

WELCOME TO THE ERA OF MOLECULAR ALLERGY FOR ANIMALS!



**First quantitative macroarray
IgE test specifically designed
for animals**

**Over 200 allergen extracts and
molecular components**

**Better identification of allergen
cross-reactivities**

**Fully automated process, higher
level of standardisation**

**With CCD blocking and
2 blocking efficiency
detectors**



Molecular Allergology: The future of IgE sensitisation detection



Molecular allergology is a state-of-the-art approach to the detection of sensitisations, whereby defined single allergen components are used for the determination of specific IgE in place of traditionally-used allergen extracts. The molecular components are recombinant proteins that provide a higher level of standardisation than allergen extracts and enable a more precise identification of IgE sensitisations.

Molecular allergology tests are powerful tools that help pinpoint allergy triggers, thus facilitating risk assessment and therapy decisions.

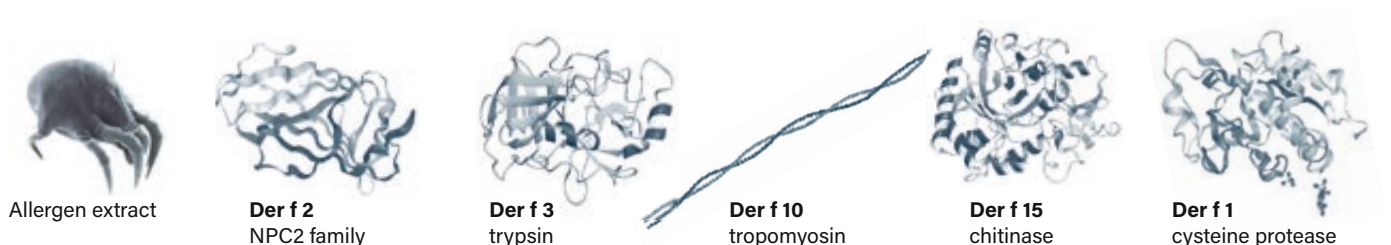
We are excited to introduce the first molecular allergology platform for animals, representing the next generation of allergen-specific IgE serology:

PAX – Pet Allergy Xplorer



What are the main advantages of PAX?

- First quantitative multiplex macroarray specifically designed for companion animals
- Over 200 allergen extracts and components included = lower testing cost per allergen
- Fully automated process = higher level of standardisation (same result if tested multiple times)
- With CCD blocking and 2 blocking efficiency detectors
- Only 0.5 ml of serum needed per test
- Expected increase in serological test sensitivity due to a higher concentration of molecular allergens
- Identification of "primary" sensitising allergens
- Identification of allergen cross-reactivities
- Selection of relevant allergen-specific immunotherapy



Allergen extract

Der f 2
NPC2 family

Der f 3
trypsin

Der f 10
tropomyosin

Der f 15
chitinase

Der f 1
cysteine protease

The PAX results are clearly set out, easy to interpret and include the following information:

- Summary of detectable sensitisations
- Interpretation summary and treatment recommendation
- Detailed results per extract and components
- Detailed interpretation with information about allergenicity and relevance, time of the year, possible cross-reactivities and treatment indication for each allergen

