Bio-Diagnostics Ltd
Upton Industrial Estate
Rectory Road
Upton Upon Severn
Worcestershire
WR8 0LX

Patient ID:	test		**Referring Physician:**
Patient Name:	test		
Date of Birth:			**Additional Information:**
Sample ID:	test		
Barcode:	02ALP0C7		
Tested on:	21/03/2022		
Approved on:	21/03/2022		
Printed on:	21/03/2022		
Note: The internal QC (Plausibility check for GD) was within acceptance range.			

Lab report: Summary on detectable sensitisations

Pollen	Grass Pollen	4
	Tree Pollen	4
	Weed Pollen	0
Mites	House Dust Mites & Storage Mites	0
Microorganisms	Fungal Spores & Yeast	0
Plant-Based Food	Legumes	3
	Grain	0
	Spices	0
	Fruits	3
	Vegetables	0
	Nuts & Seeds	2
Animal-Derived Food	Milk	0
	Egg	0
	Fish & Seafood	0
	Meat	0
Insects & Venoms	Ant, Bee, Wasp	0
	Cockroach	0
Epithelial Tissues of Animals	Pets	0
	Animals	0
Others	Latex	0
	Ficus & Hops	0
	CCD	0
	Parasite	0

Cross-reactive Allergen Families	
Polcalcin	0
Profilin	0
PR-10	4
Ole e 1 Family	0
LTPs	0
Storage Proteins	0
Lipocalins	0
NPC2	0
Serum albumin	0
Parvalbumin	0
Tropomyosin	0
CCD	0
Uteroglobin	0
Arginine kinase	0
Total IgE (kU/L)	**270**

Highest measured IgE concentration per allergen group				
< 0.3 kU_A/L	0.3 - 1 kU_A/L	1 - 5 kU_A/L	5 - 15 kU_A/L	> 15 kU_A/L
0	1	2	3	4
Negative or uncertain	Low IgE level	Moderate IgE level	High IgE level	Very high IgE level

Name	Allergen	E/M(*)	Function	kU$_A$/L
Pollen				
Grass Pollen				
Bermuda grass	Cyn d	E		8.14
Bermuda grass	Cyn d 1	M	Beta-Expansin	12.06
Perennial Ryegrass	Lol p 1	M	Beta-Expansin	38.06
Bahia grass	Pas n	E		2.27
Timothy grass	Phl p 1	M	Beta-Expansin	37.15
Timothy grass	Phl p 2	M	Expansin	≤ 0.1
Timothy grass	Phl p 5.0101	M	Grass Group 5/6	39.19
Timothy grass	Phl p 6	M	Grass Group 5/6	35
Timothy grass	Phl p 7	M	Polcalcin	≤ 0.1
Timothy grass	Phl p 12	M	Profilin	≤ 0.1
Common reed	Phr c	E		0.45
Cultivated rye, Pollen	Sec c_pollen	E		7.97
Tree Pollen				
Acacia	Aca m	E		≤ 0.1
Tree of Heaven	Ail a	E		≤ 0.1
Alder	Aln g 1	M	PR-10	4.48
Alder	Aln g 4	M	Polcalcin	≤ 0.1
Silver birch	Bet v 1	M	PR-10	24.82
Silver birch	Bet v 2	M	Profilin	≤ 0.1
Silver birch	Bet v 6	M	Isoflavon Reductase	≤ 0.1
Paper mulberry	Bro pa	E		≤ 0.1
Hazel pollen	Cor a_pollen	E		4.59
Hazel pollen	Cor a 1.0103	M	PR-10	14.2
Sugi	Cry j 1	M	Pectate Lyase	≤ 0.1
Cypress	Cup a 1	M	Pectate Lyase	≤ 0.1
Cypress	Cup s	E		≤ 0.1
Beech	Fag s 1	M	PR-10	15.68
Ash	Fra e	E		≤ 0.1
Ash	Fra e 1	M	Ole e 1-Family	≤ 0.1
Walnut pollen	Jug r_pollen	E		≤ 0.1
Mountain cedar	Jun a	E		≤ 0.1
Mulberry	Mor r	E		≤ 0.1
Olive	Ole e 1	M	Ole e 1-Family	≤ 0.1
Olive	Ole e 9	M	1,3 β Glucanase	≤ 0.1
Date palm	Pho d 2	M	Profilin	≤ 0.1
London plane tree	Pla a 1	M	Plant Invertase	≤ 0.1
London plane tree	Pla a 2	M	Polygalacturonase	≤ 0.1
London plane tree	Pla a 3	M	nsLTP	≤ 0.1
Cottonwood	Pop n	E		≤ 0.1
Elm	Ulm c	E		≤ 0.1
Weed Pollen				
Common Pigweed	Ama r	E		≤ 0.1
Ragweed	Amb a	E		≤ 0.1
Ragweed	Amb a 1	M	Pectate Lyase	≤ 0.1

