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Mitochondrial reactive oxygen species regulate fungal protease-induced inflammatory responses

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Abstract

Epidemiological studies have shown that fungal infections are a main cause of respiratory tract diseases, such as asthma, bronchopneumonia, intoxication, and invasive fungal disease. Fungi such as *Aspergillus* and *Candida* species have become increasingly important pathogens as the global climate changes. Accordingly, in this study, we evaluated the toxicological potential of *Aspergillus* protease in the lower respiratory tract. Exposure of *Aspergillus* protease to A549 cells induced upregulation of tumor necrosis factor (TNF)- α , monocyte chemoattractant protein (MCP)-1, and intercellular adhesion molecule (ICAM)-1 mRNAs and increased production of interleukin (IL)-8 and MCP-1 protein through enhanced

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