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Mycology

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Invasive fungal infections (IFIs) have become a significant problem for a number of patient categories with underlying immunodeficienies, such as transplant recipients and patients with liquid tumors receiving chemotherapy. In addition to culture-based, traditional microbiology means of diagnosis for IFIs caused by *Candida* species or *Aspergillus* species and other moulds, an array of new diagnostic modalities have emerged to provide faster and more accurate diagnosis of these infections. A review of (i) the traditional culture-based diagnostics for *Candida* and *Aspergillus* species and (ii) the advances achieved in diagnostic mycology focusing on antigen-based tests (e.g. galactomannan enzyme immuno-assay, b-D-glucan, *Histoplasma* antigen) will address the benefits and associated limitations of these tests in sensitive patient populations, particularly stem cell transplant (SCT) and solid organ transplant (SOT) recipients. Finally, as molecular diagnostics in the field of mycology, particularly for the detection of moulds, have emerged as an additional diagnostic tool, we will discuss the potential clinical utility and limitations of these tests. We will conclude with a discussion of the future in mycology diagnostics.

Biography

Dionysios Neofytos graduated from Medical School, Athens Greece, in 1996 and completed a Master in Public Health in 2008, at Thomas Jefferson University in Philadelphia, PA. He completed his residency in Internal Medicine at Newton-Wellesley Hospital, Tufts University in Boston, MA between 2001 and 2004. He subsequently completed his fellowship in Infectious Diseases at Thomas Jefferson University, Philadelphia, PA between 2004 and 2007. Since then, he held faculty positions at Thomas Jefferson University, the Johns Hopkins University in Baltimore, MD and Memorial-Sloan Kettering Cancer Center / Cornell University in New York, NY. Since August 2014 he serves as a Global Medical Leader in Infectious Diseases at Roche Diagnostics Inc, Switzerland. He has published and presented his original research work in a large number of Journals and national and international conferences. His research mainly focused on the epidemiology, diagnosis and outcomes of invasive fungal and viral infections in immune compromised hosts, such as bone marrow and solid organ transplant recipients.

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