Viva Health Laboratories

The Stables
New Lodge
Drift Road
Winkfield
Windsor
Berkshire
SL4 4RR

PATIENT ID:
VH_Test_2
PATIENT NAME:
Food Allergy Panel
DATE OF BIRTH:
01/01/2001
SAMPLE ID:
Viva Health Test 2
QR-CODE:
02ANU31D
ANALYZED ON:
01/12/2022
TESTED ALLERGENS:
295
TEST METHOD:
ALEX^2

REFERRING PHYSICIAN:
Viva Health Laboratories
TESTED BY:
BIO-DIAGNOSTICS LTD,
UPTON INDUSTRIAL ESTATE,
RECTORY ROAD, UPTON UPON SEVERN,
WORCESTERSHIRE
WR8 0LX

The internal QC (Plausibility check for GD) was within acceptance range.

Lab report: Summary on detectable sensitisations

POLLEN

Grass Pollen
Tree Pollen
Weed Pollen

MITES

House Dust Mites & Storage Mites

PLANT-BASED FOOD

Legumes
Grains
Spices
Fruits
Vegetables
Nuts & Seeds

INSECTS & VENOMS

Ant, Bee, Wasp
Cockroach

MICROORGANISMS

Fungal Spores & Yeast

ANIMAL-DERIVED FOOD

Milk
Egg
Fish & Seafood
Meat

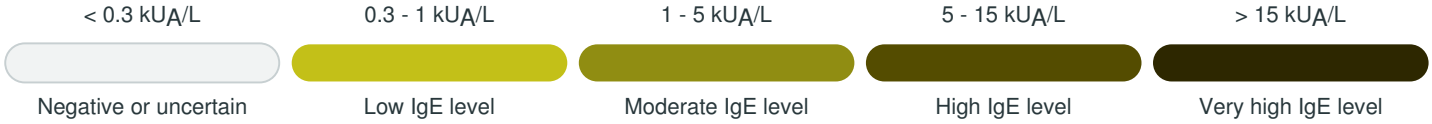
EPITHELIAL TISSUES OF ANIMALS

Pets
Farm Animals

OTHERS

Latex
Ficus
CCD
Parasite

Highest measured IgE concentration per allergen group



Name	E/M	Allergen	Function	kU$_A$/L
MICROORGANISMS & SPORES				
Yeast				
Yeast	⁘	Sac c		≤ 0.10
PLANT FOOD				
Legumes				
Peanut	◉	Ara h 1	7/8S Globulin	1.56
	◉	Ara h 2	2S Albumin	0.66
	◉	Ara h 3	11S Globulin	0.12
	◉	Ara h 6	2S Albumin	≤ 0.10
	◉	Ara h 8	PR-10	6.96
	◉	Ara h 9	nsLTP	0.66
	◉	Ara h 15	Oleosin	≤ 0.10
Chickpea	⁘	Cic a		2.45
Soy	◉	Gly m 4	PR-10	2.42
	◉	Gly m 5	7/8S Globulin	0.26
	◉	Gly m 6	11S Globulin	0.52
	◉	Gly m 8	2S Albumin	0.28
Lentil	⁘	Len c		4.43
White bean	⁘	Pha v		0.19
Pea	⁘	Pis s		6.34
Cereals				
Oat	⁘	Ave s		0.51
Quinoa	⁘	Che q		≤ 0.10
Common buckwheat	⁘	Fag e		0.22
	◉	Fag e 2	2S Albumin	≤ 0.10
Barley	⁘	Hor v		0.31
Lupine seed	⁘	Lup a		0.78
Rice	⁘	Ory s		0.23
Millet	⁘	Pan m		0.45
Cultivated rye	⁘	Sec c_flour		0.16
Wheat	◉	Tri a 14	nsLTP	0.29
	◉	Tri a 19	Omega-5-Gliadin	≤ 0.10
Spelt	⁘	Tri s		0.38

Name	E/M	Allergen	Function	kU$_A$/L
Maize		Zea m		0.13
		Zea m 14	nsLTP	0.87

Spices

Paprika		Cap a		0.52
Caraway		Car c		0.10
Oregano		Ori v		0.12
Parsley		Pet c		≤ 0.10
Anise		Pim a		0.18
Mustard		Sin a 1	2S Albumin	4.42

Fruits

Kiwi		Act d 1	Cysteine protease	0.27
		Act d 2	TLP	0.55
		Act d 5	Kiwellin	≤ 0.10
		Act d 10	nsLTP	1.08
Papaya		Car p		1.39
Orange		Cit s		0.37
Melon		Cuc m 2	Profilin	16.73
Fig		Fic c		0.10
Strawberry		Fra a 1+3	PR-10+LTP	11.20
Apple		Mal d 1	PR-10	8.30
		Mal d 2	TLP	≤ 0.10
		Mal d 3	nsLTP	0.90
Mango		Man i		≤ 0.10
Banana		Mus a		≤ 0.10
Avocado		Pers a		0.32
Cherry		Pru av		0.12
Peach		Pru p 3	nsLTP	0.84
Pear		Pyr c		0.55
Blueberry		Vac m		≤ 0.10
Grapes		Vit v 1	nsLTP	0.48

Vegetables

Onion		All c		0.20
Garlic		All s		0.91

Name	E/M	Allergen	Function	kU$_A$/L
Celery	◉	Api g 1	PR-10	2.34
	◉	Api g 2	nsLTP	≤ 0.10
	◉	Api g 6	nsLTP	0.95
Carrot	⁘	Dau c		3.58
	◉	Dau c 1	PR-10	4.82
Potato	⁘	Sol t		0.13
Tomato	⁘	Sola l		≤ 0.10
	◉	Sola l 6	nsLTP	≤ 0.10

