

# Targeted Nutritional Support for Airborne Allergy Associated Symptoms

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Allergic rhinitis is classified as the sixth most common chronic illness. It is also the most common chronic condition occurring in children. Aside from the typical allergens, it is estimated that 35 million Americans suffer from symptoms associated with airborne allergens. Of these, it is estimated that approximately 11 million experience asthma associated upper respiratory symptoms, which are often provoked by airborne allergens.<sup>1</sup> According to the US Agency for Healthcare Research and Quality, costs associated with treatments amount to \$1.8 billion annually. In addition to this cost calculation, the cost associated with the loss of productivity to employers and society is estimated to be in the range of \$3.8 billion annually.<sup>2</sup> Effective, targeted management options are recognized as having a direct impact upon the consequences of these symptoms, and may in turn serve to minimize both negative health effects and the associated costs of loss productivity.

The symptomatology of allergic rhinitis results directly from exposure to allergens in a susceptible (sensitized) individual. Among others, common allergens include pollen, grasses or other weeds, and house-dust mite. Symptoms are triggered by the interaction of an allergen with immunoglobulin E (IgE) molecules, which bind through the high affinity IgE receptor to the surface of mast cells in the nasal mucosa, or to circulating basophils. Recognition of the allergen by the IgE antibody leads to activation of the mast cell or basophil, causing the release of a variety of mediators, including histamine and leukotrienes, which in turn attract inflammatory cells from the peripheral circulation. This orchestrated chain of events results in the characteristic clinical features of allergic rhinitis.

Specific botanical compounds are recognized as effective agents in assisting the body's immune system in coping with the onset on allergy symptoms. These specific botanicals are reviewed.

## **Chekiang Fritillary (*Fritillaria thunbergii*) (extract) (bulb)**

As a member of the lily family, the bulbs of *Fritillaria* are noted to have antitussive, astringent, expectorant, and purgative properties.<sup>3, 4, 5, 6</sup> The two main alkaloids characterized are peimine and peiminine.<sup>7</sup> Plants of the *Fritillaria* genus are classified as strong antitussive (cough suppressant) agents, and have been demonstrated to relieve inflammation.<sup>8</sup> Its antitussive action has been shown to have a much more potent activity than codeine phosphate, without the addictive effects.<sup>9</sup> In the traditional Chinese representation, its action includes a role as both an expectorant and as an antipyretic (fever reducing) agent. It is also said to possess actions which moisten dryness, resulting in cough relief, to resolve or reduce phlegm, to clear and purge heat, and to purge toxins. In Chinese medicine its actions are noted in phlegm-heat cough reduction, in numbing

a painful throat, and in reducing both lymph node enlargement and toxic swelling.<sup>7</sup> Its specific action on the respiratory system is attributed to the component fritimine, which has been associated with a calming effect on the "excitability of respiratory centers."<sup>10</sup> The bulb has also been used internally for coughs, bronchitis, abscesses and related conditions.<sup>11</sup>

## **European Goldenrod (*Solidago virgaurea*) (extract) (aerial part)**

The constituents of Goldenrod include flavonoids, primarily rutin, in addition to quercitrin, isoquercitrin, astragaloside and hyperoside, as well as saponins and phenolic glycosides.<sup>12</sup> Classically, Goldenrod is used in the management of upper respiratory congestion, due to its effectiveness in thinning mucus secretions and in relieving congestion.<sup>13</sup> Its actions are indicated as being mildly antispasmodic, possessing anti-inflammatory, properties and possessing diuretic actions.<sup>12</sup>

**Contraindications:** Irrigation therapy is contraindicated in cases of edema due to impaired heart and kidney function.

## **Baikal Skullcap (*Scutellaria baicalensis*) (extract) (root)\***

Two of the three major compounds isolated from Skullcap, baicalin and baicalein, are noted to possess superoxide scavenging properties, and to inhibit xanthine oxidase, respectively.<sup>14</sup> *Scutellaria* has also been traditionally used as a relaxing nerve tonic,<sup>15</sup> and is well-recognized for its antispasmodic actions. Its use has also been noted to significantly decrease prostaglandin E2 (PGE2) in a dose-dependent fashion.<sup>16</sup> PGE2 inhibition is demonstrated as an effective means to augment inflammation.<sup>17</sup>

## **Eyebright (*Euphrasia officinalis*) (extract) (aerial part)\***

The properties of eyebright are indicated as possessing anti-inflammatory, astringent, digestive, ophthalmic and tonic properties.<sup>18, 19, 20, 21, 22, 23</sup> When taken orally eyebright functions to decrease inflammation of nasal mucous membranes and sinuses.<sup>13</sup> It is also used to counter infectious and allergic conditions affecting the eyes, middle ear, sinuses and nasal passages,<sup>24</sup> and is noted to constrict the mucous membranes of the eye. It possesses high concentrations of the iridoid glycoside aucubin, which has demonstrated antimicrobial activity.<sup>13</sup>

## **White Mulberry (*Morus alba*) (extract) (fruit)\***

Although Mulberry's primary use is in the cultivation of silkworms, it also possesses medicinal properties. In Chinese medicine White Mulberry has a long history of traditional use,<sup>25</sup> and in the modern **Chinese Materia Medica** it is classified as a blood tonic. Mulberry is also known to contain a significant amount of anthocyanins. Studies in laboratory animals demonstrate that anthocyanins possess antioxidant activity. They are also noted to provide cardiovascular protection, to promote immune enhancement, to possess antiviral activity, and to aide in stress reduction.<sup>26</sup>

## **Platycodon grandiflorum (extract) (root)\***

In Traditional Chinese Medicine *Platycodon*, also known as the balloon flower, is a perennial herb recognized for the relief

of coughs (antitussive), particularly those with associated phlegm,<sup>27</sup> or due to acute bronchitis, pneumonia or colds.<sup>29</sup> Its actions are noted as an effective agent in lung and throat clearance, in reducing swelling, and in promoting the drainage of pus.<sup>28</sup> It is said to possess expectorant, demulcent, and anti-inflammatory properties, and is noted for its support of lung qi.<sup>29</sup> In this capacity it aides both with expectorant of phlegm, and with impeding cough.<sup>30</sup> It is also noted to promote drainage from the lungs and throat.<sup>28</sup>

### **Silk Tree (*Albiza julibrissin*) (extract) (bark)\***

The silk or mimosa tree is an ornamental tree producing fine red filamentous flowers during the summertime. Among other properties, the stem bark, traditionally used in Ayurvedic medicine, is noted to have anodyne (pain relieving), anthelmintic, carminative, diuretic, vermifuge, sedative, tonic, and vulnerary (wound healing) properties.<sup>31, 32, 33</sup> An additional attribute is its anti-inflammatory activity.<sup>34</sup>

As designated above, select herbs provide specific actions to support the respiratory system, and in turn may function to modulate the immune system, resulting in a less severe immune reaction. Histoplex-AB™ utilized as part of a comprehensive approach may aide in minimizing the negative effects of allergy symptoms.

**Cautions:** Histoplex-AB™ is not recommended during pregnancy or lactation, in those with an autoimmune disorder or a significantly compromised immune system, in children under 12 years of age, or in those with an acute infection. Additionally the use of *Scutellaria* is contraindicated in diabetes, while the use of *Fritillaria* is contraindicated along with the use of hypertension medications. *Goldenrod* should be used with caution in cases of edema due to impaired heart and kidney function.

**Product Adjuncts:** Mixed Ascorbate Powder™, Optimal EFAs® Caps, IAG™

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