Name	Allergen	E/M(*)	Function	kU$_A$/L
Ragweed	Amb a 4	M	Plant Defensin	≤ 0.1
Mugwort	Art v	E		≤ 0.1
Mugwort	Art v 1	M	Plant Defensin	≤ 0.1
Mugwort	Art v 3	M	nsLTP	≤ 0.1
Hemp	Can s	E		≤ 0.1
Hemp	Can s 3	M	nsLTP	≤ 0.1
Lamb's quarter	Che a	E		≤ 0.1
Lamb's quarter	Che a 1	M	Ole e 1-Family	≤ 0.1
Annual mercury	Mer a 1	M	Profilin	≤ 0.1
Wall pellitory	Par j	E		≤ 0.1
Wall pellitory	Par j 2	M	nsLTP	≤ 0.1
Ribwort	Pla l	E		≤ 0.1
Ribwort	Pla l 1	M	Ole e 1-Family	≤ 0.1
Russian thistle	Sal k	E		≤ 0.1
Russian thistle	Sal k 1	M	Pectin Methylesterase	≤ 0.1
Nettle	Urt d	E		≤ 0.1
Mites				
House Dust Mite				
American house dust mite	Der f 1	M	Cysteine protease	≤ 0.1
American house dust mite	Der f 2	M	NPC2 Family	≤ 0.1
European house dust mite	Der p 1	M	Cysteine protease	0.11
European house dust mite	Der p 2	M	NPC2 Family	≤ 0.1
European house dust mite	Der p 5	M	unknown	≤ 0.1
European house dust mite	Der p 7	M	Mites, Group 7	0.11
European house dust mite	Der p 10	M	Tropomyosin	≤ 0.1
European house dust mite	Der p 11	M	Myosin, heavy chain	≤ 0.1
European house dust mite	Der p 20	M	Arginine kinase	≤ 0.1
European house dust mite	Der p 21	M	unknown	≤ 0.1
European house dust mite	Der p 23	M	Peritrophin-like protein domain	≤ 0.1
Storage Mite				
Acarus siro	Aca s	E		≤ 0.1
Blomia tropicalis	Blo t 5	M	Mites, Group 5	≤ 0.1
Blomia tropicalis	Blo t 10	M	Tropomyosin	≤ 0.1
Blomia tropicalis	Blo t 21	M	unknown	≤ 0.1
Glycyphagus domesticus	Gly d 2	M	NPC2 Family	≤ 0.1
Lepidoglyphus destructor	Lep d 2	M	NPC2 Family	≤ 0.1
Tyrophagus putrescentiae	Tyr p	E		≤ 0.1
Tyrophagus putrescentiae	Tyr p 2	M	NPC2 Family	≤ 0.1
Microorganisms & Spores				
Yeast				
Malassezia sympodialis	Mala s 5	M	unknown	≤ 0.1
Malassezia sympodialis	Mala s 6	M	Cyclophilin	≤ 0.1
Malassezia sympodialis	Mala s 11	M	Mn Superoxid-Dismutase	≤ 0.1
Yeast	Sac c	E		≤ 0.1
Moulds				

