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22 May 2013 | News | By BioSpectrum Bureau

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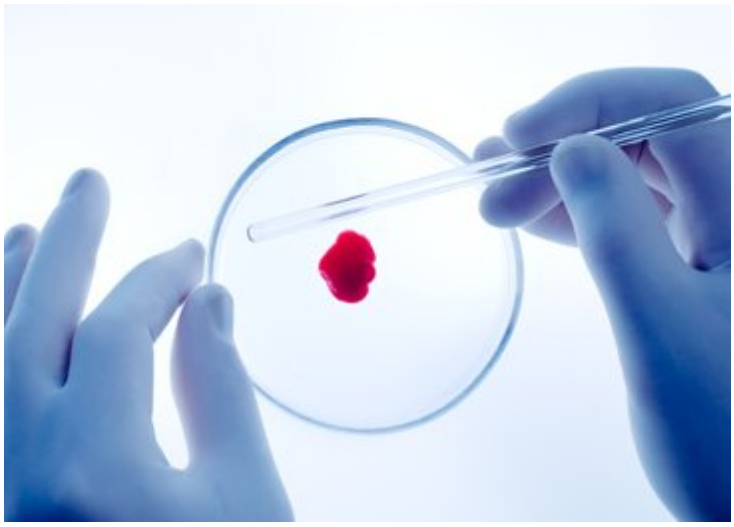

Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana has been granted a South African patent on an innovation in diagnosis of infectious diseases.

Microbial antigenic particles can bind specifically to antibodies of corresponding specificity present in the serum of infected man or animal to form a clump called agglutinate. This is the basis of diagnostic tests employed for several bacterial and viral diseases of man and animals. However, inability to detect small clumps can sometimes lead to false negative result and aggregates of antigen particles alone can often lead to false positive results.

The new diagnostic test called Super agglutination test provides an ingenious solution to the problem of false positive and false negative results common with the available diagnostic tests and kits employed for diagnosis of a large number of infectious diseases of animals and humans, including important zoonotic diseases like brucellosis (the rose bengal plate test) and salmonellosis, transmissible from animals to humans. A commercial kit for diagnosis of HIV infection currently being used worldwide is also based on the prevalent test procedure and can be improved by the new modifications.

The idea behind the breakthrough is that of Dr Hari Mohan Saxena, professor of immunology in the veterinary microbiology department of GADVASU. A research paper on the new test authored by Dr HM Saxena and Dr Paviter Kaur (assistant professor in the same department) has recently been published in the International Journal of Tropical Disease and Health.

In a comparative study undertaken by Dr Shubhada Chothe, a post-graduate student under the supervision of Dr Saxena, the new test was found to be superior to the conventional tests commonly used in screening cattle and buffaloes for brucellosis. It was found comparable to, and in some respects better than even some of the advanced laboratory based tests. The new test is simple, easy to perform, cheap and field applicable in rural or remote areas and can be applied to several bacterial and viral diseases.

The new method of diagnosis was recently selected among the "Top 100 innovations" in the India Innovation Growth Program 2013 jointly organized by the Department of Science and Technology, Ministry of Science and Technology, Government of India, Martin Lockheed, Federation of Indian Chambers of Commerce and Industry, Indo-US Science and Technology Forum, Stanford Graduate School of Business and IC2 Institute of Texas University, US, respectively. Applications for patent for this invention have already been filed in the US, Europe, China and India.