

# 10th Advances Against Aspergillosis and Mucormycosis

2 - 3 February 2022

Virtual Event

## Research on the Diagnostic Performance of Several Different Galactomannan Methodologies for Invasive Aspergillosis

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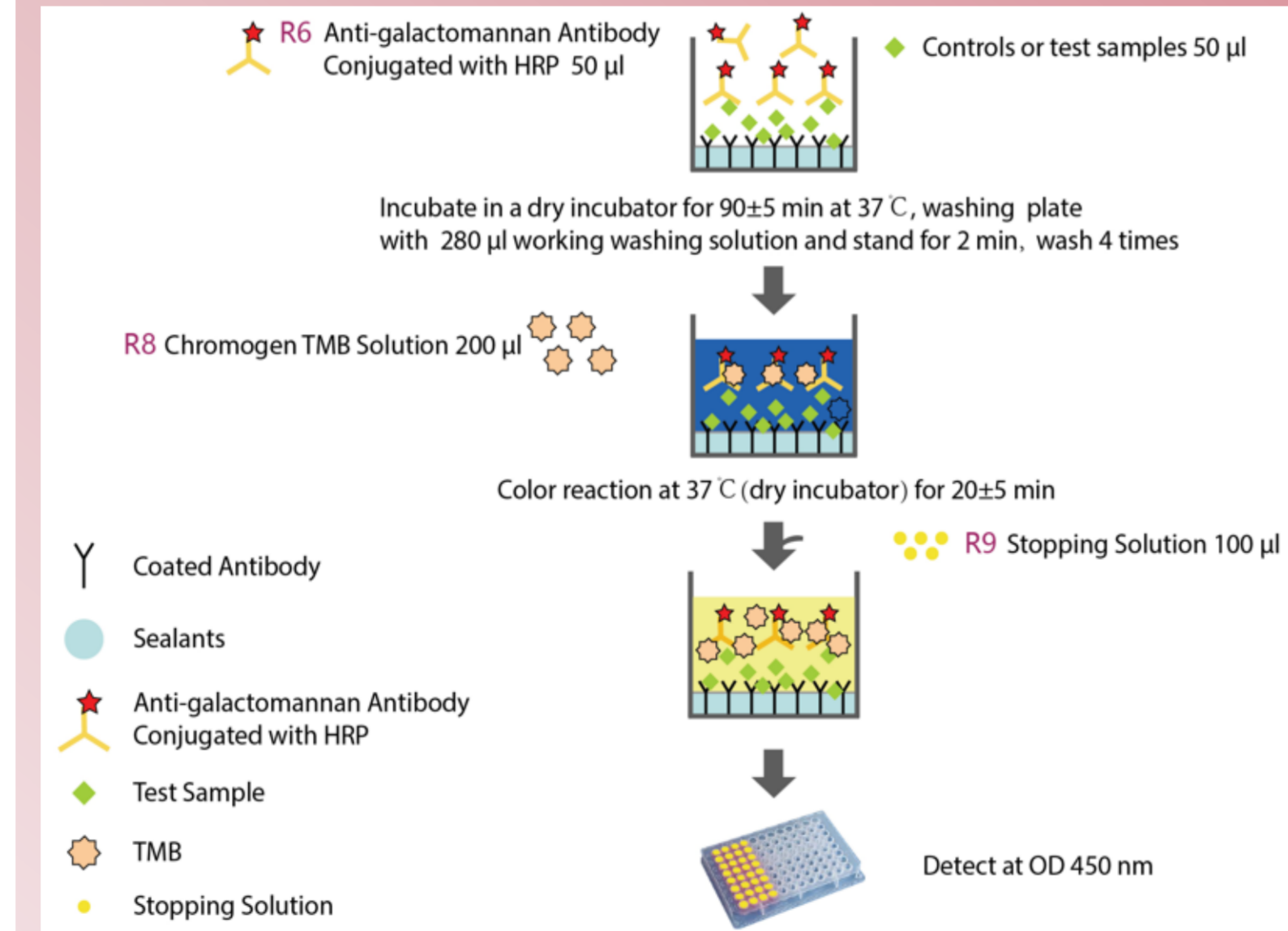
### 1. BACKGROUND

Invasive Aspergillosis (IA) are a growing threat to human health worldwide. *Aspergillus galactomannan* (GM) is a recognized biomarker for the diagnosis of IA. The detection of GM represents a substantial challenge for many clinical laboratories. However, there was no consensus has yet been reached about the single most optimal method. Here, a comparison, which use three different methodologies of GM detection reagent, was made for investigate the diagnostic performance.

