SUMMARY AND CONCLUSION

Plasmids are widely distributed in nature, and most bacteria isolated from clinical material will contain at least one, and often as many as six, different plasmids. Bacterial plasmids contribute a wide variety of phenotypes to their bacterial host, including antibiotic resistance and virulence properties (Helmuth et al., 1985).

In this study, S. typhimurium strain was examined for the presence of plasmid by alkaline lysis method, and a large plasmid DNA could be detected and identified by electrophoresis where it lied high up in the gel which indicated it's large molecular weight.

Curing of this plasmid by high temperature (42°C for 18 hours) was done to form the mutant (plasmid -ve strain).

oral inoculation of serial dilutions of both wild strain (plasmid +ve) and mutant strain (plasmid -ve) in groups of BALB/c mice was the basis for testing the role of plasmid in the virulence of the strain by measuring the LD50.

It was found that the virulence of the wild strain reduced by 10^4 folds after curing of the plasmid.

These results ensure that the large DNA plasmid which was discovered in the S. typhimurium strain has a real role in the virulence of that strain .

The combined analysis of Pathogenesis and genetics associated with Salmonella virulence plasmids may identify new system of bacterial virulence and the genetic basis of this virulence in the future .