Nuts

Cashew	⁘	Ana o		0.69
	◉	Ana o 2	11S Globulin	≤ 0.10
	◉	Ana o 3	2S Albumin	0.54
Brazil nut	⁘	Ber e		0.13
	◉	Ber e 1	2S Albumin	≤ 0.10
Pecan	⁘	Car i		0.78
Hazelnut	◉	Cor a 1.0401	PR-10	9.84
	◉	Cor a 8	nsLTP	0.68
	◉	Cor a 9	11S Globulin	0.29
	◉	Cor a 11	7/8S Globulin	1.46
	◉	Cor a 14	2S Albumin	2.43
Walnut	◉	Jug r 1	2S Albumin	1.29
	◉	Jug r 2	7/8S Globulin	0.85
	◉	Jug r 3	nsLTP	0.20
	◉	Jug r 4	11S Globulin	0.50
	◉	Jug r 6	7/8S Globulin	0.27
Macadamia	◉	Mac i 2S Albumin	2S Albumin	≤ 0.10
	⁘	Mac inte		0.63
Pistachio	◉	Pis v 1	2S Albumin	1.41
	◉	Pis v 2	11S Globulin subunit	≤ 0.10
	◉	Pis v 3	7/8S Globulin	≤ 0.10
Almond	⁘	Pru du		1.38

Seed

Pumpkin seed	⁘	Cuc p		1.38
Sunflower seed	⁘	Hel a		0.99

Name	E/M	Allergen	Function	kU$_A$/L
Poppy seed		Pap s		0.52
		Pap s 2S Albumin	2S Albumin	≤ 0.10
Sesame		Ses i		3.26
		Ses i 1	2S Albumin	4.16
Fenugreek seeds		Tri fo		0.82

ANIMAL FOOD

Milk

Cow, milk		Bos d_milk		≤ 0.10
		Bos d 4	α-Lactalbumin	≤ 0.10
		Bos d 5	β-Lactoglobulin	0.16
		Bos d 8	Casein	0.10
Camel		Cam d		≤ 0.10
Goat, milk		Cap h_milk		≤ 0.10
Mare's milk		Equ c_milk		≤ 0.10
Sheep, milk		Ovi a_milk		≤ 0.10

Egg

Egg white		Gal d_white		0.39
Egg yolk		Gal d_yolk		0.27
Egg white		Gal d 1	Ovomucoid	≤ 0.10
		Gal d 2	Ovalbumin	≤ 0.10
		Gal d 3	Ovotransferrin	0.32
		Gal d 4	Lysozym C	≤ 0.10
Egg yolk		Gal d 5	Serum Albumin	≤ 0.10

Seafood

Herring worm		Ani s 1	Kunitz Serin Protease Inhibitor	≤ 0.10
		Ani s 3	Tropomyosin	≤ 0.10
Crab		Chi spp.		≤ 0.10
Herring		Clu h		≤ 0.10
		Clu h 1	β-Parvalbumin	0.98
Brown shrimp		Cra c 6	Troponin C	0.14
Carp		Cyp c 1	β-Parvalbumin	1.01
Atlantic cod		Gad m		0.40

Name	E/M	Allergen	Function	kU$_A$/L
	◉	Gad m 2+3	β-Enolase & Aldolase	≤ 0.10
	◉	Gad m 1	β-Parvalbumin	0.24
Lobster	⁘	Hom g		≤ 0.10
Shrimp	⁘	Lit s		0.29
Squid	⁘	Lol spp.		≤ 0.10
Common mussel	⁘	Myt e		≤ 0.10
Oyster	⁘	Ost e		≤ 0.10
Shrimp	⁘	Pan b		≤ 0.10
Scallop	⁘	Pec spp.		≤ 0.10
Black Tiger Shrimp	◉	Pen m 1	Tropomyosin	≤ 0.10
	◉	Pen m 2	Arginine kinase	≤ 0.10
	◉	Pen m 3	Myosin, light chain	0.21
	◉	Pen m 4	Sarcoplasmic Calcium Binding Protein	≤ 0.10
Thornback ray	⁘	Raj c		≤ 0.10
	◉	Raj c Parvalbumin	α-Parvalbumin	≤ 0.10
Clam	⁘	Rud spp.		≤ 0.10
Salmon	⁘	Sal s		≤ 0.10
	◉	Sal s 1	β-Parvalbumin	0.77
Atlantic mackerel	⁘	Sco s		≤ 0.10
	◉	Sco s 1	β-Parvalbumin	1.21
Tuna	⁘	Thu a		≤ 0.10
	◉	Thu a 1	β-Parvalbumin	1.29
Swordfish	◉	Xip g 1	β-Parvalbumin	≤ 0.10

Meat

House cricket	⁘	Ach d		0.22
Cattle, meat	⁘	Bos d_meat		≤ 0.10
	◉	Bos d 6	Serum Albumin	0.21
Horse, meat	⁘	Equ c_meat		≤ 0.10
Chicken meat	⁘	Gal d_meat		≤ 0.10
Migratory locust	⁘	Loc m		≤ 0.10
Turkey	⁘	Mel g		0.13
Rabbit, meat	⁘	Ory_meat		≤ 0.10
Sheep, meat	⁘	Ovi a_meat		0.12
Pork	⁘	Sus d_meat		≤ 0.10
	◉	Sus d 1	Serum Albumin	1.28

Name	E/M	Allergen	Function	kU_A/L
Mealworm		Ten m		≤ 0.10

Total IgE: 952 kU/L

Reference range total-IgE

Adults: < 100 kU/L

PRINTED ON
01/12/2022

MOD ALLERGEN PANEL
Viva Health Labs - Food Allergy & tIgE

Information to cross-reactive allergens

Profilins

Profilins show a very high degree of cross-reactivity.

Depending on the population, up to 50% of pollen allergics are sensitised to profilin (higher rate in Mediterranean countries, lower rate in Northern Europe). The sensitisation to profilin can cause inhalative symptoms. Up to 50% of profilin sensitised patients may have food allergy - oral allergy syndrome in most cases. Raw tomato, melon, watermelon, and citrus fruits are typically associated with profilin. Profilins are not stable to processing.

PR-10

PR-10 allergens show a high degree of cross-reactivity.