PAX Complete result



Common Name	Scientific name	E/H Allergen	Function	ng/mL
Grass Pollens				
Bermuda grass	Cynodon dactylon	Cyn d	18	21
Kentucky blue grass	Poa pratensis	Cyn d 1	Beta-Espen	21
Medow fescue	Festuca pratensis	Fes p	21	25
Orchard grass	Dactylis glomerata	Dac g	21	22
Perennial ryegrass	Lolium perenne	Lol p 1	Beta-Espen	19
Rye, tall fescue	Selenic selena	SeL sel	21	25
Timothy grass	Phleum pratense	Phl p 1	Beta-Espen	22
		Phl p 2	Espen	22
		Phl p 5.0101	Grass Group 5/6	18
		Phl p 6	Grass Group 5/6	21
		Phl p 7	Phenol	18
		Phl p 12	Phenol	25
Weed Pollens				
Dock / Sorrel	Rumex acetosella / crispus	Rum x, Rum c	22	22
English Plantain	Plantago lanceolata	Pla 1	24	24
Lambs quarter	Chenopodium album	Pla 11	On x 2-Family	22
		Pla 12	On x 2-Family	24
		Pla 13	On x 2-Family	22
		Pla 14	On x 2-Family	22
		Pla 15	On x 2-Family	22
		Pla 16	On x 2-Family	22
		Pla 17	On x 2-Family	22
		Pla 18	On x 2-Family	22
		Pla 19	On x 2-Family	22
		Pla 20	On x 2-Family	22
		Pla 21	On x 2-Family	22
		Pla 22	On x 2-Family	22
		Pla 23	On x 2-Family	22
		Pla 24	On x 2-Family	22
		Pla 25	On x 2-Family	22
		Pla 26	On x 2-Family	22
		Pla 27	On x 2-Family	22
		Pla 28	On x 2-Family	22
		Pla 29	On x 2-Family	22
		Pla 30	On x 2-Family	22
		Pla 31	On x 2-Family	22
		Pla 32	On x 2-Family	22
		Pla 33	On x 2-Family	22
		Pla 34	On x 2-Family	22
		Pla 35	On x 2-Family	22
		Pla 36	On x 2-Family	22
		Pla 37	On x 2-Family	22
		Pla 38	On x 2-Family	22
		Pla 39	On x 2-Family	22
		Pla 40	On x 2-Family	22
		Pla 41	On x 2-Family	22
		Pla 42	On x 2-Family	22
		Pla 43	On x 2-Family	22
		Pla 44	On x 2-Family	22
		Pla 45	On x 2-Family	22
		Pla 46	On x 2-Family	22
		Pla 47	On x 2-Family	22
		Pla 48	On x 2-Family	22
		Pla 49	On x 2-Family	22
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		Pla 62	On x 2-Family	22
		Pla 63	On x 2-Family	22
		Pla 64	On x 2-Family	22
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		Pla 67	On x 2-Family	22
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		Pla 72	On x 2-Family	22
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		Pla 75	On x 2-Family	22
		Pla 76	On x 2-Family	22
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		Pla 78	On x 2-Family	22
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		Pla 81	On x 2-Family	22
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		Pla 83	On x 2-Family	22
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		Pla 92	On x 2-Family	22
		Pla 93	On x 2-Family	22
		Pla 94	On x 2-Family	22
		Pla 95	On x 2-Family	22
		Pla 96	On x 2-Family	22
		Pla 97	On x 2-Family	22
		Pla 98	On x 2-Family	22
		Pla 99	On x 2-Family	22
		Pla 100	On x 2-Family	22

Common Name	Scientific name	E/H Allergen	Function	ng/mL
Interpretation - Support				
Pellitory				
<ul style="list-style-type: none"> This patient has a sensitization to pellitory pollen. Associated allergic signs are generally worse during the pellitory pollen season, which varies from May to October depending upon the geographical location. Allergen-specific immunotherapy is recommended for pellitory pollen sensitization, if the corresponding clinical signs occur. Par 2 is an allergen from the wall pellitory (Parietaria judicata). It is a member of the rutTP allergen family. The potential for cross-reactions with most other allergens of this family is considered low. In humans, Par 2 is a highly specific marker for pellitory pollen sensitization; at this time, it is not known if the same occurs in animals. 				
D. farinosa				
<ul style="list-style-type: none"> This patient has a sensitization to house dust mites. Associated allergic signs are generally year-round, but house dust mites are known to proliferate during times of high humidity and temperature. There is a known cross-reactivity between allergens of house dust and storage mite species, as well as between those of Dermatophagoides farinae and Tetranychus. Allergen-specific immunotherapy is recommended for house dust mite sensitization, if the corresponding clinical signs occur. 				
Tyrophagus putrescentiae				
<ul style="list-style-type: none"> This patient has a sensitization to storage mites. Associated allergic signs are generally year-round, but storage mites are known to proliferate during times of high humidity and temperature. There is a known cross-reactivity between allergens of house dust and storage mite species. Allergen-specific immunotherapy is recommended for storage mite sensitization, if the corresponding clinical signs occur. 				
American cockroach				
<ul style="list-style-type: none"> This patient has a sensitization to American cockroach. Associated allergic signs are generally year-round. There is a known cross-reactivity between allergens of different cockroach species. Allergen-specific immunotherapy is recommended for cockroach sensitization, if the corresponding clinical signs occur. Par 7 is an allergen of the American cockroach (Periplaneta americana). It belongs to the family of cockroach Group 7 allergens (Tropomyosin). Par 7 is a minor allergen of humans sensitized to this cockroach; at this time it is not known if this is also the case in animals. The potential for cross-reactions of Par 7 with other tropomyosins present in mites, insects, nematodes, and ingested feedstuffs is very high. Sensitization to tropomyosin likely represents a cross-reactivity to nematodes, such as Tetranychus. At this time, the benefit of immunotherapy for patient sensitized to cross-reactive tropomyosins has not been studied. However, in the absence of additional sensitizations, immunotherapy to tropomyosin-containing house dust mites could be considered. 				
DISCLAIMER: THIS INTERPRETATION GUIDANCE IS A TOOL TO SUPPORT VETERINARIANS IN THE INTERPRETATION OF PAX RESULTS. PAX RECOMMENDATIONS DO NOT REPLACE THE DIAGNOSIS BY A VETERINARIAN.				

