



**Neuberg**  
DIAGNOSTICS

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# *New* INSIGHTS

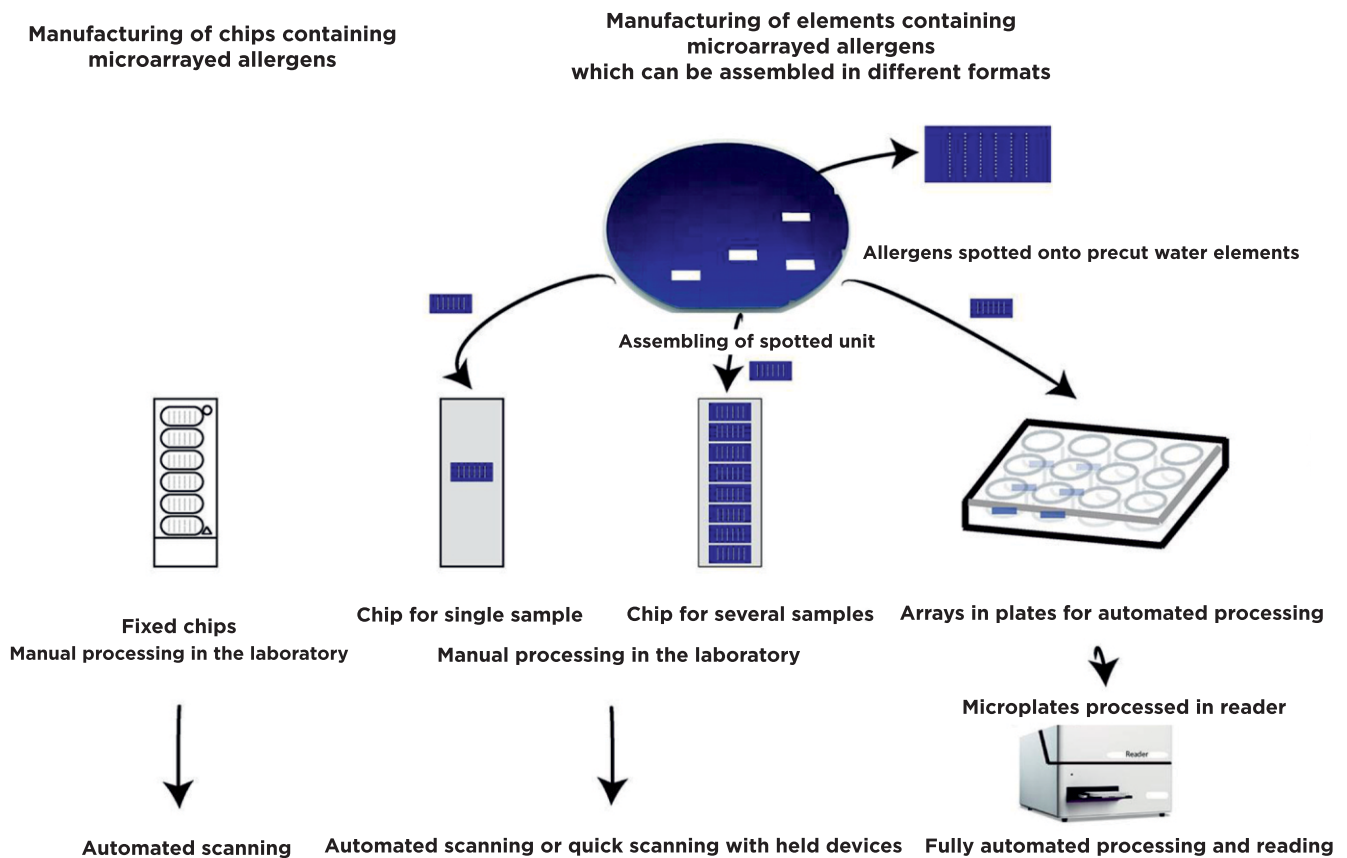


## **Allergy Testing-** **Component Resolved Diagnostics (CRD)**

Serial number : 012 Edition : 1. 2022

# Allergy testing by ALEX - Microarray technology - Component Resolved Diagnostics (CRD)

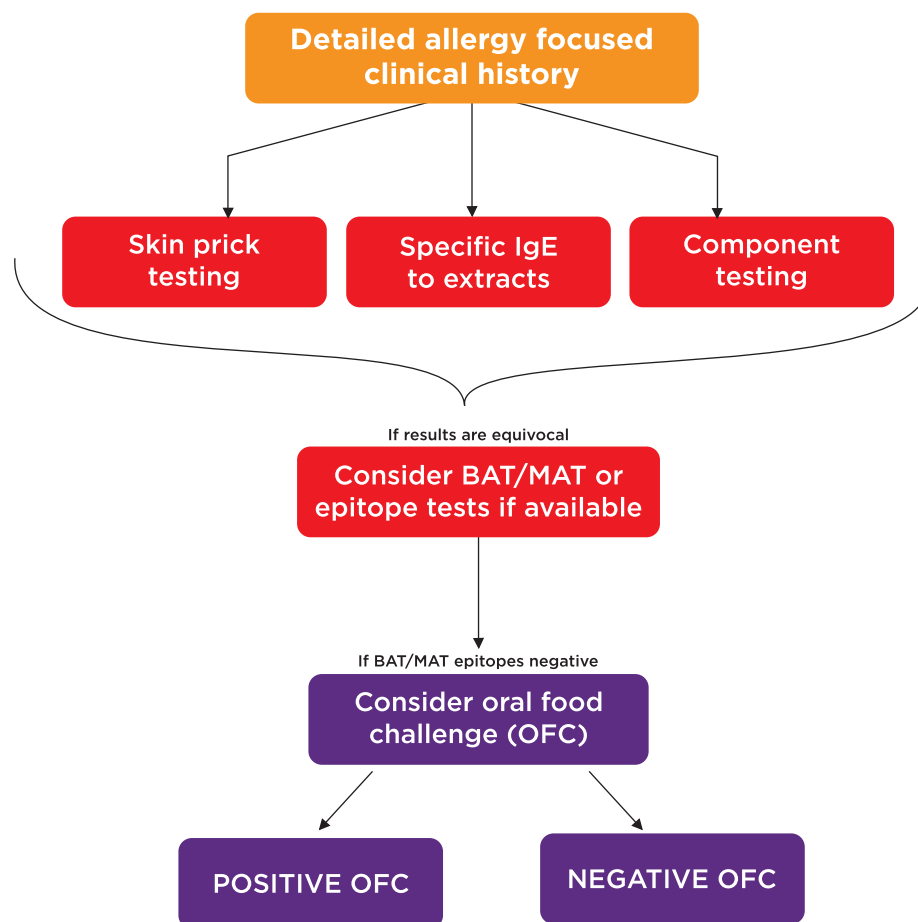
- ▶ Allergy Explorer is an in-vitro multiplex allergy test that allows simultaneous measurement of total IgE (tIgE) and specific IgE (sIgE) antibodies against nearly 300 different allergens, from a single run of a patient sample.
- ▶ Conventional singleplex allergy test systems can be laborious in obtaining a comprehensive IgE sensitization profile of patients. Often, several testing cycles are required to reach a clear diagnosis, and total IgE is tested separately. To streamline this fragmented approach, ALEX gives you a near complete picture of patient's allergic situation, including total IgE levels.
- ▶ ALEX has been developed based on a proprietary nanobead technology, ensuring optimization of every individual allergen immobilized on the solid phase.
- ▶ This harmonious integration of Macro Level Diagnostics (total IgE Level), Micro Level Diagnostics (specific IgE against purified protein extracts) and Core Level (specific IgE against molecular components) allows ALEX to create a detailed understanding of an individual's allergy status.



# What is Component-resolved diagnostics (CRD)?

- ▶ Component-resolved diagnostics (CRD) in food allergies is an approach utilized to characterize the molecular components of each allergen involved in a specific IgE (sIgE)-mediated response. In the clinical practice, CRD can improve diagnostic accuracy and assist the physician in many aspects of the allergy work-up.
- ▶ CRD allows for discriminatory co-sensitization versus cross-sensitization phenomena and can be useful to stratify the clinical risk associated with a specific sensitization pattern, in addition to the oral food challenge (OFC)
- ▶ The advent of CRD represents a milestone in the field of food allergy diagnosis, allowing for a better identification and characterization of the specific molecules that trigger allergic reactions. In light of this, CRD has become an important tool in the diagnostic work-up of food allergies, has given the identification of sIgE against the major allergens allows for discriminating against primary food allergies versus secondary sensitization. Moreover, CRD helps predict the evolution of the allergic process and the clinical risk of each patients and in stratifying the outcome of the OFC.