PR-10 inhalative:
The major birch pollen allergen, Bet v 1, represents the prototype of all PR-10 allergens and is the primary sensitiser in regions with birch pollen exposure. The presence of PR-10 allergens in Fagales tree pollen explains IgE cross-reactivity between pollen from hazel, alder, beech, oak and hornbeam.
PR-10 nutritive:
PR-10 allergens in raw fruits, nuts, vegetable and legumes can induce oral allergy syndrome and sometimes severe allergic reactions in sensitised individuals, if a high amount of the respective allergen is consumed. PR-10 allergens are not stable to processing.

nsLTPs

nsLTPs show a high degree of cross-reactivity within plant family borders (e.g. stone-fruit, Rosaceae).

nsLTPs are the most prevalent plant-food allergens in Southern Europe. The clinical reactions can be systemic and severe, especially when not associated to birch pollinosis. Pru p 3, the major allergen of peach, plays a precursor role in the sensitization to other nsLTPs. Relevant nsLTPs containing plant-foods belong not only to Rosaceae family (incl. stone- and pomaceous fruit), but also to the nuts and legumes group, as well as to cereals such as wheat, maize and rice. nsLTPs are stable to processing.

Storage proteins (2S Albumins, 7/8S Globulins, 11S Globulins)

Storage proteins show a limited degree of cross-reactivity.

Storage proteins are major allergens in legumes (e.g. peanut or soy), tree nuts (e.g. wal- or hazelnut) and other seeds (e.g. buckwheat, sesame, mustard). Storage proteins are the major cause of severe allergic reactions, including anaphylaxis. Storage proteins are stable to processing.

Serum Albumins

Serum albumins show a very high degree of cross-reactivity.

Serum albumins represent a minor respiratory allergen of animal dander. Serum albumins are also implicated in rare allergic diseases like pork-cat and bird-egg syndrome. Meat and milk allergen: May elicit severe symptoms upon ingestion of uncooked or unboiled food, not stable to processing.

Parvalbumins

Parvalbumins show a very high degree of cross-reactivity.

Clinical cross-reactivity between different fish species is explained by highly conserved parvalbumin IgE epitopes. Parvalbumins are food and respiratory allergens and can cause severe allergic reactions. Parvalbumins are stable to processing.

ALEX² – Number of tested allergen sources: 165

GRASS POLLEN 6
Bahia grass, Bermuda grass, Common reed, Perennial ryegrass, Rye, Timothy grass

TREE POLLEN 19
Acacia, Alder, Arizona Cypress, European Ash, Beech, Cottonwood, Date palm, Elm, Hazel, London Plane Tree, Mediterranean Cypress, Mountain cedar, Mulberry, Olive, Paper mulberry, Silver birch, Sugi, Tree of Heaven, Walnut

WEED POLLEN 10
Annual mercury, Hemp, Lamb's quarter, Mugwort, Nettle, Pigweed, Ragweed, Ribwort, Russian thistle, Wall pellitory

HOUSE DUST MITES & STORAGE MITES 7
Acarus siro, American house dust mite, Blomia tropicalis, European house dust mite, Glycyphagus domesticus, Lepidoglyphus destructor, Tyrophagus putrescentiae

LEGUMES 6
Chickpea, White bean, Lentil, Pea, Peanut, Soy

GRAINS 11
Barley, Buckwheat, Corn, Cultivated rye, Lupine, Millet, Oat, Quinoa, Rice, Spelt, Wheat

SPICES 6
Anise, Caraway, Mustard, Oregano, Paprika, Parsley

FRUITS 15
Avocado, Apple, Banana, Blueberry, Cherry, Fig, Grape, Kiwi, Mango, Muskmelon, Orange, Papaya, Peach, Pear, Strawberry

VEGETABLES 6
Carrot, Celery, Garlic, Onion, Potato, Tomato

NUTS & SEEDS 13
Almond, Brazil nut, Cashew, Hazelnut, Macadamia, Pecan, Pistachio, Walnut, Fenugreek seeds, Poppy seed, Pumpkin seed, Sesame, Sunflower seed

COCKROACH 2
American cockroach, German cockroach

INSECT VENOMS 5
Common wasp venom, Fire ant venom, Honeybee venom, Long-headed wasp venom, Paper wasp venom

FUNGAL SPORES & YEAST 6
Alternaria alternata, Aspergillus fumigatus, Baker's yeast, Cladosporium herbarum, Malassezia sympodialis, Penicilium chrysogenum

MILK 5
Camel's milk, Cow's milk, Goat's milk, Mare's milk, Sheep's milk

EGG 2
Egg white, Egg yolk

FISH & SEAFOOD 20
Anisakis simplex, Atlantic cod, Atlantic herring, Atlantic mackerel, Black-Tiger shrimp, Brown shrimp, Carp, Common mussel, Crab, Lobster, Northern prawn, Oyster, Salmon, Scallop, Shrimp mix, Squid, Swordfish, Thornback ray, Tuna, Venus clam

MEAT 10
Beef, Chicken, Horse, House cricket, Lamb, Mealworm, Migratory locust, Pig, Rabbit, Turkey

PETS 7
Cat, Djungarian hamster, Dog, Guinea pig, Mouse, Rabbit, Rat

FARM ANIMALS 5
Cattle, Goat, Horse, Pig, Sheep

OTHERS 4
Latex, Hom s lactoferrin, Pigeon tick, Weeping fig

RAVEN® INTERPRETATION GUIDANCE SOFTWARE

Interpretation - Support

Raven Interpretation Summary

Sample Information

The sample was tested on ALEX² Barcode 02ANU31D, interpretation date 01/12/2022.

Of the tested 295 allergens, 107 were/was above the cut off of 0.3 kU_A/L. A sensitisation can be an indicator of an IgE dependent allergy. For all positive ALEX 2 allergens, comments for interpretation guidance are listed below.

Total IgE: 952 kU/L

The measured total IgE was 952 kU/L. With a total IgE titre above 100 kU/L, allergy is likely.

Cross-Reactive allergen sensitisation detected

Sensitisations against molecular allergens which are markers of (broad) cross-reactivity between different allergen sources were detected.

