

## Immugenicity Evaluation of Complex Administration of HBsAg Antigen and outer Membrane Vesicle of Neisseria Meningitidis Serotype B in Animal Model

Peyman Mokarami\*<sup>1</sup>; Seyed Davar Siadat<sup>2</sup>; Seyed Fazlollah Mousavi<sup>3</sup>; Reza Shapoury<sup>1</sup>; Hadi Parsa<sup>1</sup>; Abolfazl Dashtbani<sup>2</sup>;

1-Department of Microbiology, School of Sciences, Zanjan Azad University, Zanjan, Iran

2-Department of Hepatitis and AIDS, Pasteur Institute of Iran, Iran

3-Department of Microbiology, Pasteur Institute of Iran, Iran

peyman.cassini@gmail.com

**Background & Objectives:** The promotion and development of subunit vaccines with adjuvants of microbial origin and a new perspective on the course are devoted to vaccine research. *Neisseria meningitidis* serotype B outer membrane vesicles in the same field as an adjuvant of microbial origin has a special place.

**Methods:** *Neisseria meningitidis* serotype B outer membrane vesicles by differential ultra centrifugation methods were extracted and then with a different group of HBsAg and in animal models was injected subcutaneously. The collected blood samples at specific periods and specific antibody titer against hepatitis B virus or HBsAg ELISA was determined.

**Results:** Considering that the complete and incomplete Freund adjuvant adjuvant such as backup and microbial adjuvant used (OMV) in all groups increased the antibody titer were HBsAg. The adjuvant role in enhancing the immune response is well understood. On the other hand, induced significant responses related to the incomplete adjuvant group OMV suggests the effectiveness of this adjuvant is bacterial OMV adjuvant in the immune response compared with complete adjuvant was higher but not statistically significant.

**Conclusion:** However, given the complete Freund adjuvant particular chemical has harmful effects and contraindications in humans. So if we can, even in animal models can induce a response against the adjuvant OMV is valuable and applicable to this can be shown to induce and can be applied as an adjuvant for hepatitis B vaccine be used.

**Keywords:** OMV; HBsAg; Hepatitis B Vaccine