

Abstracts of MD thesis supervised by



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103. Afaf Ahmed Abd El-Sayed Khedr
Application of new technology for preparation of fowl cholera vaccine
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Abstract

Fowl cholera is one of the important problems in poultry industry. Fowl cholera is caused by *P. multocida*. This disease has been poorly controlled and researchers are still looking for an effective vaccine. In the present study, *P. multocida* major outer protein gene (*omph*) reported to be strong immunogens. The gene (*omph*) encoding OmpH protein had been amplified by PCR technique from the whole genome of *P. multocida* CU strains and expressed in *E. coli* after cloned between *Bam*HI and *Sall* sites of pBK-CMV phagemid vector,. In SDS-PAGE analysis, the OmpH protein contains a major band with a molecular mass of about 37 kDa. Comparing this with the Western blot assay revealed that there is the faint band was able to react to the *P. multocida* positive chicken serum antibody. Chicken (6-8 weeks) were vaccinated twice 3weeks intervals by inoculation of 100 µg DNA. Another group of chicken was vaccinated with *P. multocida* bacterins. The results of IHA and ELISA test, revealed that the DNA vaccine gave pronounced protection. All vaccins reach to maximum mean titre at 3rd week post vaccination and at 2nd week post boosting.

The protection percentages after challenge were 87.5 and 90% in case of DNA and inactivated vaccine respectively. Finally, it was found plasmids encoding *omph* gene of *P. multocida* induce antibodies against *P. multocida* and gave a good protection