Detected cross-reactive allergen sensitisations:

- PR-10s: Aln g 1, Api g 1, Ara h 8, Bet v 1, Cor a 1.0103, Cor a 1.0401, Dau c 1, Fag s 1, Gly m 4, Mal d 1
- nsLTPs: Act d 10, Api g 6, Ara h 9, Art v 3, Cor a 8, Mal d 3, Pla a 3, Pru p 3, Vit v 1, Zea m 14
- Profilins: Bet v 2, Cuc m 2, Hev b 8, Mer a 1, Phl p 12, Pho d 2
- Parvalbumins: Clu h 1, Cyp c 1, Sal s 1, Sco s 1, Thu a 1
- Cysteine Proteases: Der p 1
- Isoflavon Reductases: Bet v 6
- Storage Proteins: Ana o 3, Ara h 1, Ara h 2, Cor a 11, Cor a 14, Gly m 6, Jug r 1, Jug r 2, Jug r 4, Pis v 1, Ses i 1, Sin a 1

PR-10 Proteins

PR-10 inhalative: The major birch pollen allergen, Bet v 1, represents the prototype of all PR-10 allergens and is the primary sensitiser in regions with birch-pollen exposure. The presence of PR-10 allergens in birch related tree pollen explains possible IgE cross-reactivity between pollen from hazel, alder, beech, oak and hornbeam. PR-10 nutritive: PR-10 allergens in fresh fruits, nuts, vegetables and legumes can induce oral allergy syndrome and sometimes even severe allergic reactions in sensitised individuals. PR-10 allergens are not stable to heat and digestion.

Non-specific Lipid Transfer Proteins (nsLTP)

Members of the nsLTP allergen family can cause inhalative symptoms (nsLTP in pollen), as well as mild to severe forms of food allergy. nsLTP allergens can be found in tree-and weed pollen, and in many plant foods as well as in latex. Inhalative symptoms manifest themselves as allergic rhinoconjunctivitis and/or allergic asthma. nsLTP food allergens can trigger both mild and severe reactions. nsLTPs are stable to heat and digestion.

Profilins

Members of the Profilin allergen family can cause inhalative symptoms, as well as mild forms of food allergy. Profilins are present in all plant based allergen sources. Inhalative symptoms - if they occur at all - are usually mild. Profilin food allergy is usually mild and restricted to oral allergy syndrome. Profilins from foods are not resistant to heat and digestion.

Parvalbumins

Parvalbumins are the major allergens from fish species. The degree of cross-reactivity between different Parvalbumins is high, but not absolute. Parvalbumins are resistant to heat and digestion. α-Parvalbumin from thornback ray has been described as hypoallergenic.

Cysteine Proteases

Members of the CP allergen family can cause inhalative symptoms, as well as mild to severe forms of food allergy. CP allergens can be found in several fruits, mites and in ragweed pollen. Inhalative symptoms manifest as allergic rhinoconjunctivitis and/or allergic asthma. CP food allergens can cause severe reactions. Fruit CP allergens are resistant to heat and digestion.

Isoflavon Reductases

The role of allergens from the IR allergen family is not completely understood. Newer data point to a minor role regarding inhalative symptoms. Members of the IR allergen family can be found in pollen, fruit and vegetables. IR allergens from fruit and vegetables could be responsible for mild symptoms.

Storage Proteins

Members of the storage protein allergen families are able to induce mild and strong allergic reactions and even anaphylactic shock. Allergens of these families can be found in legumes, nuts and seeds. Storage proteins are resistant to heat and digestion. Storage protein allergen families include 2S Albumins, 7/8S & 11S Globulins.

Tree Pollen

Acacia

Sensitisation to acacia pollen was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

A causal treatment via AIT is not available. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Birch Family

Sensitisation to pollen from the birch family was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Aln g 1 is a member of the PR-10 allergen family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Aln g 1 and pollen- as well as food-allergens from the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Aln g 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Bet v 1 is the major allergen in birch pollen and a member of the PR-10 allergen family. It is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Bet v 1 and pollen- as well as food-allergens from the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Bet v 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Bet v 2 is a member of the Profilin allergen family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Bet v 2 and between other members of the Profilin allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level.

Bet v 6 is a member of the Isoflavon Reductase (IR) allergen family. Recent data point to a minor role regarding inhalative symptoms. Cross-reactions between Bet v 6 and other members of the IR allergen family have been described. Patients with isolated sensitisation to Bet v 6 (without Bet v 1) are not suitable candidats for AIT. As IRs are panallergens in plant-derived food, sensitisation to Bev t 6 may cause oral allergy syndrome.

Cor a 1.0103 is a member of the PR-10 family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Cor a 1.0103 and pollen- as well as food-allergens from the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Cor a 1.0103 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Fag s 1 is a member of the PR-10 allergen family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Fag s 1 and between other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level.

Causal treatment is possible via AIT, symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Cottonwood

Sensitisation to cottonwood pollen was detected. Allergic symptoms associated with this allergen source includes allergic rhinoconjunctivitis. So far a member of the Profilin allergen family has been officially accepted by the WHO (Pop n 2).

AIT is available as a causal treatment but rarely performed. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Cypress Family

Sensitisation to pollen from the cypress family was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Cry j 1 is a member fo the Pectate Lyase allergen family. The degree of cross-reactivity between different cypress species based on Pectate Lyases is high. Cry j 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Cup a 1 is a member fo the Pectate Lyase allergen family. The degree of cross-reactivity between different cypress species based on Pectate Lyases is high. Cup a 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Causal treatment is possible via AIT, symptomatic treatment includes anti-histamines and corticosteroids in various formulations (tablet, spray).

Date Palm

Sensitisation to date palm pollen was detected. Allergic symptoms associated with date palm pollen range from allergic rhinoconjunctivitis to allergic asthma.

Pho d 2 is a member of the Profilin allergen family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Pho d 2 and other members of the Profilin allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level.

A causal treatment via AIT may not be available. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Olive family

Sensitisation to pollen from the olive family was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Fra e 1 / Ole e 1 are members of the Ole e 1 allergen family. The degree of cross-reactivity is very high within the Oleaceae family (e.g between ash, olive, lilac, privet), not so with more distant relatives (e.g. English Plantain). Fra e 1/Ole e 1 are major allergens from Ash/Olive and serve as markers for AIT indication, if corresponding clinical symptoms are present.

Causal treatment is possible via AIT - Fra e 1/Ole e 1 serve as markers for AIT indication, if corresponding clinical symptoms are present. Symptomatic treatment includes anti-histamines and corticosteroids in various formulations (tablet, spray).