Name	Allergen	E/M(*)	Function	kU$_A$/L
Alternaria alternata	Alt a 1	M	Alt a 1-Family	≤ 0.1
Alternaria alternata	Alt a 6	M	Enolase	≤ 0.1
Aspergillus fumigatus	Asp f 1	M	Mitogillin Family	≤ 0.1
Aspergillus fumigatus	Asp f 3	M	Peroxysomal Protein	≤ 0.1
Aspergillus fumigatus	Asp f 4	M	unknown	≤ 0.1
Aspergillus fumigatus	Asp f 6	M	Mn Superoxid-Dismutase	≤ 0.1
Cladosporium herbarum	Cla h	E		≤ 0.1
Cladosporium herbarum	Cla h 8	M	Short Chain Dehydrogenase	≤ 0.1
Penicilium chrysogenum	Pen ch	E		≤ 0.1
Plant Food				
Legumes				
Peanut	Ara h 1	M	7/8S Globulin	≤ 0.1
Peanut	Ara h 2	M	2S Albumin	≤ 0.1
Peanut	Ara h 3	M	11S Globulin	≤ 0.1
Peanut	Ara h 6	M	2S Albumin	≤ 0.1
Peanut	Ara h 8	M	PR-10	5.56
Peanut	Ara h 9	M	nsLTP	≤ 0.1
Peanut	Ara h 15	M	Oleosin	≤ 0.1
Chickpea	Cic a	E		≤ 0.1
Soy	Gly m 4	M	PR-10	1.28
Soy	Gly m 5	M	7/8S Globulin	≤ 0.1
Soy	Gly m 6	M	11S Globulin	≤ 0.1
Soy	Gly m 8	M	2S Albumin	≤ 0.1
Lentil	Len c	E		≤ 0.1
White bean	Pha v	E		≤ 0.1
Pea	Pis s	E		≤ 0.1
Cereals				
Oat	Ave s	E		≤ 0.1
Quinoa	Che q	E		≤ 0.1
Common buckwheat	Fag e	E		≤ 0.1
Common buckwheat	Fag e 2	M	2S Albumin	≤ 0.1
Barley	Hor v	E		≤ 0.1
Lupine seed	Lup a	E		≤ 0.1
Rice	Ory s	E		≤ 0.1
Millet	Pan m	E		≤ 0.1
Cultivated rye	Sec c_flour	E		≤ 0.1
Wheat	Tri a aA_TI	M	Alpha-Amylase Trypsin-Inhibitor	≤ 0.1
Wheat	Tri a 14	M	nsLTP	≤ 0.1
Wheat	Tri a 19	M	Omega-5-Gliadin	≤ 0.1
Spelt	Tri s	E		≤ 0.1
Maize	Zea m	E		≤ 0.1
Maize	Zea m 14	M	nsLTP	≤ 0.1
Spices				
Paprika	Cap a	E		≤ 0.1
Caraway	Car c	E		≤ 0.1
Oregano	Ori v	E		≤ 0.1

Name	Allergen	E/M(*)	Function	kU$_A$/L
Parsley	Pet c	E		≤ 0.1
Anise	Pim a	E		≤ 0.1
Mustard	Sin	E		≤ 0.1
Mustard	Sin a 1	M	2S Albumin	≤ 0.1
Fruit				
Kiwi	Act d 1	M	Cysteine protease	≤ 0.1
Kiwi	Act d 2	M	TLP	≤ 0.1
Kiwi	Act d 5	M	Kiwellin	≤ 0.1
Kiwi	Act d 10	M	nsLTP	≤ 0.1
Papaya	Car p	E		≤ 0.1
Orange	Cit s	E		≤ 0.1
Melon	Cuc m 2	M	Profilin	≤ 0.1
Fig	Fic c	E		≤ 0.1
Strawberry	Fra a 1+3	M	PR-10+LTP	4.44
Apple	Mal d 1	M	PR-10	6.66
Apple	Mal d 2	M	TLP	≤ 0.1
Apple	Mal d 3	M	nsLTP	≤ 0.1
Mango	Man i	E		≤ 0.1
Banana	Mus a	E		≤ 0.1
Avocado	Pers a	E		≤ 0.1
Cherry	Pru av	E		≤ 0.1
Peach	Pru p 3	M	nsLTP	≤ 0.1
Pear	Pyr c	E		≤ 0.1
Blueberry	Vac m	E		≤ 0.1
Grapes	Vit v 1	M	nsLTP	≤ 0.1
Vegetables				
Onion	All c	E		≤ 0.1
Garlic	All s	E		≤ 0.1
Celery	Api g 1	M	PR-10	≤ 0.1
Celery	Api g 2	M	nsLTP	≤ 0.1
Celery	Api g 6	M	nsLTP	≤ 0.1
Carrot	Dau c	E		≤ 0.1
Carrot	Dau c 1	M	PR-10	≤ 0.1
Potato	Sol t	E		≤ 0.1
Tomato	Sola l	E		≤ 0.1
Tomato	Sola l 6	M	nsLTP	≤ 0.1
Nuts				
Cashew	Ana o	E		≤ 0.1
Cashew	Ana o 2	M	11S Globulin	≤ 0.1
Cashew	Ana o 3	M	2S Albumin	≤ 0.1
Brazil nut	Ber e	E		≤ 0.1
Brazil nut	Ber e 1	M	2S Albumin	≤ 0.1
Pecan	Car i	E		≤ 0.1
Hazelnut	Cor a 1.0401	M	PR-10	1.85
Hazelnut	Cor a 8	M	nsLTP	≤ 0.1
Hazelnut	Cor a 9	M	11S Globulin	≤ 0.1
Hazelnut	Cor a 11	M	7/8S Globulin	≤ 0.1