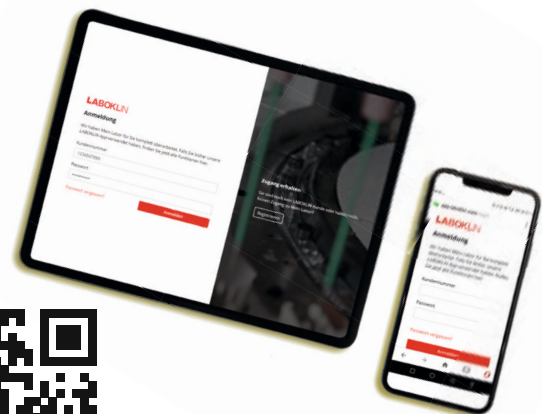
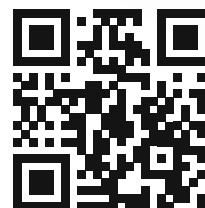
Access reports via your mobile with the LABOKLIN app!

We at Laboklin understand that it is not always possible to log on to the computer and check whether the expected results have already arrived. Sometimes it has to be done after-hours whilst at home or in between farm calls.

With the Laboklin app, you can use your mobile device (smartphone or tablet) to access your results online anytime, anywhere. As the reports are synchronized live, they can only be accessed if your device is connected to the internet*.

Scan the QR code to access the app directly.

* The applications are provided free of charge by LABOKLIN. Any fees incurred for establishing a connection to the data network of your mobile phone provider should be checked before use.



PAX Allergens: Components & Extracts

	Common name	Scientific name	Extracts & Components
Grass Pollens	Bermuda grass	<i>Cynodon dactylon</i>	Cyn d *
			Cyn d 1
	Orchard grass	<i>Dactylis glomerata</i>	Dac g *
	Meadow fescue	<i>Festuca pratensis</i>	Fes p *
	Perennial ryegrass	<i>Lolium perenne</i>	Lol p 1
			Phl p 1
	Timothy	<i>Phleum pratense</i>	Phl p 2
			Phl p 5.0101
			Phl p 6
Phl p 7			
Phl p 12			
Kentucky blue grass	<i>Poa pratensis</i>	Poa p *	
Ryegrass, cultivated	<i>Secale cereale</i>	Sec c_pollen *	
Tree Pollens	Alder	<i>Alnus glutinosa</i>	Aln g *
			Aln g 1
			Aln g 4
	Silver birch	<i>Betula verrucosa</i>	Bet v *
			Bet v 1
			Bet v 2
			Bet v 6
	Hazel	<i>Corylus avellana</i>	Cor a_pollen *
	Cypress	<i>Cupressus sempervirens</i>	Cor a 1.0103
			Cup s *
	Beech	<i>Fagus sylvatica</i>	Fag s 1
	Ash	<i>Fraxinus excelsior</i>	Fra e *
			Fra e 1
	Privet	<i>Ligustrum vulgare</i>	Lig v *
	Olive tree	<i>Olea europaea</i>	Ole e *
			Ole e 1
Ole e 7			
Ole e 9			
London plane tree	<i>Platanus acerifolia</i>	Pla a 1	
		Pla a 2	
		Pla a 3	
Cottonwood	<i>Populus nigra</i>	Pop n *	
Elm	<i>Ulmus campestris</i>	Ulm c *	
Weed Pollens	Ragweed	<i>Ambrosia artemisiifolia</i>	Amb a *
			Amb a 1
			Amb a 4
	Mugwort	<i>Artemisia vulgaris</i>	Art v *
			Art v 1.0101
			Art v 3.0201
	Lamb's quarter	<i>Chenopodium album</i>	Che a *
			Che a 1
	Wall pellitory	<i>Parietaria judaica</i>	Par j *
			Par j 2
	Ribwort / Plantain	<i>Plantago lanceolata</i>	Pla l *
			Pla l 1
	Dock/Sorrel	<i>Rumex crispus / acetosella</i>	Rum c / *
Rum a			
Russian thistle	<i>Salsola kali</i>	Sal k *	
		Sal k 1	
Nettle	<i>Urtica dioica</i>	Urt d *	