London Plane Tree

Sensitisation to London Plane tree pollen was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Pla a 3 is a member of the nsLTP allergen family. The degree of cross-reactivity to most other members of this family can be considered high. Pla a 3 reactivity is frequently associated with nsLTP sensitisation in Mediterranean patients. AIT is not indicated, when Pla a 3 is the only positive allergen from London Plane Tree pollen. Pla a 3 reactivity is frequently found positive in patients with food allergy caused by nsLTPs.

A causal treatment via AIT is a possible way to treat London Plane tree allergics. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Walnut Tree

Sensitisation to walnut tree pollen was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

A causal treatment via AIT may not be available. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Grass pollen

Sensitisation to grass pollen was detected. Allergic symptoms associated with grass pollen range from allergic rhinoconjunctivitis to allergic asthma.

Cyn d 1, Lol p 1 and Phl p 1 are members fo the β-Expansin allergen family. The degree of cross-reactivity between members of this allergen family is very high. β-Expansins serve as markers for AIT indication, if corresponding clinical symptoms are present. Positive results were obtained for: Cyn d 1, Lol p 1, Phl p 1.

Phl p 2 is a member of the Expansin allergen family. The degree of cross-reactivity between members of this allergen family is very high. Along with Phl p 1 and 5, Phl p 2 serves as a marker of true grass-pollen Sensitisation. Patients with isolated Sensitisation to Phl p 2 are not suitable candidates for AIT.

Phl p 5 is a member of the Grass Group 5/6 allergen family. The degree of cross-reactivity between members of this allergen family is high, although not in all grass pollen species a Grass Group 5/6 allergen has been described. Along with Phl p 1 and Phl p 2, Phl p 5 serves as marker of true grass-pollen sensitisation. Phl p 1 and 5 serve as markers for AIT indication, if corresponding clinical symptoms are present.

Phl p 6 is a member of the Grass Group 5/6 allergen family. The degree of cross-reactivity between members of this allergen family is high.

Phl p 12 is a member of the Profilin allergen family and is associated with inhalative symptoms during pollen seasons of grasses, trees and weeds, and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Phl p 12 and other members of the Profilin allergen family is very high. The importance of these cross-reactions has to be analysed on a clinical level.

Causal treatment is possible via AIT - Phl p 1 and 5 serve as markers for AIT indication, if corresponding are present. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Weed Pollen

Annual Mercury

Sensitisation to pollen from annual mercury was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Mer a 1 is a member of the Profilin allergen family and is associated with inhalative symptoms during pollen seasons of grasses, trees and weeds, and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Mer a 1 and other members of the Profilin allergen family is very high. The importance of these cross-reactions has to be analysed on a clinical level.

Causal treatment via AIT is not available. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Mugwort

Sensitisation to pollen from mugwort was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Art v 3 is a member of the nsLTP allergen family. The degree of cross-reactivity to most other members of this family can be considered medium to high. Art v 3 reactivity is frequently associated with nsLTP sensitisation in Mediterranean patients. AIT is not indicated, when Art v 3 is the only positive allergen from mugwort pollen. Art v 3 reactivity is frequently found positive in patients with food allergy caused by nsLTPs.

Causal treatment is possible via AIT - Art v 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Pigweed

Sensitisation to pollen from pigweed was detected. Allergic symptoms associated with this allergen source include allergic rhinoconjunctivitis.

Causal treatment is possible via AIT. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Ribwort

Sensitisation to pollen from ribwort was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Pla l 1 is a member of the Ole e 1 allergen family. The degree of cross-reactivity to Ole e 1 allergens from other plantain species is high, that to Ole e 1-like allergens from other plant families is low. Pla l 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Causal treatment is possible via AIT. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Russian Thistle

Sensitisation to pollen from Russian thistle was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Causal treatment is possible via AIT - Sal k 1 serves as a marker for AIT indication. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Furry Animals

Cat

Sensitisation to cat was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Fel d 2 is a member of the Serum Albumin allergen family (SA). The degree of cross-reactivity to other members of the SA family is very high (e.g Can f 3 from dog). Sensitisation to Fel d 2 can also lead to cat-pork syndrome.

If avoidance of cats is not possible, an AIT can be prescribed. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance of exposition to cats is strongly recommended.

Pig

Sensitisation to pig was detected. Allergic symptoms associated with this allergen source range from allergic rhino-conjunctivitis to allergic asthma, especially when exposure is frequent (e.g. swine barn workers).

AIT for causal treatment may not be available. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance is strongly recommended.

Moulds and Yeasts

Alternaria alternata

Sensitisation to spores from Alternaria alternata was detected. Allergic symptoms associated with A. alternata range from allergic rhinoconjunctivitis to allergic asthma. Alternaria alternata is an outdoor fungal species.

Alt a 1 is a member of the Alt a 1 allergen family and is associated with inhalative symptoms. Cross-reactions between Alt a 1 and other members of the Alt a 1 allergen family have been described. Alt a 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Causal treatment is possible via AIT, symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Malassezia sympodialis

Sensitisation to Malassezia sympodialis (MS) was detected. This is common in adult atopic dermatitis patients but rare in healthy individuals. Especially seborrheic skin sites (e.g. head, neck) are preferrable colonisation sites.

Mala s 6 is a member of the Cyclophilin allergen family. The degree of cross-reactivity to other members of this family is high.

Skin emollients are the basis of AD therapy. In case of clinically manifest skin inflammation during AD flares, anti-inflammatory treatment is necessary. AD patients may benefit from an antifungal therapy that is effective against Malassezia.

Mites and Cockroaches

House dust mites

Sensitisation to house dust mite was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to asthma.

Der p 1 & Der f 1 are members of the Cystein Protease allergen family (CP). The degree of cross-reactivity between different members of the CP family in different house dust mites is high. Both Der p 1 and Der f 1 serve as markers for AIT indication, if corresponding symptoms are present. Positive results were obtained for: Der p 1.

Der p 7 is a member of the Mite Group 7 allergen family (MG 7). The degree of cross-reactivity to its pendant from D. farinae is very high, much lower to related allergens from storage mites

Der p 23 is a member of the Peritrophin-like Protein allergen family (PLP), which is associated with the development of Asthma. The degree of cross-reactivity to other members of the PLP allergen family is not clear.

Allergen avoidance is advised. Encasings for blankets, matresses and pillows can reduce the allergen load. Der f 1/Der p 1 and Der f 2/Der p 2 are major allergens from house dust mite and serve as markers for AIT indication, if corresponding clinical symptoms are present. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray).

