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*& Scientific Research*  
*AL-Muthanna University*  
*College of Science*



**Bacterial diagnosis of *Bifidobacterium* and some  
physiological effect on mice albino (Balb/c)**

**A thesis**  
**submitted to College of Science - Al - Muthanna**  
**University the Department of Biology, in partial**  
**fulfillment of the requirements for the degree of Master**  
**in Biology / Microbiology.**

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## Summary

The present study were involved isolation and characterization of *Bifidobacterium* from stool of healthy human. A total of 66 isolates were collected randomly from healthy human in AL-Najaf Al-Ashraf city during the period 1/2012– 4/2012 .

Identification of isolates has been carried out depending on their characters on selective media , biochemical tests and polymerase chain reaction technique (PCR) by using 16SrDNA gene . The results showed that all 66 isolates were belong to *Bifidobacterium spp*, while non of these isolate were belong to *Bifidobacterium infantis* according to the results of PCR.

The ability of all isolates to produce bacteriocin has been investigated results revealed that all isolates did not have the ability to produce bacteriocin .Furthermore, to explain the role of *Bifidobacterium spp*. in decreasing the infection of pathogenic bacteria , Experimental study has been carried out for this issue. *Salmonella typhimurium* were used as pathogenic bacteria that infect Balb/c mice which were used as a model of experimental study. The result revealed that mice which administered with *Bifidobacterium* and infected with *S. typhimurium* showed no important clinical signs of salmonellosis with no pathological of histo-pathological change when compared with mice that were infected with *Salmonella typhimurium* (Negative control) . Also , the result revealed that Gentamicin had little effect in the treatment of mice administered with *Bifidobacterium* and infected with *Salmonella typhimurium* , when compared with mice infected with *Salmonella typhimurium* only.