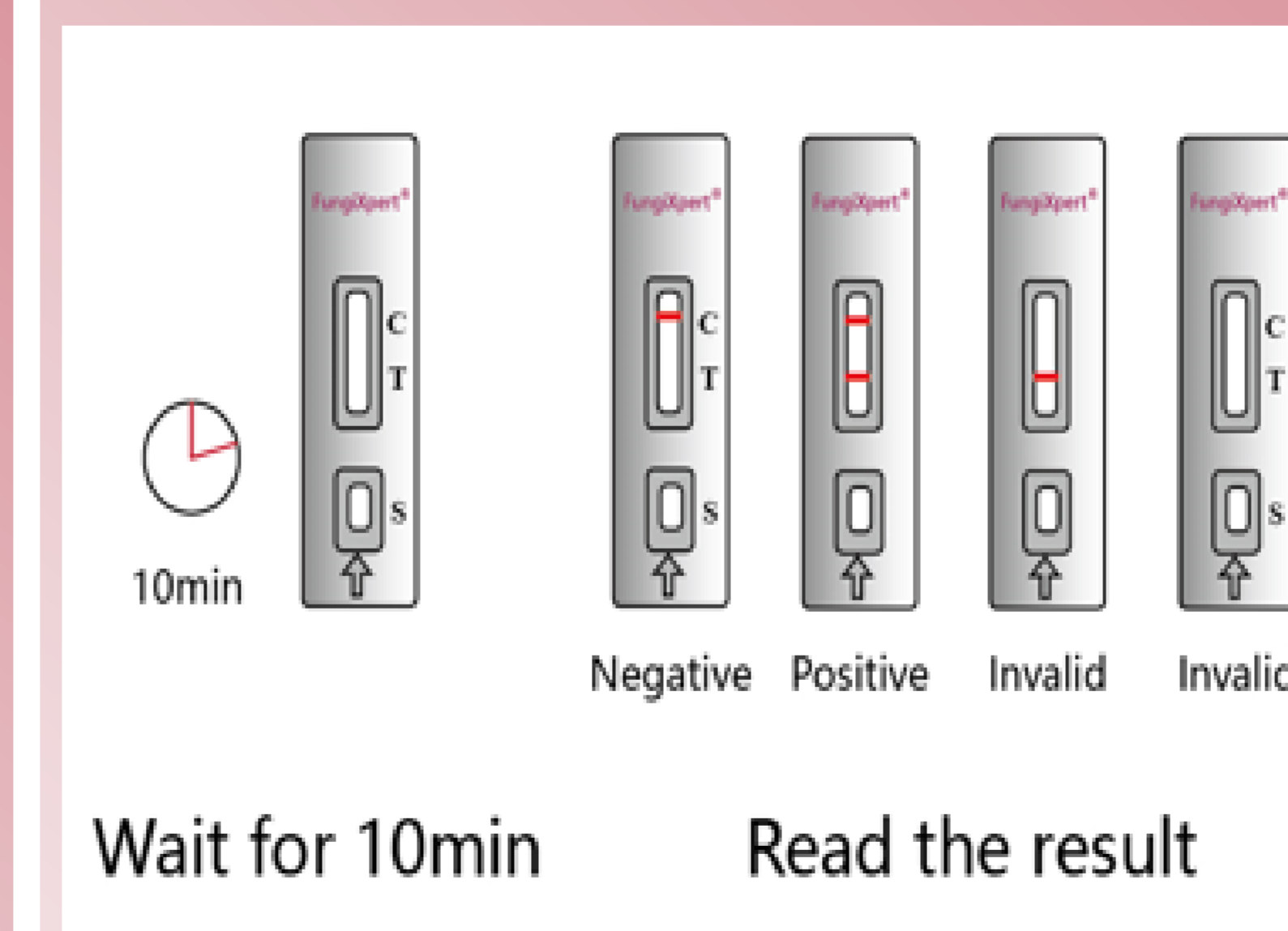
### CLIA



### ELISA



### LFA



### 2. MATERIAL & METHODS

In order to evaluate the application of three methodologies, FungiXpert® *Aspergillus Galactomannan* Detection K-Set (Lateral Flow Assay), *Aspergillus Galactomannan* ELISA Detection Kit, *Aspergillus Galactomannan* Detection Kit (CLIA), clinical comparison study was carried out at 3 sites located in China to evaluate the sensitivity, specificity and coincidence rate.

### 3. RESULTS

SERUM SAMPLES	Clinical Result			SERUM SAMPLES	Clinical Result			SERUM SAMPLES	Clinical Result					
	Positive	Negative	Total		Positive	Negative	Total		Positive	Negative	Total			
GMLFA	Positive	106	9	115	GMLFA	Positive	93	7	100	GMLFA	Positive	115	11	126
	Negative	11	194	205		Negative	4	185	189		Negative	8	238	246
GMELISA	Positive	108	10	118	GMELISA	Positive	94	7	101	GMELISA	Positive	117	11	128
	Negative	9	193	202		Negative	3	185	188		Negative	6	238	244
GMCLIA	Positive	109	10	119	GMCLIA	Positive	94	7	101	GMCLIA	Positive	117	11	128
	Negative	8	193	201		Negative	3	185	188		Negative	6	238	244

Site 1

Site 2

Site 3

BAL SAMPLES	Clinical Result			BAL SAMPLES	Clinical Result			BAL SAMPLES	Clinical Result					
	Positive	Negative	Total		Positive	Negative	Total		Positive	Negative	Total			
GMLFA	Positive	31	2	33	GMLFA	Positive	19	1	20	GMLFA	Positive	30	2	32
	Negative	2	38	40		Negative	1	24	25		Negative	1	45	46
GMELISA	Positive	31	3	34	GMELISA	Positive	19	1	21	GMELISA	Positive	30	2	32
	Negative	2	37	39		Negative	1	24	24		Negative	1	45	46
GMCLIA	Positive	32	3	35	GMCLIA	Positive	19	1	21	GMCLIA	Positive	30	2	32
	Negative	1	37	38		Negative	1	24	24		Negative	1	45	46

The sensitivity and specificity for GMLFA is 90.6-96.8% and 95-96.4% respectively.

The sensitivity and specificity for GMELISA is 92.3-96.9% and 92.5-96.4% respectively.

The sensitivity and specificity for GMCLIA is 93.2 96.97% and 92.5-96.4% respectively.

### 4. CONCLUSION

Different sensitivities had been showed of three methodologies, but each tests showed concordant results in more than 90% of the cases.

To sum up, all 3 kits have high sensitivity and specificity, which can provide high diagnostic value for the IA.