Cockroach

Sensitisation to cockroach was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Bla g 2 is a member of the Aspartate Protease allergen family (PA). Cross-reactions between other members so the PA family are possible. High concentrations of Bla g 2 are found in fecal particles.

Pest control is advised as a first line measure. If this is not possible, an AIT can be prescribed. Symptomatic treatment includes anti-histamines as well as corticosteroids in various formulations (tablet, spray).

Insect Venoms

Wasp

Sensitisation to wasp venom was detected. Allergic symptoms associated with wasp venom allergy range from local to severe anaphylactic reactions.

As avoidance of wasps is difficult, AIT is the major therapy option in wasp venom allergy. Additionally the prescription of an emergency kit (incl. adrenalin autoinjector for severe cases) is advised.

Cereals and Seeds

Barley

Sensitisation to barley was detected. Allergic symptoms associated with barley Include immediate and excercise induced anaphylaxis, baker's asthma, gastrointestinal- and skin reactions. Allergy to beer can also be caused by an underlying sensitisation to barley.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Corn

Sensitisation to corn was detected. Allergic symptoms associated with corn range from oral allergy syndrome to anaphylactic reactions. Corn allergens can also induce baker's asthma. Many cases of corn allergy were reported from Italy due to the high consumption of polenta.

Zea m 14 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between members of the nsLTP family is high within botanically closely related species (e.g. stone fruit). The importance of these cross-reactions has to be analysed on a clinical level. Zea m 14 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Fenugreek seeds

Sensitisation to fenugreek seeds was detected. Allergic symptoms associated with fenugreek seeds range from inhalative symptoms (described in occupational settings) to severe anaphylactic reactions when ingested. Ground fenugreek seeds are part of many curry powder variants.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Millet

Sensitisation to millet was detected. Allergic symptoms associated with millet range from oral allergy syndrome to anaphylactic reactions. Millet allergy is a rare but potentially life-threatening condition, mostly resulting from primary sensitisation to airborne millet allergens in bird keepers. Potential egg allergy should always be addressed during work-up of millet-allergic subjects.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Oat

Sensitisation to oat was detected. Allergic symptoms associated with oat include baker's asthma, anaphylaxis and skin reactions. A high prevalence of oat sensitisation has been found in children suffering from atopic dermatitis.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Poppy seed

Sensitisation to poppy seed was detected. Allergic symptoms associated with poppy seed range from oral allergy syndrome to severe anaphylactic reactions. Excercise induced reactions after the consumption of poppy seed have been described.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Pumpkin seed

Sensitisation to pumpkin seed was detected. Allergic symptoms associated with pumpkin seed range from oral allergy syndrome to severe anaphylactic reactions.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Sesame

Sensitisation to sesame was detected. Allergic symptoms associated with sesame allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Ses i 1 is a storage protein associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from sesame and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Ses i 1 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Spelt

Sensitisation to spelt (flour) was detected. Allergic symptoms associated with spelt Include immediate and excercise induced anaphylaxis, baker's asthma, gastrointestinal- and skin reactions.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Sunflower seed

Sensitisation to sunflower seed was detected. Allergic symptoms associated with sunflower seeds range from oral allergy syndrome to severe anaphylactic reactions.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Fruits

Apple

Sensitisation to apple was detected. Allergic symptoms associated with apple range from oral allergy syndrome to severe, anaphylactic reactions.

Mal d 1 is a member of the PR-10 allergen family and is associated with mild forms of apple allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Mal d 1 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases an Mal d 1 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Mal d 1 is not stable towards heat and digestion.

Mal d 3 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between Mal d 3 and other members of the nsLTP family is high within botanically closely related species (e.g. stone fruit). The importance of these cross-reactions has to be analysed on a clinical level. Mal d 3 is stable towards heat and digestion.

As Mal d 1 is heat sensitive, baked or cooked apple can be consumed without danger for clinical reactions. In case of genuine apple allergy due to sensitisations to Mal d 2 and/or 3, avoidance is the therapeutic option of choice. Mal d 3 is primarily located in fruit skin, peeled apple is tolerated by most patients with Mal d 3 sensitisation. Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Avocado

Sensitisation to Avocado was detected. Allergic symptoms associated with avocado range from oral allergy syndrome to anaphylaxis. Many reactions to avocado may be based on a primary sensitisation to latex. Members of the Class I Chitinase and Profilin allergen families have been implicated in avocado sensitisations.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Grape

Sensitisation to grape was detected. Allergic symptoms associated with grape range from oral allergy syndrome to anaphylaxis. Anaphylactic reactions were described after the intake of wine. Occupational grape allergy causes mainly inhalative symptoms.

Vit v 1 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between Vit v 1 and other members of the nsLTP allergen family is high within botanically closely related species (e.g. stone fruit). The importance of these cross-reactions has to be analysed on a clinical level. Vit v 1 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Kiwi

Sensitisation to kiwi was detected. Allergic symptoms associated with kiwi allergy range from oral allergy syndrome to severe, anaphylactic reactions.

Act d 2 is a member of the TLP allergen family. So far, the clinical importance of TLPs has not been completely understood. The degree of cross-reactivity between Act d 2 and other members (e.g. Mal d 2 from apple) of the TLP allergen family is high. Stability studies showed that TLPs are resistant to heat and digestion.

Act d 10 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between members of the nsLTP family is high within botanically closely related species (e.g. stone fruit). The importance of these cross-reactions has to be analysed on a clinical level. Act d 10 is stable towards heat and digestion.

include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Muskmelon

Sensitisation to muskmelon was detected. Allergic symptoms associated with muskmelon are usually mild, systemic reactions are rare.

Cuc m 2 is a member of the Profilin allergen family and is associated with mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Cuc m 2 and between other members of the Profilin allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level.

