Biochemical, Toxic and Antigenic Properties of Vectors E₁ Isolated from Various Serotypes of Listeria monocytogenes. B. Potužníková, M. Mára, C. John, E. Menčíková, F. Patočka, I. Hánová, Laboratory for Special Medical Microbiology, Institute of Medical Microbiology and Immunology, Faculty of Medicine, Charles University, Prague.

Listerial factor E₁ isolated by Patočka and Mára (1971), using a modified ether-water procedure of Ribi for the preparation of endotoxin, and analogous to the endotoxin of listeria described later (Siddique and Srivastava, 1972, 1973) was prepared from cells of six strains of the chief serotypes of Listeria monocytogenes (Brat 1, T₂, T₃, T₄a, T₄b, Brat 2). As was determined in aerated shaken cultures in tryptose media with glucose at 37°C ("Microferm" fermentor) the separate strains differed distinctly in their growth constants and production of factor E₁ related to dry weight of washed cells (4 to 29%). The absolute amounts of proteins (Lowry) and polysaccharides (orcinol) varied in the E₁ of each strain, their proportions, however, approximated 4 : 1 in all of them. The minimal reactive dose of the edematous-erythematous reaction in the skin of rabbits was in the range of 60 to 100 µg. The E₁ of various serotypes lowered the LD₅₀ of mice upon simultaneous administration of infective doses of strain Brat 1. Rabbit antisera obtained by adjuvant immunization with the various E₁ agglutinated fresh sheep erythrocytes sensitized with the E₁. Titres of the various E₁ antisera differed. Immunoelectrophoresis revealed that listerial factors E₁ prepared from the six chief serotypes reacting with antiserum against E₁ of strain T₃ produced from 2 to 5 precipitation lines. The most significant precipitation line was present in reaction with samples of all serotypes tested.