

EDITORIAL

Outdoor Allergens of Regional Importance in Asia

The global healthcare burden caused by pollinosis is now being increased due to the production of a higher amount of pollen, allergenic proteins with climate change, and increased air pollution [1]. Diagnosis of pollinosis should reflect regional differences in flora. However, most of the reagents for allergy diagnosis and immunotherapy are imported from western countries and produced from similar species not native to Asian countries [2]. Pollen food allergy syndrome (PFAS) often makes the situation worse. Strong cross-reactivity of some pollen allergens elicits allergic reactions to some fruits and vegetables.

Component-resolved diagnosis (CRD) is of great interest for the more accurate diagnosis, identification of culprit allergen, and primary sensitizer. Therefore, it is essential for the standardization of allergen extracts and the molecular characterization of component allergens.

The purpose of this thematic issue is a publication a series of review articles on the allergen sources and molecular properties of component allergens which are important in Asian countries. It is the extension of a previous issue on allergens in Asian homes [3]. This issue covers the characteristics of various allergens from pollens, along with climate change and pollinosis [1]. Japanese cedar [4] and Japanese hop [5] are the two most peculiar producers of pollen allergens in Asia. Oak [6], mugwort [7], and grass are also producers of potent allergens. The species of oak, mugwort, and grasses of allergenic importance in Asia are different from those in western countries. However, they are highly cross-reactive with the homologous species imported from western countries. The same species of birch [8] and ragweed [9] are also potent producers of allergens in Asia. Perspectives on allergy vaccines using chemically modified allergoids for the development of safe and effective immunotherapeutics are also included [10]. Three more papers on climate change, mugwort and grass pollen allergens were intended to be included in this issue. However, some papers were lost largely due to the pandemic crisis of Covid-19.

These articles can provide an insight into the different situations of western countries. Characterization of allergen molecules can provide a better understanding of allergenic properties. Hopefully, this knowledge can facilitate the development of better allergy diagnostics and immunotherapeutics.

Keywords: Allergen, Asia, molecular allergology, pollen, pollinosis, pollen food allergy syndrome (PFAS).

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