



Comparative sensitivities of various tests for diagnosing early Schistosoma mansoni infection in mice

Mahmoud Mohamed Bahgat^{1,3*}, Abduallh M. Ibrahim², Amany Sayed Maghraby^{1,3}, Maha Rizk³, Rehab Abdel Megeed³

¹Therapeutical Chemistry Department, Immunology and Infectious Diseases group, Center of Excellence for Advanced Sciences, the National Research Center, Dokki, Cairo 12311, Egypt

²Zoology Department, Faculty of Science, Ain Shams University, Cairo, Egypt

³Therapeutical Chemistry Department, the National Research Center, Dokki, Cairo 12311, Egypt

Abstract:

We compared the diagnostic values of cercarial antigen preparation, cercarial secretions, soluble worm antigen preparation and worm vomit prepared from the parasite Schistosoma mansoni. Enzyme linked immunosorbant assay was used to detect IgG in plasma from Schistosoma mansoni infected mice. In parallel, specific primers for the parasite genome was used to detect S. mansoni DNA in plasma and urine from infected mice and hemolymph and tissues of infected Biomphalaria alexandrina snails by Polymerase chain reaction. The results showed that all the above diagnostic approaches enabled infection to be diagnosed as early as three days post mice exposure to parasite cercariae. Cercarial secretions and worm vomit represent new useful economic crude antigens for preliminary detection of parasite active transmission or response to therapy in an endemic setting. Also, it was found that the detection of Schistosoma mansoni DNA in urine from infected mice was the most sensitive and specific (although expensive) method for infection diagnosis than all the others.

Biography:

Mahmoud Mohamed Bahgat is working as a researcher in Therapeutically Chemistry Department, Immunology and Infectious Diseases group, Centre of Excellence for Advanced Sciences, the National Research Center, Dokki, Cairo . He has extended his valuable service for many years and has been a recipient of many award and grants.



Recent Publications:

- Mahmoud Mohamed Bahgat, et al;Prediction of the Vaccine-derived Poliovirus Outbreak Incidence: A Hybrid Machine Learning Approach; 2020
- Mahmoud Mohamed Bahgat, et al;Author Correction: Prediction of the Vaccine-derived Poliovirus Outbreak Incidence: A Hybrid Machine Learning Approach; 2020
- Mahmoud Mohamed Bahgat, et al;Vaccines in Developing Countries: Needs, Production Capacity and Immunization Strategies; 2020
- Mahmoud Mohamed Bahgat, et al;IMMUNE RE-SPONSES TO KILLED REASSORTED INFLUEN-ZA VIRUS SUPPLEMENTED WITH NATURAL ADJUVANTS; 2020
- Mahmoud Mohamed Bahgat, et al;H1N1 Infection Reduces Glucose Level in Human U937 Monocytes Culture; 2020

Webinar on Immunology | August 30, 2020 | Osaka, Japan

Citation: Mahmoud Mohamed Bahgat; Comparative sensitivities of various tests for diagnosing early Schistosoma mansoni infection in mice.; Applied Webinar on Clinical Microbiology; July 24, 2020; Paris, France