

Aspergillus fumigatus IgG ELISA

ref. # 6100

Serodiagnosis of chronic and allergic pulmonary aspergillosis

ELISA kit 96 tests

First commercial kit associating:

Somatic and metabolic antigens + 2 recombinant antigens

Detection of IgG with a protein A conjugate

Prospective multicentric study*

436 sera from 352 patients, including 136 CPA, 94 ABPA and 206 controls were tested with the Bordier kit and with two commercially available kits: Platelia *Aspergillus* IgG (Bio-Rad) and ELISA Classic *Aspergillus fumigatus* IgG (Virion\Serion).

A)	Bordier	Bio-Rad	Virion\Serion	pvalue
Equivocal results (%)	2.8	6.7	10.1	
Sensitivity (%)	97.0	91.7	86.1	<.01
Specificity (%)	90.3	91.3	81.5	<.01
Youden index	0.873	0.830	0.676	

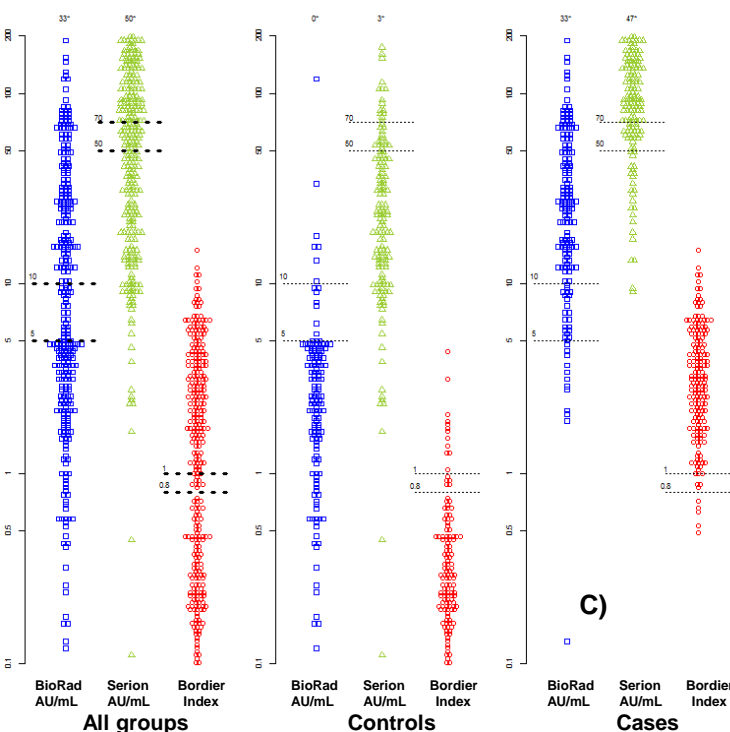
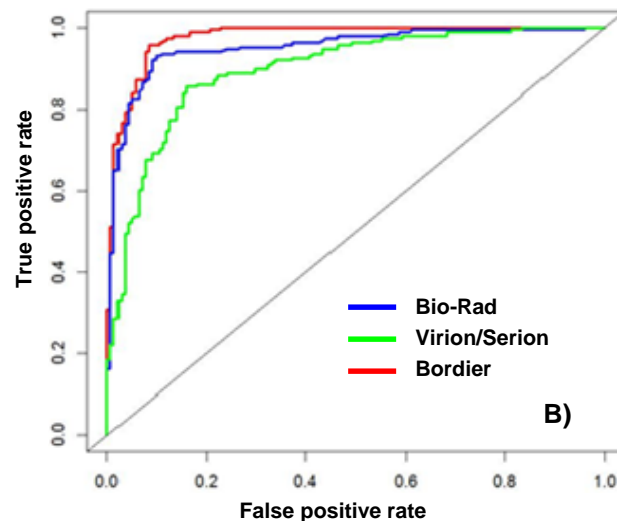


Table A) Performances of the three assays

Equivocal results are considered as positives.

Youden index = sensitivity + specificity - 1.

pvalue = Cochran Q test.

Sensitivity and specificity were 97% and 90.3% respectively for Bordier; 91.7% and 91.3% for Bio-Rad and 86.1% and 81.5% for Virion / Serion.

McNemar analysis confirms the superior sensitivity of Bordier compared to Bio-Rad ($p < 0.01$) and Serion ($p = 0.04$). Bordier and Bio-Rad showed comparable specificities ($p = 0.8$), which are higher than the one of Serion ($p = 0.02$ for each test).

Figure B) Roc curves of the three assays

The AUC of the Bordier assay (0.977) was even greater than those of the Bio-Rad and Virion\Serion assays (0.951 and 0.897 respectively) ($p < 0.01$).

Figure C) Quantitative results and distribution of antibodies obtained with the three assays

Dotted line: positive and negative cut-offs.

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Dumollard C., Bailly S., Perriot S., Brenier-Pinchart M.P., Saint-Raymond C., Camara B., Gangneux J.P., Persat F., Valot S., Grenouillet F., Pelloux H., Pinel C., Cornet M. Prospective evaluation of a new *Aspergillus* IgG EIA kit for the diagnosis of chronic and allergic pulmonary aspergillosis. J. Clin. Microbiol. In press.