بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

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Immunological Studies on Salmonellae Isolated From Different Sources

A thesis submitted by

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For the PhD degree in Veterinary Medical Sciences (Microbiology)

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Abstract

Salmonella infection is a critical veterinary and medical problem world-wide and is a major issue in the food industry. Non-typhoidal *Salmonella* is known significantly as an important gastroenteritis-related pathogen. There is limited data specifically discussing the outer membrane proteins (OMPs), a distinguishable characteristic of Gram negative bacteria situated at host–bacterial interface and are significant for virulence, host immune responses and drug therapy targets. Enhanced diagnosis of live poultry colonized with *Salmonella* species is required to avoid food borne diseases. The widely available ELISA assays are currently based on O-antigens (LPS) mixture or *Salmonella* total cell lysate and are unorganized by cross-reaction. The present study is based on molecular characterization of OMPs among four *Salmonella* serovars (*S*.Typhimurium, *S.* Enteritidis, *S.* Kentucky and *S.* Anatum) using SDS-PAGE, the isolates were confirmed by culturing, biochemical, serological and molecular (real-time PCR targeting *invA* gene) identifications. The OMPs profiling showed more than 70 protein bands ranging in size from 208 kDa to below 16 kDa which were detected using Totallab 1D 12.2software. It is clear that all *Salmonella* strains had bands at 54-60 kDa, 45-53 kDa, 36-39 kDa and 26-31 kDa. Eleven strains had bands at 41-46 kDa and 33-35 kDa. Nine strains had bands at 61-69 kDa. Eight strains had bands at 135-145 kDa and 72-79 kDa. Seven strains had bands at 108-123 kDa and 83-91 kDa. In the Western blot analysis, the prepared hyper immune serum of each *Salmonella* serovars reacted with the outer membrane protein band 35kDa. The finding highlighted that the OMP 35kDa protein of studied salmonellae could be immune-response protein. An Indirect ELISA developed in this study holds promise as screening of poultry flocks for *Salmonella* infection.

Key words: *ELISA, Outer Membrane Proteins, Salmonella, SDS, Western immuno blotting.*

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I dedicate this work to

Spirit of my father

My Mother

My Husband

My brothers

My daughter and my son

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