

S004 Nucleic acid quantification and detection in the developing world

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Techniques using nucleic acid amplification (NAA) have not had the same impact on research and clinical diagnosis in the developing world when compared to that observed in the west. This is unsurprising when the costs and infrastructure required to perform NAA is considered. Despite this NAA is being used increasingly both in research and diagnosis in countries like Zambia and Tanzania. Scientific research is made possible through the support and development of the necessary laboratory infrastructure and the establishment of special transport for the reagents and samples. This has enabled world leading country relevant research to be performed by local scientists on subjects from rapid diagnosis of infectious diseases to measuring the RNA gene expression in an immune response. Concomitantly the challenge presented by the need for tests that are more appropriate for a resource poor setting has lead to a number of newer methodologies for nucleic acid detection, which can be tailored to perform in the field without the need for training in molecular biology. As NAA techniques become both more simple and cheaper their impact is likely to play an increasingly crucial role in developing world research and diagnosis.