HYPERSENSITIVITY PNEUMONITIS ANTIGENS ACTIVATE ALVEOLAR MACROPHAGES IN VITRO

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The gaseous phase cultures of alveolar macrophages (AMs) of guinea pigs were exposed to the saline extracts of the dust-borne bacteria *Micropolyspora faeni* (syn. *Faenia rectivirgula*) and *Erwinia herbicola* (syn. *Enterobacter agglomerans*) which have been added at the concentration of 1 μg/ml to culture medium with or without complement. The effects of exposure on superoxide anion (°2-) production by AMs were assessed by the lucigenin-dependent chemiluminescence method. Both extracts caused significant ($p < O.Ol$) increase in °2- generation by AMs, as assessed by the 161-254 percent enhancement of chemiluminescence release comparing to control values. The presence of complement augmented the production °02-, which reached a peak at 3 hours after initial exposure. The possible significance of the generation of oxygen radicals in pathogenesis of the diseases due to exposure to agricultural dusts loaded with bacterial antigens is discussed.

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