NOTES

A NOTE ON THE SUSCEPTIBILITY OF HEMOPHILUS INFLUENZAE TYPE B TO BACITRACIN

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Bacitracin is a new member of the group of antibiotics produced by the gram-positive sporeforming bacilli. It was first reported by Johnson, Anker, and Meleney in 1945 (*Science*, **102**, 376), and it is produced by a member of the *Bacillus subtilis* group of organisms. Investigation of this antibiotic is being conducted under a grant from the United States Army. The bacitracin is being supplied by the Commercial Solvents Corporation.

Many organisms isolated from pathological processes have been tested for sensitivity to bacitracin. It has been observed that most of the gram-negative bacilli were resistant to the action of the antibiotic. An exception was noted in the case of four strains of *Hemophilus influenzae* which were obtained from the spinal or ventricular fluid in four cases of meningitis in humans. These strains were all type B, and were freshly isolated from the pathological material. Three of the strains were tested for susceptibility to bacitracin on primary culture of spinal or ventricular fluid as well as on subcultures. These constituted the only strains of this organism available for study; without exception they appeared to be sensitive to the antibiotic.

The pathological specimen suspected of containing *Hemophilus influenzae* was planted on 10 per cent human blood agar in petri plates. A heavy inoculum was spread evenly over the plate with a bent wire. A piece of filter paper approximately 1 cm square was soaked in a solution of bacitracin containing 20 units per ml and placed in the center of the plate. After 24 to 48 hours' incubation, the squares were surrounded by an inner zone of complete inhibition outside of which was an indefinite area of sparsely scattered colonies. This merged with the dense growth on the remainder of the plate. Subcultures were tested in a similar manner. Approximately the same results were obtained by using steel penicylinders filled with the antibiotic. One of the strains was tested for sensitivity in a tube assay. The organisms were grown and titrated in blood extract broth. This strain was inhibited by 0.625 to 0.63 units of bacitracin per ml under these conditions.