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Reply to "Implications of High Antifungal Susceptibility on *Schizophyllum commune*-Associated Allergy in Clinical Practice"

Anuradha Chowdhary,[a] Shallu Kathuria,[a] Kshitij Agarwal,[b] Jacques F. Meis[c,d]

Departments of Medical Mycology[a] and Pulmonary Medicine,[b] Vallabhbhai Patel Chest Institute, University of Delhi, Delhi, India; Department of Medical Microbiology, Radboud University, Nijmegen Medical Centre, Nijmegen, Netherlands[c]; Department of Medical Microbiology and Infectious Diseases, Canisius-Wilhelmina Hospital, Nijmegen, Netherlands[d]

We acknowledge and appreciate the observations of Ogawa et al. in response to our paper (1) regarding the applicability of the antifungal susceptibility profile of the basidiomycete *Schizophyllum commune* in allergic bronchopulmonary mycoses (ABPM). The importance of filamentous basidiomycetes as agents of invasive and allergic disease has increased in the past few years (2–5). It is emphasized that due to the small number of samples tested in our study, it was difficult to demonstrate the efficacy of oral itraconazole in cases of ABPM due to *S. commune*. We agree with Ogawa et al. that further investigations on a larger sample size are required to elucidate the role of antifungal drugs in allergic disorders associated with *S. commune*. However, oral itraconazole has been proven to be effective in the treatment of allergic bronchopulmonary aspergillosis (ABPA) in randomized controlled trials (6, 7). Furthermore, the beneficial effects of oral itraconazole have also been demonstrated in patients with severe asthma sensitized to one of several common fungi (8). It is noteworthy that the emergence of azole-resistant *Aspergillus fumigatus* in patients with ABPA who are treated with long-term azole therapy (mainly itraconazole) has raised concerns for undertaking antifungal susceptibility testing (AFST) (9, 10). It is, therefore, suggested that AFST should become an integral part of the management of these patients, especially if they are poorly responsive to therapy or deteriorate after an initial response (9). Likewise, the knowledge of profiles of antifungal drugs' susceptibilities to filamentous basidiomycetes is important for patient management and therapeutic outcome, as several basidiomycetes show resistance to antifungals. For example, *Hormographiella aspergillata* and *Volvariella volvacea*, agents of invasive mycosis, are resistant to amphotericin B, caspofungin, itraconazole, voriconazole, and posaconazole and have been associated with a poor patient outcome (11). Similarly, *S. commune* has been reported to cause invasive disease in the past, and the low MICs of azoles observed in our series of *S. commune* isolates give an indication for possible effective treatment (1, 11, 12). Currently, in allergic/chronic pulmonary mycoses, AFST of molds against azoles is not routinely performed. Although not yet validated, it is clear that low *in vitro* MICs might be encouraging for treament of infections caused by basidiomycetes. The second important point noted by Ogawa et al. is that low *in vitro* MICs of *S. commune* might have advantages with regard to the recurrence of ABPM caused by this fungus. They stated that a low dose of itraconazole therapy for 14 days in a case of ABPM due to *S. commune* successfully prevented disease recrudescence for 4 years (13). Furthermore, the authors observed the seasonal recrudescence of ABPM due to *S. commune*, which may be attributed to fungal overgrowth in the field in that period. In this context, it is well known that asthmatics sensitive to *Alternaria* or *Cladosporium* species tend to suffer from a severe form of the disease when these fungi sporulate during late summer and early autumn (3). Thus, a similar occurrence of a seasonal association of *S. commune* with allergic diseases in patients may exist.

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Address correspondence to Anuradha Chowdhary, dranuradha@hotmail.com.

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