	Common name	Scientific name	Extracts & Components
Danders & Epithelia	Cattle	<i>Bos domesticus</i>	Bos d 2
	Dog	<i>Canis familiaris</i>	Can f 1
			Can f 2
			Can f 3
			Can f 4
			Can f 6
			Can f_maleurine (including Can f 5) *
	Can f Fel d 1 like		
	Guinea pig	<i>Cavia porcellus</i>	Cav p 1
	Horse	<i>Equus caballus</i>	Equ c 1
Equ c 3			
		Equ c 4	
Cat	<i>Felis catus</i>	Fel d 1	
		Fel d 2	
		Fel d 4	
		Fel d 7	
Mouse	<i>Mus musculus</i>	Mus m 1	
Rabbit	<i>Oryctolagus cuniculus</i>	Ory c 1	
		Ory c 2	
		Ory c 3	
Mites & Cockroaches	Acarus siro	<i>Acarus siro</i>	Aca s *
	German cockroach	<i>Blatella germanica</i>	Bla g 1
			Bla g 2
			Bla g 4
			Bla g 5
			Bla g 9
	Flea	<i>Ctenocephalides felis</i>	Cte f 1
	Dermatophagoides farinae	<i>Dermatophagoides farinae</i>	Der f *
			Der f 1
			Der f 2
			Der f 15
			Der f 18
	Dermatophagoides pteronyssinus	<i>Dermatophagoides pteronyssinus</i>	Der p *
			Der p 1
			Der p 2
			Der p 5
			Der p 7
Der p 10			
Der p 11			
Der p 20			
		Der p 21	
		Der p 23	
Glycyphagus domesticus	<i>Glycyphagus domesticus</i>	Gly d 2	
Lepidoglyphus destructor	<i>Lepidoglyphus destructor</i>	Lep d *	
	<i>Lepidoglyphus destructor</i>	Lep d 2	
Tyrophagus putrescentiae	<i>Tyrophagus putrescentiae</i>	Tyr p *	
	<i>Tyrophagus putrescentiae</i>	Tyr p 2	
Alternaria alternata	<i>Alternaria alternata</i>	Alt a *	
		Alt a 1	
		Alt a 6	

	Common name	Scientific name	Extracts & Components
Moulds & Yeasts	Aspergillus fumigatus	Aspergillus fumigatus	Asp f *
			Asp f 1
			Asp f 3
			Asp f 4
			Asp f 6
	Cladosporium herbarum	Cladosporium herbarum	Cla h *
			Cla h 8
	Malassezia pachydermatis	Malassezia pachydermatis	Mala p *
	Malassezia sympodialis	Malassezia sympodialis	Mala s 1
			Mala s 9
Mala s 5			
Mala s 6			
Mala s 11			
Insect Venoms	Honey bee venom	Apis mellifera	Api m *
			Api m 1
			Api m 2
			Api m 3
			Api m 5
			Api m 10
	Long-headed wasp venom	Dolichovespula spp.	Dol spp *
	Paper wasp venom	Polistes dominula	Pol d *
			Pol d 5
	Fire ant venom	Solenopsis richteri & Solenopsis invicta	Sol spp *
Common wasp venom	Vespula vulgaris	Ves v *	
		Ves v 1	
		Ves v 5	
Foods	Oat	Avena sativa	Ave s *
	Buckwheat	Fagopyrum esculentum	Fag e *
			Fag e 2
	Sunflower seed	Helianthus annuus	Hel a *
	Barley	Hordeum vulgare	Hor v *
	Rice	Oryza sativa	Ory s
			Ory s_GLUB1
	Millet	Panicum miliaceum	Pan m *
	Rye, cultivated	Secale cereale	Sec c_flour *
	Wheat	Triticum aestivum	Tri a *
			Tri a 14
			Tri a 19
			Tri a aA_TI
	Corn, cereal	Zea mays	Zea m *
			Zea m 14
			Zea m_GBSSI
	Apple	Malus domestica	Mal d 1
			Mal d 2
			Mal d 3
	Peanut	Arachis hypogaea	Ara h 1
Ara h 2			
Ara h 3			
Ara h 5			
Ara h 6			
Ara h 8			
Ara h 9			
		Ara h 15	