## Approach to Allergy:



# Component Resolved Diagnosis

Allergenic Food Source  
Skin prick tests



Allergenic Extract  
Specific IgE



Unique allergen molecules  
Cross-reactive allergen molecules

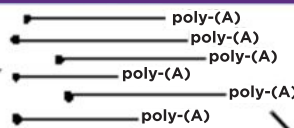


Component Resolved Diagnostics

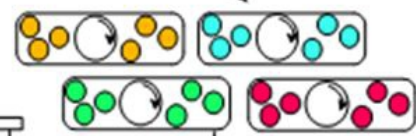
# Components Production



mRNA extraction



cdNA synthesis, doing and selection of a DNA clones encoding individual allergenic proteins



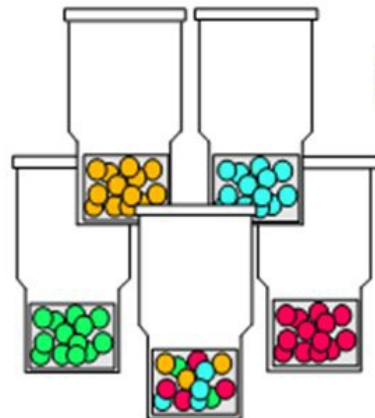
Production of recombinant allergens, Immobilization on solid phase



Allergy- eliciting biological material

Extraction, Immobilization on solid phase

Standard Allergen ImmunoCAP



Recombinant Allergen ImmunoCAP

Standardization and research reagents

## Allergy by Microarray technique - report format

<b>Patient ID:</b>	20300126167		<b>Referring Physician:</b>
<b>Patient Name:</b>	Master SHLOK SHAH		
<b>Date of Birth:</b>			
<b>Sample ID:</b>	20300126167		<b>Additional Information:</b>
<b>Barcode:</b>	02AHA783		
<b>Sampled on:</b>	16/03/2022		
<b>Tested on:</b>	17/03/2022		
<b>Approved on:</b>	17/03/2022		
<b>Note: The internal QC (Plausibility check for GD) was within acceptance range.</b>			

### Lab report : Summary on detectable sensitisations

			<b>Cross-reactive Allergen Families</b>	
Grass Pollen	Grass Pollen	0	Polcalcin	0
	Tree Pollen	2	Profilin	0
	Weed Pollen	0	PR-10	0
Mites	House Dust Mites & Storage Mites	0	Ole e 1 Family	0
Microorganisms	Fungal Spores & Yeast	4	LTPs	1
Plant-Based Food	Legumes	1	Storage Proteins	0
	Grain	1	Lipocalins	0
	Spices	0	NPC2	0
	Fruits	1	Serum albumin	0
	Vegetables	0	Parvalbumin	0
	Nuts & seeds	1	Tropomyosin	0
Animal-Derived Food	Milk	0	CCD	0
	Egg	0	Ulteroglobulin	0
	Fish & Seafood	0	Arginine Kinase	0
	Meat	2		
Insects & Venoms	Ant, Bee, Wasp	0		
	Cocokroach	0	<b>Total IgE (KU/L)</b>	190
Epithelial Tissues of Animals	Pets	0		
	Animals	0		
Others	Latex	0		
	Ficus & Hops	0		
	CCD	0		
	Parasite	0		

### Highest measured IgE concentration per allergen group

<0.3 kUA/L	0.3 - 1 kUA/L	1 - 5 kUA/L	5 - 15 kUA/L	> 15 kUA/L
0	1	2	3	4
Negative or uncertain	Low IgE level	Moderate IgE level	High IgE level	Very High IgE level



**Knock out** medical emergencies,  
**before it's too late!**

**HEALTH ko aasani se na lo,  
TEST aasani se karo**



**Blood Tests**



**Health Packages**



**ICMR Approved COVID Tests**

**“ Get your blood test done  
Anywhere, Anytime...  
Neuberg hain na ”**

# PARTNERS IN HEALTH



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