Include extensive patient training on avoidance measures for mild reactions and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Orange

Sensitisation to orange was detected. Allergic symptoms associated with orange range from oral allergy syndrome to anaphylaxis.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Papaya

Sensitisation to papaya was detected. Allergic symptoms associated with papaya range from inhalative to anaphylactic reactions. Most cases occur in an occupational setting, as papain (the major allergen) is used as meat or cephalopod tenderizer, as beer clarificant, in pharmaceuticals and cosmetics.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Peach

Sensitisation to peach was detected. Allergic symptoms associated with peach allergy range from oral allergy syndrome to severe, anaphylactic reactions

Pru p 3 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between Pru p 3 and other members of the nsLTP allergen family is high within botanically closely related species (e.g. stone fruit). The importance of these cross-reactions has to be analysed on a clinical level. Pru p 3 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). As Pru p 3 is primarily located in fruit skin, peeled peach is tolerated by most patients.

Pear

Sensitisation to pear was detected. Allergic symptoms associated with pear allergy range from oral allergy syndrome to severe, anaphylactic reactions.

As the major pear allergen (Pyr c 1) is heat sensitive, baked or cooked pear can be consumed without danger for clinical reactions. In cases of pear allergy caused by Py r c 3 (nsLTP) avoidance is the therapeutic option of choice. If an anaphylactic reaction occured, the prescription of an emergency kit is advised.

Strawberry

Sensitisation to strawberry was detected. Allergic symptoms associated with strawberry are usually mild, systemic reactions are rare.

Fra a 1 is a member of the PR-10 allergen family and is associated with mild forms of strawberry allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Fra a 1 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Usually Fra a 1 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Fra a 1 is not stable towards heat and digestion. Fra a 3 is a member of the nsLTP allergen family and may cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between Fra a 3 and other members of the nsLTP family is high within botanically closely related species (e.g. stone fruit). The importance of these cross-reactions has to be analysed on a clinical level. Fra a 3 is stable towards heat and digestion.

Include extensive patient training on avoidance measures for mild reactions and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Nuts and Legumes

Almond

Sensitisation to Almond was detected. Allergic symptoms associated with almond range from oral allergy syndrome to skin reactions and gastrointestinal symptoms. Severe allergic reactions to almond are rare.

Include extensive patient training on avoidance measures for mild reactions and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Cashew

Sensitisation to cashew was detected. Allergic symptoms associated with cashew range from oral allergy syndrome to severe, anaphylactic reactions.

Ana o 2 and 3 are storage proteins associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from cashew and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Ana o 2 & 3 are stable towards heat and digestion. Positive results were obtained for: Ana o 3.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Chickpea

Sensitisation to Chickpea detected. Allergic symptoms associated with chickpea range from oral allergy syndrome to anaphylaxis. Chickpea allergy may result from primary peanut allergy or occur independently.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Hazelnut

Sensitisation to hazelnut was detected. Allergic symptoms associated with hazelnut allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Cor a 1.0401 is a member of the PR-10 allergen family and is associated with mild forms of hazelnut allergy e.g. oral allergy syndrome. In rare cases, mild systemic reactions occur. Severe anaphylactic reactions are very rare. The degree of cross-reactivity between Cor a 1.0401 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases a Cor a 1.0401 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Cor a 1.0401 is not stable towards heat and digestion.

Cor a 8 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between members of the nsLTP allergen family is high within botanically closely related species (e.g. stone fruit) and moderate between less closely related species. The importance of these cross-reactions has to be analysed on a clinical level. Cor a 8 is stable towards heat and digestion.

Cor a 9, 11 & 14 are storage proteins associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from hazelnut and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Cor a 9, 11 & 14 are stable towards heat and digestion. Positive results were obtained for: Cor a 11, Cor a 14.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Lentil

Sensitisation to lentil was detected. Allergic symptoms associated with lentil range from oral allergy syndrome to anaphylayxis. Lentil allergy may result from primary peanut allergy or occur independently.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Lupine seed

Sensitisation to lupine seed was detected. Allergic symptoms associated with lupine seed range from oral allergy syndrome to anaphylaxis. Lupine flour is used as a substitute or additive in e.g. wheat flour. As an occupational allergen lupine flour is able to induce rhino-conjunctivitis and asthma.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Macadamia

Sensitisation to macadamia was detected. Allergic symptoms associated with Macadamia range from oral allergy syndrome to anaphylaxis.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Pea

Sensitisation to pea was detected. Allergic symptoms associated with pea range from oral allergy syndrome to anaphylaxis. Pea allergy may result from primary peanut allergy or occur independently.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Peanut

Sensitisation to peanut was detected. Allergic symptoms associated with peanut allergens range from oral allergy syndrome to severe, anaphylactic reactions.

The peanut storage proteins Ara h 1,2,3 and 6 are associated with clinical reactions up to severe anaphylaxis. The degree of cross-reactivity between storage proteins from peanut and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Ara h 1,2,3 & 6 are stable towards heat and digestion. Positive results were obtained for: Ara h 1, Ara h 2.

Ara h 8 is a member of the PR-10 family and is associated with mild forms of peanut allergy e.g. oral allergy syndrome. The degree of cross-reactivity between Ara h 8 and other members of the PR-10 allergen family is moderate to high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases an Ara h 8 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Ara h 8 is not stable towards heat and digestion

Ara h 9 is a member for the nsLTP allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between members of the nsLTP allergen family is high within botanically closely related species (e.g. stone fruit) and moderate between less closely related species. The importance of these cross-reactions has to be analysed on a clinical level. Ara h 9 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Pecan

Sensitisation to pecan detected. Allergic symptoms associated with pecan range from oral allergy syndrome to anaphylaxis. Pecan strongly cross-reacts with walnut.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Pistachio

Sensitisation to pistachio was detected. Allergic symptoms associated with pistachio range from oral allergy syndrome to anaphylaxis.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Soy

Sensitisation to soy was detected. Allergic symptoms associated with soy allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Gly m 4 is a member of the PR-10 family and is associated with mild forms of soy allergy e.g. oral allergy syndrome, as well as severe reactions after the consumption of unprocessed soy products like soy milk. The degree of cross-reactivity between Gly m 4 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases a Gly m 4 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Products like soy milk contain high levels of unprocessed allergens.

Gly m 5, 6 & 8 are storage proteins associated with clinical reactions up to severe anaphylaxis. The degree of cross-reactivity between storage proteins from soy and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Gly m 5,6 & 8 are stable towards heat and digestion. Positive results were obtained for: Gly m 6.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). Fermented soy products (e.g. soy sauce, miso) have lost allergenicity.