* Extract

	Common name	Scientific name	Extracts & Components
Foods	Soy	<i>Glycine max</i>	Gly m *
			Gly m 4
			Gly m 5
			Gly m 6
			Gly m 8
	Lentil	<i>Lens culinaris</i>	Len c *
			Len c 1
			Len c 2
			Len c 3
	Pea	<i>Pisum sativum</i>	Pis s *
			Pis s 1
			Pis s 2
			Pis s 3
	Cow's milk	<i>Bos domesticus</i>	Bos d_milk *
			Bos d 4
			Bos d 5
			Bos d 8
	Egg white	<i>Gallus domesticus</i>	Gal d_white *
			Gal d 1
			Gal d 2
			Gal d 3
	Egg yolk	<i>Gallus domesticus</i>	Gal d_yolk *
			Gal d 5

	Common name	Scientific name	Extracts & Components
Foods	Beef	<i>Bos domesticus</i>	Bos d_meat *
			Bos d 6
			Bos d 7
			Bos d_ACTA1
			Bos d_LDHA
	Horse	<i>Equus caballus</i>	Equ c_meat *
	Rabbit	<i>Oryctolagus spp.</i>	Ory_c_meat *
			Ory_c_CKM
			Ory_c_GAPDH
			Ory_c_PGM1
			Ory_c_PKM
	Lamb	<i>Ovis aries</i>	Ovi a_meat *
			Ovi a_IgG
	Pig	<i>Sus domesticus</i>	Sus d_meat *
	Chicken	<i>Gallus domesticus</i>	Sus d 1
			Gal d_meat *
			Gal d 7
			Gal d 9
	Turkey	<i>Meleagris gallopavo</i>	Gal d_PKM
			Mel g *
	Mealworm	<i>Tenebrio molitor</i>	Ten m *
	Herring, Atlantic	<i>Clupea harengus</i>	Clu h *
			Clu h 1

	Common name	Scientific name	Extracts & Components
Foods	Cod, Atlantic	<i>Gadus morhua</i>	Gad m *
			Gad m 1
			Gad m 2+3
			Gad m 4
	Salmon, Atlantic	<i>Salmo salar</i>	Sal s *
			Sal s 1
			Sal s 2
			Sal s 3
			Sal s 4
			Sal s 6
			Sal s 7
			Sal s 8
	Mackerel, Atlantic	<i>Scomber scombrus</i>	Sco s *
			Sco s 1
	Tuna	<i>Thunnus albacares</i>	Thu a *
	Carrot	<i>Daucus carota</i>	Thu a 1
			Dau c *
	Tomato	<i>Solanum lycopersicum</i>	Dau c 1
			Sola l *
	Potato	<i>Solanum tuberosum</i>	Sola l 6
			Sol t *
			Sol t 2
			Sol t_GBSSI

* Extract

4PAWS – THE reminder APP for Pet Owners

From setting reminders to give medication as well as being prepared when traveling – all this is possible with the 4Paws app!



Allergy

Pollen calendar, allergy test results, and the treatment plan for allergy therapy – all in one place.



Other treatments

Never forget to administer important medication again – thanks to the reminder function.



Vaccinations

Remember to schedule your vaccinations at the right time – it's no problem!



Anti-parasitics

Worming treatment and parasite prophylaxis – when is it right? The app tells you.



Traveling

Enter the travel period and destination and the app will remind you of the recommended prophylactic measures and follow-up examinations. The app provides information on the vector-borne pathogens found in the destination country in the form of "fact sheets".

NEW

Absolutely no costs and ad-free installation from the app stores:



LABOKLIN
LABORATORY FOR CLINICAL DIAGNOSTICS



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