Name	Allergen	E/M(*)	Function	kU$_A$/L
Hazelnut	Cor a 14	M	2S Albumin	≤ 0.1
Walnut	Jug r 1	M	2S Albumin	≤ 0.1
Walnut	Jug r 2	M	7/8S Globulin	≤ 0.1
Walnut	Jug r 3	M	nsLTP	≤ 0.1
Walnut	Jug r 4	M	11S Globulin	≤ 0.1
Walnut	Jug r 6	M	7/8S Globulin	≤ 0.1
Macadamia	Mac i 2S Albumin	M	2S Albumin	≤ 0.1
Macadamia	Mac inte	E		≤ 0.1
Pistachio	Pis v 1	M	2S Albumin	≤ 0.1
Pistachio	Pis v 2	M	11S Globulin subunit	≤ 0.1
Pistachio	Pis v 3	M	7/8S Globulin	≤ 0.1
Almond	Pru du	E		≤ 0.1
Seed				
Pumpkin seed	Cuc p	E		≤ 0.1
Sunflower seed	Hel a	E		≤ 0.1
Poppy seed	Pap s	E		≤ 0.1
Poppy seed	Pap s 2S Albumin	M	2S Albumin	≤ 0.1
Sesame	Ses i	E		≤ 0.1
Sesame	Ses i 1	M	2S Albumin	≤ 0.1
Fenugreek seeds	Tri fo	E		≤ 0.1
Animal Food				
Milk				
Cow, milk	Bos d_milk	E		≤ 0.1
Cow, milk	Bos d 4	M	α-Lactalbumin	≤ 0.1
Cow, milk	Bos d 5	M	β-Lactoglobulin	≤ 0.1
Cow, milk	Bos d 8	M	Casein	≤ 0.1
Camel	Cam d	E		≤ 0.1
Goat, milk	Cap h_milk	E		≤ 0.1
Mare's milk	Equ c_milk	E		≤ 0.1
Sheep, milk	Ovi a_milk	E		≤ 0.1
Egg				
Egg white	Gal d_white	E		≤ 0.1
Egg yolk	Gal d_yolk	E		≤ 0.1
Egg white	Gal d 1	M	Ovomucoid	≤ 0.1
Egg white	Gal d 2	M	Ovalbumin	≤ 0.1
Egg white	Gal d 3	M	Ovotransferrin	≤ 0.1
Egg white	Gal d 4	M	Lysozym C	≤ 0.1
Egg yolk	Gal d 5	M	Serum Albumin	≤ 0.1
Seafood				
Herring worm	Ani s 1	M	Kunitz Serin Protease Inhibitor	≤ 0.1
Herring worm	Ani s 3	M	Tropomyosin	≤ 0.1
Crab	Chi spp.	E		≤ 0.1
Herring	Clu h	E		≤ 0.1
Herring	Clu h 1	M	β-Parvalbumin	≤ 0.1
Brown shrimp	Cra c 6	M	Troponin C	≤ 0.1
Carp	Cyp c 1	M	β-Parvalbumin	≤ 0.1

