EDITORIAL

New Drugs and Therapeutic/Diagnostic Targets for Fungal and Parasitic Diseases - Part II

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The classical methods of diagnosis in both parasitology and mycology require microscopic visualization as well as the identification of the microorganisms using their morphological characteristics. In addition in the case of fungi, it is necessary to use culture-based methods. However, these methods are tedious and usually not very sensitive and require trained personnel to perform them.

Tools for the diagnosis and monitoring of the disease remains a challenge, since a diagnosis is misleading, erroneous or too slow, hinder effective treatments. As a result, new and low-cost assays are required to help physicians to establish an accurate and definitive diagnosis and to modify the strategies to control these infectious diseases.

Alternatively, indirect methods have been developed, such as serology-based assays and more recently molecular-based assays. In this respect, this CTMC thematic issue includes extensive reviews of updated diagnostic methods.

Recently, molecular techniques based on the amplification of nucleic acids have allowed the development of sensitive, specific and rapid diagnostic methods, however their high price and the requirement of infrastructures make difficult to apply them in low-resource countries. Dea-Ayuela *et al.* have analysed the main advances in the development of a molecular technique called loop-mediated isothermal amplification (LAMP) assay for the diagnosis of malaria, leishmaniasis and Chagas' disease as well as the feasibility of their implementation in developing countries and its use as point-of-care diagnostic tests.

Candida is a fungus that is present in the skin, mouth or intestine of healthy individuals whose growth is controlled primarily by the immune system. However, in certain circumstances, such as immunosuppression, the infection spreads to different organs causing an invasive candidiasis. Pitarch *et al.* compiles an extensive review of the diagnostic methods applied in the most serious forms of candidiasis, the invasive one, since the rapidity in making the correct diagnosis is fundamental in the control of the infection and the prognosis of the disease.

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