

Abstract

Abstract Damp/moldy indoor environments, which have resulted from flooding events and may increase as a result of climate change, have been associated with asthma exacerbation. Certain molds found in significantly higher or lower concentrations in asthmatics' homes compared to control homes have been categorized as Group 1 (G1) and Group 2 (G2) molds, respectively. We have compared the allergic **potential** of selected G1/G2 molds to house dust mite (HDM) in a mouse model. BALB/c mice were exposed to mold (0-80 μ g) or HDM (20 μ g) extract by intratracheal aspiration either 4X over 4 weeks (allergenecity) or 1X (non-specific responses). Airflow limitation (methacholine challenge) was measured (Day 1) and serum and bronchoalveolar lavage fluid were collected (Day 2) after the final exposure. The G1 molds induced low-to-moderate responses and required higher doses to achieve antigen-specific IgE results similar to those induced by HDM. Compared to HDM responses, the G2 mold in this study required lower doses to induce a similar response. Acute exposure responses suggest some molds may exacerbate asthmatic responses. These studies demonstrate the differing capacities of molds to induce responses associated with allergic asthma, including differences in the threshold dose for allergy induction. Therefore, molds must be evaluated individually for allergic/asthmatic **potential**. These studies along with our previous studies with G1 (*Stachybotrys chartarum*)/G2 (*Penicillium chrysogenum*) molds suggest that the G1/G2 categorization is not indicative of allergic **potential** but they do not preclude this categorization's utility in determining unhealthy building dampness.