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Prevalence of sensitization to weed pollens of *Humulus scandens*, *Artemisa vulgaris*, and *Ambrosia artemisiifolia* in northern China

中国北方杂草（葎草、艾蒿、豚草）花粉过敏原的流行情况

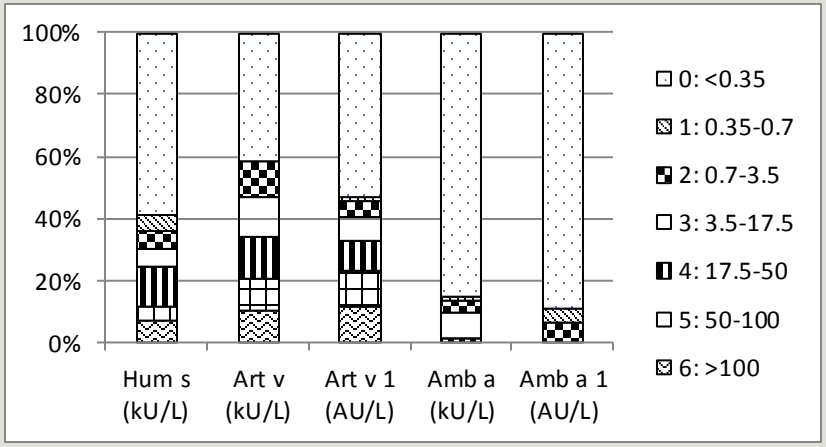
Key words: Humulus scandens, Artemisa vulgaris, Ambrosia artemisiifolia, Intradermal test, Specific IgE, Sensitization

关键词：葎草；艾蒿；豚草；皮内试验，特异性IgE；过敏

- The prevalence of positive intradermal responses in clinic to pollens of *Artemisia sieversiana*, *Artemisia annua*, *A. artemisiifolia*, and *H. scandens* was 11.0%, 10.2%, 3.7%, and 6.6%, respectively. Among the intradermal positive subjects, the prevalence of specific IgE antigens to *A. vulgaris* was 58.3%, to *A. artemisiifolia* 14.7%, and to *H. scandens* 41.0%.

- The prevalence of specific IgE antigens to the allergen Art v 1 was 46.9%, and to Amb a 1 was 11.2%. The correlation between the presence of IgE antibodies specific to *A. vulgaris* and to the Art v 1 antigen was very high. Subjects with *A. artemisiifolia* specific IgE also had *A. vulgaris* specific IgE, but with relatively high levels of *A. vulgaris* IgE antibodies. There were no correlations between the presence of IgE antibodies to *H.scandens* and *A. vulgaris* or to *H. scandens* and *A. artemisiifolia.*

- The intradermal prevalence of weed pollen sensitization among allergic subjects in northern China is about 13.5%. Correlations of specific IgE antibodies suggest that pollen allergens from *Artemisia* and *Humulus* are independent sources for primary sensitization.



Prevalence of specific IgE reactivity (positive percentage in different class) to weed pollen and individual major allergen (n=144)

Combined specific IgE sensitizations (All n=144)

	Humulus (kU/L)	Artemisia v (kU/L)	Ambrosia (kU/L)	Art v 1 (AU/L)	Amb a 1 (AU/L)
All n= 144	41.0 %	58.3 %	14.7 %	46.9 %	11.2 %
Humulus IgE positive n=59	100 %	49.2 %	20.3 %	33.9 %	11.9 %
Artemisia IgE positive n=84	34.5 %	100 %	22.6 %	76.2 %	19.1 %
Ambrosia IgE positive n=21	57.1 %	90.5 %	100 %	81.0 %	38.1 %
Art v 1 IgE positive n=67	29.9 %	99.5 %	25.4 %	100 %	23.9 %
Amb a 1 IgE positive n=16	43.8 %	100 %	50.0 %	100 %	100 %