Fast and quantitative evaluation of human leukocyte interaction with *Aspergillus fumigatus* conidia by flow cytometry.

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Details



Abstract

Systemic infections with the opportunistic mold *Aspergillus fumigatus* are a great threat to immunocompromised patients such as transplant recipients. Immunological research on *A. fumigatus* involves the measurement of phagocytosis of fungal conidia (spores) by human phagocytes. Here, we present a fast and flexible way to analyze phagocytosis by flow cytometry using fluorescein isothiocyanate (FITC) labeling of conidia prior to co-incubation with human leukocytes and an anti-FITC counterstaining step postincubation to allow the discrimination of internalized and adherent conidia. In contrast to many other protocols, this method can be combined with further surface marker analyses. We sought to determine phagocytosis rates of *A. fumigatus* conidia in different stages and after several incubation times using this method.

Moreover, we provide an example of application by comparing phagocytosis of *A. fumigatus* mutants to the wild type. © 2018 International Society for Advancement of Cytometry.

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