

2<sup>nd</sup> International Conference on Vaccines and Vaccination

August 20-22, 2012 Hilton Chicago/Northbrook, USA

## Immunostimulational evaluation of Brucella abortus LPS and OMPs combined vaccine by serum bactericidal assay

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Some currently live vaccines of Brucella abortus are the causes of Abortion or brucellosis in Cows and other Livestocks, and also have a low Immunogenecity Rate of 40%. It was shown that, the Brucella's Detoxified LPS and it's OMPs have a Significant Immunity. We Evaluated the Immunity of the LPS and OMPs Combination by injecting them into Laboratory Animals to see whether a safer vaccine, with a higher Immunogenicity Rate can be Developed for man and livestock, or not. the B.abortus LPS was extracted by Modified westphal Hot Phenol method and Detoxified with NaOH 0.1 N, and it's OMPs were extracted by claussen Deoxycholate-Citrate method. 3 groups of 2 Rabbits were selected for Immunization, Which groups 1&2 were injected by 0.5 ml Serum Physiology with 25  $\mu$ g LPS or 50 $\mu$ g of the OMPs Associated with Incomplete Fruend's Adjuvant (IFA), respectively. Group 3 was injected by a Combination of 25  $\mu$ g LPS & 50 $\mu$ g OMPs with IFA, 3 times every 15 days, intradermally. 15 days after the last injection, blood samples were taken for Serum Bactericidal Assay (SBA). The Antibody titers of the SBA test for group 1 was 1/8, and for group 2, was 1/32 and group 3 was 1/64 maximum, respectively. An Acceptable Antibody Response has been seen by all groups. However, group 3 had shown the highest titer of antibody among other groups. Therefore, the LPS and the OMPs have a Synergisitic effect together and could be considered as a candidate for Brucella Vaccine.

Keyword: Lipopolysaccharide, Outer Membrane Protein, Brucella abortus vaccine.

## Biography

Mahdi Sadati is an American citizen, he achieved his Master's Degree in Microbiology recently, from the Islamic Azad University, Science & Research Campus, Kurdistan Branch, Sanandaj-Iran. He is under supervision of Dr. Hojat Ahmadi from the Bacterial Vaccines & Antigen Production of the Pasteur Institute of Iran, a well-known international research & development center and has scientific collaborations for various Bacterial Vaccines with this institute.

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