

New microsphere-based methods for detecting HIV antibodies

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Detection of HIV antibodies is used to diagnose HIV infection and monitor trials of experimental HIV/AIDS vaccines. New, more sensitive detection systems being developed use microspheres to capture HIV antibodies and can measure even small amounts of multiple antibodies at

one time. This novel multiplex immunoassay approach is described in an article in *BioResearch Open Access*.

The ability to detect very low levels of [HIV virus](#) is critical for early detection of HIV infection and to assess the effectiveness of an AIDS vaccine. Rebecca L.R. Powell and coauthors from the International AIDS Vaccine Initiative, Brooklyn, NY, compared the microsphere-based BioPlex® Suspension Array System to conventional ELISA antibody test methods for detecting simian immunodeficiency virus (SIV) in SIV-infected rhesus macaques.

The specificity of the two methods were comparable. The microsphere-based test system successfully detected four key [HIV antibodies](#) simultaneously in SIV-infected animals, compared to noninfected control animals. Furthermore, in blood samples that tested negative for one or more HIV antibody using an ELISA test, the microsphere assay was often able to detect the antibody in the sample.

The findings were presented in the article "A Multiplex Microsphere-Based Immunoassay Increases the Sensitivity of SIV-Specific Antibody Detection in Serum Samples and Mucosal Specimens Collected from [Rhesus Macaques](#) Infected with SIVmac239." (<http://online.liebertpub.com/doi/full/10.1089/biores.2013.0009>)

"This new method provides a significant improvement over standard ELISA techniques, allowing increased sensitivity for specific antibody detection—which is highly important for assessing [vaccine efficacy](#)," says *BioResearch Open Access* Editor Jane Taylor, PhD, MRC Centre for Regenerative Medicine, University of Edinburgh, Scotland.

More information: The article is available on the *BioResearch Open Access* website (<http://www.liebertpub.com/biores>).

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