Walnut

Sensitisation to walnut was detected. Allergic symptoms associated with walnut allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Jug r 1,2,4 & 6 are storage proteins associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from walnut and storage proteins from legumes, nuts and seeds is low to moderate. The exception is Jug r 6, which can cross-react with related allergens from tree nuts (e.g. Cor a 11 from hazelnut) and sesame. The importance of these cross-reactions has to be analysed on a clinical level. Jug r 1,2,4 are stable towards heat and digestion. Jug r 6 displays intermediate thermal stability and susceptibility to digestion. Positive results were obtained for: Jug r 1, Jug r 2, Jug r 4.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Spices

Mustard

Sensitisation to mustard seed was detected. Allergic symptoms associated with mustard seed range from oral allergy syndrome to anaphylaxis.

Sin a 1 is a storage protein (2S Albumin) associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from mustard seed and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Sin a 1 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Paprika

Sensitisation to paprika was detected. Allergic symptoms associated with paprika range from oral allergy syndrome to anaphylaxis. Paprika allergy is rare and the responsible allergens are not well characterized. If paprika powder is produced with seeds, storage proteins might be involved in potentially strong reactions.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Vegetables

Carrot

Sensitisation to carott was detected. Allergic symptoms associated with carott range from oral allergy syndrome to anaphylaxis. Carrot allergy is mostly present in patients with birch or mugwort pollen sensitisation.

Dau c 1 is a member of the PR-10 allergen family and is associated with mild forms of carott allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Dau c 1 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases an Dau c 1 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Dau c 1 is not stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Celery

Sensitisation to celery was detected. Allergic symptoms associated with celery range from oral allergy syndrome to anaphylaxis. Celery allergy is caused by sensitisation to pollen (from birch and mugwort), which causes cross-reactions to celery. Severe reactions to celery are often linked to a primary mugwort pollen Sensitisation.

Api g 1 is a member of the PR-10 allergen family and is associated with mild forms of celery allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Api g 1 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases an Api g 1 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Api g 1 is not stable towards heat and digestion.

Api g 6 is a member of the nsLTP type II allergen family and can cause clinical reactions from oral allergy syndrome to anaphylaxis. The degree of cross-reactivity between Api g 6 and members of the nsLTP type I family (e.g. Pru p 3) is low. Api g 6 is stable towards heat and digestion. Api g 6 is located in the celery bulb, in contrast to Api g 2.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Garlic

Sensitisation to garlic was detected. Allergic symptoms associated with garlic range from oral allergy syndrome to anaphylaxis. Allergy to garlic is very rare. Heat treatment does not always inactivate the responsible allergen.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Animal Foods (Milk and Egg)

Egg

Sensitisation to hen's egg was detected. Allergic symptoms associated with hen's egg include severe, anaphylactic reactions, as well gastrointestinal symptoms and worsening of skin status in individuals suffering from atopic dermatitis.

Gal d 2 & 3 are heat labile allergens from hen's egg. Well cooked or baked hen's egg will be tolerated by sensitised patients. Gal d 2 can cause allergic complications in sensitised individuals, who are vaccinated with Gal d 2 (Ovalbumin) containing vaccines. Positive results were obtained for: Gal d 3.

Include intensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). Aside from Gal d 1, hen's egg allergens are not stable to heat.

Red Meat

Pork

Sensitisation to pork was detected. Allergic symptoms associated with pork range from gastro-intestinal symptoms to anaphylaxis. Pork allergy can be caused via Sensitisation to Serum Albumin, or via Sensitisation to alpha-Gal, a heat resistant sugar in non-primate mammals. Clinical reactions to alpha-Gal often have a delay of 3-6 hours. Inhalative Sensitisation to Serum Albumin from cat (Fel d 2) can cause the pork-cat syndrome via cross-reaction.

Sus d 1 is a heat-labile allergen from pork. It shows a high degree of cross-reactivity with other Serum Albumins from mammals (e.g. Fel d 2 from cat). The importance of these cross-reactions has to be analysed on a clinical level. Serum albumins are not stable towards heat and digestion.

Include extensive patient training on avoidance measures for mild reactions and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). Heat-treatment, or other approaches such as freeze-drying, can decrease the allergenicity of pork in serum albumin-associated pork allergy.

Fish

Sensitisation to fish was detected. Allergic symptoms associated with fish allergy include mild to severe anaphylactic reactions after fish consumption as well as respiratory/asthmatic reactions upon exposure to cooking vapors.

Parvalbumins are the major allergens from fish species. The degree of cross-reactivity between different Parvalbumins is high, but not absolute. Parvalbumins are resistant to heat and digestion. α-Parvalbumin from thornback ray has been described as hypoallergenic.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Other

Latex

Sensitisation to latex was detected. Allergic symptoms associated with latex allergy range from contact urticaria to anaphylaxis. In children with Spina bifida the most frequent manifestation is urticaria and angioedema. In latex allergic health care workers the most common symptoms are of a respiratory nature and local skin reactions.

Hev b 8 is a member of the Profilin allergen family. While its clinical relevance in latex allergy is low, it may explain positive sIgE results to latex in pollen-sensitised patients. The degree of cross-reactivity between Hev b 8 and other members of the Profilin allergen family is high.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). The use of replacement Replacement by latex-free products (e.g. nitrile gloves) is also strongly advised.

DISCLAIMER: THE PRESENCE OF IgE-ANTIBODIES IMPLIES A RISK OF ALLERGIC REACTIONS AND HAS TO BE ANALYZED IN CONJUNCTION WITH THE CLINICAL HISTORY AND OTHER DIAGNOSTIC TEST RESULTS. THE RAVEN INTERPRETATION GUIDANCE SOFTWARE IS A TOOL TO SUPPORT PHYSICIANS IN THE INTERPRETATION OF ALEX 2 RESULTS. RAVEN COMMENTS DO NOT REPLACE THE DIAGNOSIS BY A PHYSICIAN. NO LIABILITY IS ACCEPTED FOR RAVEN COMMENTS AND RESULTING THERAPEUTIC INTERVENTIONS. THE STATED COMMENTS ARE DESIGNED EXCLUSIVELY FOR ALEX2 RESULTS.