

## World Congress on INFECTIOUS AND CONTAGIOUS DISEASE

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**Triazole Resistance in *Aspergillus fumigatus* Isolates in Africa: a systematic review****Fructueux Modeste***Marien Ngouabi university, Congo*

Emergence of triazole resistance has been observed in *Aspergillus fumigatus* over the past decade including Africa. This review summarizes the current published data on the epidemiology and reported mechanisms of triazole-resistant *Aspergillus fumigatus* (TRAF) in both environmental and clinical isolates from Africa. Searches on databases Medline, PubMed, HINARI, Science Direct, Scopus and Google Scholar on triazole resistance published between 2000 and 2021 from Africa were performed. Isolate source, antifungal susceptibility using internationally recognized methods, cyp 51A mechanism of resistance and genotype were collected. Eleven published African studies were found that fitted the search criteria; these were subsequently analyzed. In total this constituted of 1686 environmental and 46 clinical samples. A TRAF prevalence of 17.1% (66/387) and 1.3% (5/387) was found in respectively environmental and clinical settings in African studies. Resistant to itraconazole, voriconazole, and posaconazole was documented. Most of the triazole-resistant isolates (30/71, 42.25%) were found to possess the TR 34/L98H mutation in the cyp 51A-gene; fewer with TR 46/Y121F/T289A (n = 8), F46Y/M172V/E427K (n = 1), G54E (n = 13), and M172V (n = 1) mutations. African isolates with the TR 34/L98H, TR 46/Y121F/T289A and the G54E mutations were closely related and could be grouped in one of two clusters (cluster-B), whereas the cyp 51A/M172V mutation clustered with most cyp 51A-WT strains (cluster-A). A single case from Kenya shows that TR 34/L98H from environmental and clinical isolates are closely related. Our findings highlight that triazole resistance in environmental and clinical *A. fumigatus* is a cause for concern in a number of African countries. There is need for epidemiological surveillance to determine the true burden of the problem in Africa.

**Biography**

Mr AMONA Fructueux Modeste has completed his MSc in microbiology, option Parasitology and mycology at age of 26 years from NAZI Boni university, Burkina Faso and he is a PhD student from Faculty of Health Science, Marien Ngouabi university, Health science School, Republic of Congo. I am interesting in fungal pathogens from identification to diagnosis. I have published 8 papers on fungal infection in reputed journals and attended some international congress.