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## Nucleic Acid Amplification Techniques in the Diagnosis of Infectious Diseases: The Way Forward

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# Nucleic Acid Amplification Techniques in the Diagnosis of Infectious Diseases: The Way Forward

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## Abstract

Nucleic acid amplification-based tests as laboratory diagnostic tools have attracted a lot of attention in the past several years. From the discovery of polymerase chain reaction in 1983 to the human genome sequencing in 2001, these tests have come into prominence as major tools for rapid diagnosis of infectious diseases, identification of microbes directly from clinical samples, and their genotyping for epidemiological studies. Identification of fastidious or uncultivable microbes, hitherto unrecognized microorganisms, and rapid identification of multidrug resistance have been made possible by refining many of these techniques. Several modifications are now available, which make them more accessible to a larger number of routine laboratories. The open platforms with easier approaches to their protocols will soon replace the conventional microbiological techniques by the amplification techniques. However, caution should be exercised while interpreting their results as the tests are highly sensitive and may give false positive results. This review attempts to provide an overall picture of some of the most popular amplification tests that have been successfully incorporated into a system of the laboratory diagnosis of infectious diseases.

**Key words:** Polymerase chain reaction, nucleic acid amplification techniques

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