Name	Allergen	E/M(*)	Function	kU_A/L
Atlantic cod	Gad m	E		≤ 0.1
Atlantic cod	Gad m 2+3	M	β-Enolase & Aldolase	≤ 0.1
Atlantic cod	Gad m 1	M	β-Parvalbumin	0.11
Lobster	Hom g	E		≤ 0.1
Shrimp	Lit s	E		≤ 0.1
Squid	Lol spp.	E		≤ 0.1
Common mussel	Myt e	E		≤ 0.1
Oyster	Ost e	E		≤ 0.1
Shrimp	Pan b	E		≤ 0.1
Scallop	Pec spp.	E		≤ 0.1
Black Tiger Shrimp	Pen m 1	M	Tropomyosin	≤ 0.1
Black Tiger Shrimp	Pen m 2	M	Arginine kinase	≤ 0.1
Black Tiger Shrimp	Pen m 3	M	Myosin, light chain	≤ 0.1
Black Tiger Shrimp	Pen m 4	M	Sarcoplasmic Calcium Binding Protein	≤ 0.1
Thornback ray	Raj c	E		≤ 0.1
Thornback ray	Raj c Parvalbumin	M	α-Parvalbumin	≤ 0.1
Clam	Rud spp.	E		≤ 0.1
Salmon	Sal s	E		0.26
Salmon	Sal s 1	M	β-Parvalbumin	≤ 0.1
Atlantic mackerel	Sco s	E		≤ 0.1
Atlantic mackerel	Sco s 1	M	β-Parvalbumin	≤ 0.1
Tuna	Thu a	E		≤ 0.1
Tuna	Thu a 1	M	β-Parvalbumin	≤ 0.1
Swordfish	Xip g 1	M	β-Parvalbumin	≤ 0.1
Meat				
House cricket	Ach d	E		≤ 0.1
Cattle, meat	Bos d_meat	E		≤ 0.1
Cattle, meat	Bos d 6	M	Serum Albumin	≤ 0.1
Horse, meat	Equ c_meat	E		≤ 0.1
Chicken meat	Gal d_meat	E		≤ 0.1
Migratory locust	Loc m	E		≤ 0.1
Turkey	Mel g	E		≤ 0.1
Rabbit, meat	Ory_meat	E		≤ 0.1
Sheep, meat	Ovi a_meat	E		≤ 0.1
Pork	Sus d_meat	E		≤ 0.1
Pork	Sus d 1	M	Serum Albumin	≤ 0.1
Mealworm	Ten m	E		≤ 0.1
Insects & Venoms				
Fire ant poison				
Fire ant	Sol spp.	E		≤ 0.1
Honey Bee Venom				
Honey bee	Api m	E		≤ 0.1
Honey bee	Api m 1	M	Phospholipase A2	≤ 0.1
Honey bee	Api m 10	M	Icarapin Variant 2	≤ 0.1
Wasp Venom				
Hornet	Dol spp	E		≤ 0.1

