Eman H Abdel-Rahman et al., J Clin Cell Immunol 2014, 5:5
http://dx.doi.org/10.4172/2155-9899.S1.017

OMICS Group Conferences
Accelerating Scientific Discovery

3rd International Conference and Exhibition on
Clinical & Cellular Immunology
September 29-October 01, 2014 DoubleTree by Hilton Baltimore-BWI Airport, USA

Induction of protective cellular and humoral responses against fasciolosis in rabbits using immunoaffinity fraction of *Fasciola gigantica* excretory secretory products

Eman H Abdel-Rahman[1], **Sanaa K A Abou-El-Douba**[2], **Soad E Hassan**[1], **Nagwa I Toaleb**[1] and **A G Hegazi**[1]
[1]National Research Center, Egypt
[2]University of Tabuk, KSA

Fasciolosis due to *Fasciola gigantica* or *F. hepatica* causes significant production losses in animals, as well as being a zoonotic disease of global importance. In an attempt to develop vaccine against fasciolosis in rabbits, an immunoaffinity fraction of *F. gigantica* excretory secretory products was isolated. The fraction possesses 87.67% of the initial antigenic activities in ES products with 2051.5 fold increase in specific activity compared to crude extract. It consists of two bands of molecular weight 27 KDa and 23.5 KDa as revealed by SDS-PAGE. Vaccination of rabbits twice with the fraction resulted in 85.7% reduction in worm burden. It is also resulted in high antibody IgG levels as proved by ELISA, were the highest IgG response was observed at two weeks post first immunization compared to non-vaccinated infected control rabbits. The level of IgG increased at four weeks post infection and remained stable to the end of the experiment. A significant expression of IL-4 and INF-gamma was observed in vaccinated rabbits starting one week until thirteen weeks post infection. The level of IL-4 was significantly higher than the level of INF-gamma throughout the experiment. Collectively, the current results suggest promising immunoprophylactic potentials of the immunoaffinity fraction of ES products of *F. gigantica* against fasciolosis in rabbits through induction of both cellular and humoral responses.

Emanhussein1@hotmail.com