7.

[1] Minett, F. C., Stableforth, A. W., and Edwards, S. J., *J. Comp. Path. and Ther.*, 1929, **42**, 213.

[2] Stableforth, A. W., *J. Comp. Path. and Ther.*, 1932, **45**, 185.

hofer[3] described the cultural characters of similar streptococci isolated by him, which he designated as *Str. dysgalactiæ*.

Lancefield[4] reported that certain nonhemolytic strains of streptococci were members of the serological Group C. In a personal communication she stated that these nonhemolytic strains were from cases of bovine mastitis.

In the serological study of 15 strains of *alpha* hemolytic mastitis streptococci of Group II *(Str. dysgalactiæ)*, isolated here or obtained from 3 other laboratories, it was found that all 15 strains possessed an antigen which gives a group-specific precipitin-reaction with sera of Lancefield's serological Group C. Furthermore, the group-specific antibodies in Group C sera obtained from Dr. Lancefield could be removed by absorbing with the Group II mastitis strains. Antisera prepared from formalin-killed cultures of Group II streptococci were precipitated by the extracts of hemolytic strains of Group C.

In a personal communication of April 18, 1939, Dr. Wayne Plastridge informed the writer that mastitis strains originally classified by him as *S. pseudo-agalactiæ* belong to serological Group C and are culturally identical with cultures described by Diernhofer[3] as *Str. dysgalactiæ*.

The results show that strains of *alpha* hemolytic mastitis streptococci (Group II) either are related to or belong to Lancefield's serological Group C.

10640

Effect of Neoprontosil on Bacterial Toxins.

CHARLES M. CARPENTER AND GERALD M. BARBOUR. (Introduced by George Packer Berry.)

From the Department of Bacteriology, University of Rochester School of Medicine and Dentistry, Rochester, N. Y.

Domagk[1] first reported that Prontosil prevented the death of mice injected with lethal doses of hemolytic streptococci, even though it had no bactericidal effect on the microörganisms *in vitro*. Because of Domagk's findings, the drug was used for treatment in streptococcal infections in man and subsequently in other infectious diseases.

[3] Diernhofer, K., *Milchwirtsch. Forsch.*, 1932, **13**, 368.

[4] Lancefield, R. C., PROC. SOC. EXP. BIOL. AND MED., 1938, **38**, 473.

[1] Domagk, Gerhard, *Deutsche Med. Wchnschr.*, 1935, **61**, 250.