Name	Allergen	E/M(*)	Function	kU$_A$/L
Paper wasp venom	Pol d	E		≤ 0.1
Paper wasp venom	Pol d 5	M	Antigen 5	≤ 0.1
Wasp venom	Ves v	E		≤ 0.1
Wasp venom	Ves v 1	M	Phospholipase A1	≤ 0.1
Wasp venom	Ves v 5	M	Antigen 5	≤ 0.1
Cockroach				
German Cockroach	Bla g 1	M	Cockroach Group 1	≤ 0.1
German Cockroach	Bla g 2	M	Aspartyl protease	≤ 0.1
German Cockroach	Bla g 4	M	Lipocalin	≤ 0.1
German Cockroach	Bla g 5	M	Glutathione S-transferase	≤ 0.1
German Cockroach	Bla g 9	M	Arginine kinase	≤ 0.1
American Cockroach	Per a	E		≤ 0.1
American Cockroach	Per a 7	M	Tropomyosin	≤ 0.1
Animal Origin				
Pet				
Dog	Can f_Fd1	M	Uteroglobin	≤ 0.1
Male dog urine (incl. Can f 5)	Can f_male urine	E		≤ 0.1
Dog	Can f 1	M	Lipocalin	≤ 0.1
Dog	Can f 2	M	Lipocalin	≤ 0.1
Dog	Can f 3	M	Serum Albumin	≤ 0.1
Dog	Can f 4	M	Lipocalin	≤ 0.1
Dog	Can f 6	M	Lipocalin	≤ 0.1
Guinea pig	Cav p 1	M	Lipocalin	≤ 0.1
Cat	Fel d 1	M	Uteroglobin	≤ 0.1
Cat	Fel d 2	M	Serum Albumin	≤ 0.1
Cat	Fel d 4	M	Lipocalin	≤ 0.1
Cat	Fel d 7	M	Lipocalin	≤ 0.1
House mouse	Mus m 1	M	Lipocalin	≤ 0.1
Rabbit, epithel	Ory c 1	M	Lipocalin	≤ 0.1
Rabbit, epithel	Ory c 2	M	Lipophilin	≤ 0.1
Rabbit, epithel	Ory c 3	M	Uteroglobin	≤ 0.1
Djungarian hamster	Phod s 1	M	Lipocalin	≤ 0.1
Rat	Rat n	E		≤ 0.1
Farm Animals				
Cattle	Bos d 2	M	Lipocalin	≤ 0.1
Goat, epithel	Cap h_epithelia	E		≤ 0.1
Horse, epithel	Equ c 1	M	Lipocalin	≤ 0.1
Horse, epithel	Equ c 3	M	Serum Albumin	≤ 0.1
Horse, epithel	Equ c 4	M	Latherin	≤ 0.1
Sheep, epithel	Ovi a_epithelia	E		≤ 0.1
Pig	Sus d_epithelia	E		≤ 0.1
Others				
Latex				
Latex	Hev b 1	M	Rubber elongation factor	≤ 0.1
Latex	Hev b 3	M	Small rubber particle protein	≤ 0.1

Name	Allergen	E/M(*)	Function	kU$_A$/L
Latex	Hev b 5	M	unknown	≤ 0.1
Latex	Hev b 6.02	M	Pro-Hevein	≤ 0.1
Latex	Hev b 8	M	Profilin	≤ 0.1
Latex	Hev b 11	M	Class 1 Chitinase	0.12
Ficus				
Weeping fig	Fic b	E		≤ 0.1
Ccd				
Hom s Lactoferrin	Hom s LF	M	CCD	≤ 0.1
Parasite				
Pigeon tick	Arg r 1	M	Lipocalin	≤ 0.1

Normal Total-IgE	
Adults:	< 20 kU/l Allergy unlikely, 20 - 100 kU/l Allergy possible, > 100 kU/l Allergy likely

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 sensitizer 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 sensitized individuals, if a high amount of the respective allergen is consumed. PR-10 allergens are not stable to processing.

Name	Allergen	E/M(*)	Function	kU$_A$/L
Alder	Aln g 1	M	PR-10	4.48
Apple	Mal d 1	M	PR-10	6.66
Beech	Fag s 1	M	PR-10	15.68
Hazel pollen	Cor a 1.0103	M	PR-10	14.2
Hazelnut	Cor a 1.0401	M	PR-10	1.85
Peanut	Ara h 8	M	PR-10	5.56
Silver birch	Bet v 1	M	PR-10	24.82
Soy	Gly m 4	M	PR-10	1.28

Interpretation - Support

Raven Interpretation Summary

Sample Information

The sample was tested on ALEX² Barcode 02ALP0C7, interpretation date 21/03/2022.

Of the tested 295 allergens, 19 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: 270 kU/L

The measured total IgE was 270 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, Ara h 8, Bet v 1, Cor a 1.0103, Cor a 1.0401, Fag s 1, Gly m 4, Mal d 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.

Tree Pollen

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.

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).

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 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.

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).

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.

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).

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

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.

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.

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

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.

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.

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.