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INTRODUCTION

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01st January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

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(57) Abstract :
TITLE: IN-SILICO SANDWICH PEPTIDE-APTAMER FOR RAPID DETECTION OF MYCOBACTERIUM TUBERCULOSIS ABSTRACT A method to detect a presence of pathogens in a peptide-based aptamer (100) for diagnosing mycobacterium tuberculosis comprising: embedding a microtiter plates with a thiolated capture aptamer (101);adding a patient's serum sample to the plate in case the sample has a Mycobacterium tuberculosis- antigenic surface protein binds to a capture peptide bind (102); adding a biotinylated detection aptamer to the microtiter plates along with a Streptavidin poly-HRP which has affinity in case the MTB has bound to capture aptamer (103); and adding a TMB where in case a color remains red the patient is devoid of MTB infection or in case color shifts to yellow on oxidation of a sulphuric acid or a hydrogen peroxide the patient is infected with MTB (104), wherein the peptide-based aptamer (100) detects the presence of pathogens where a patient with mycobacterium tuberculosis is diagnosed with a right medicine at the initial stage. A PGRS-17 is considered to be the most virulent surface protein for all the three Indian MTB strains and based on the interaction of the antibody, the designed aptamer is chosen to dock with PGRS-17. The interaction profile of the docked complex between the aptamer and surface protein is simulated for 100 ns and 500 ns (PGRS). The complex of PGRS-17 and capture peptide remained stable after simulation for 100 and 500 ns.

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