SUMMARY

In recent time, increasing fish production is very important to face the problem of protein deficiency. Fresh water fishes provide a major source of protein .

According to FAO., Fishes Esstatistics (1992), the total yeild of *Tilapia* (Oreochromis) in 1990 was 6.6 million metric tons, Egypt contribute about 250.000 metric tons .

Tilapia species is widely distributed in our fresh water specially in River Nile , Lakes and irrigation canals .

Pseudomonas aeruginosa as well as *Ps. fluoresences* are the major problems in aquaculture and cause bacterial hemorrhagic septicemia , that causes up to 90%,mortalities in population of fish. In the present study , an attempt was made to evaluate the effect of some natural products on the sensitivity of the isolated bacteria infected fishes and on some bacterial characteristics. The results obtained can be summarized as follows :

1- Clinical examination of the naturally infected fishes indicate the presence of hemorrhage on several parts of body surface (mouth , base of fins , abdomen , opercula and around the annal opening) , this is in addition to turbidity of the eyes and slight exophthalmia , roughness of the scales and sometimes scale losses .

2- The postmortem examination of the naturally infected fishes indicate the presence of congestion of the gills, hepatomegaly, splenomegaly,

distended gall bladder with bile, congestion in kidney, congestion hemorrhage in intestine and accumulation of bloody fluides in abdominal wall .

3- Bacterialogical examination of the infected fishes revealed the presence of four types of bacteria. Dependant on morphological, physiological and biochemical characterestics and by applying the AP120E system, the isolated bacteria were identified as *Ps.aeurginosa* , *Ps. fluoresences*, *Salmonella arizonae* and *Citrobacter baraakii* .

4- The two pathogenic Pseudomonas species were isolated from skin, liver, kindeny, spleen, intestine, gills and ascetic fluides, mean while the two non pathogenic species namely *Salmonella arizonae* and *Citrobacter baraakii* were isolated only from intestine, gills and skin .

5- Extraction of the dried parts of *Origanum vulgare* and the rhizomes of *Zingiber officinale* with water as well as selective organic solvents was carried out .

6- Preliminary antibacterial screening of each of the obtained extract as well as industerial chemical antibiotices against the isolated bacteria showed differences in the mean diameter of the inhibition zones. *Ps.aeurginosa*, attained the highest mean diameter of the inhibition zone followed by *Ps. fluoresences*, *Salmonella arizonae* and *Citrobacter baraakii* being, 35,25 & 35,25 & 30,18 & 25,16 for *Origanum vulgare* and *Zingiber officinale* respectively.

7- Two crystalline compounds were isolated from the aerial parts of *Origanum vulgare* and rhizomes of *Zingiber officinale.* The micro-analysis of the two compounds as well as UV, IR, NMR and Mass spectrum revealed that each of the obtained compound consists of C,H and oxygen with molecular formula C_{11} H_{18} O_9 and C_{21} H_{45} O_6 for the compound separated from *Origanum vulgare* and *Zingiber officinale* respectively .

8- Antibacterial sensitivity as well as minimum inhibatory concentrational (MIC) of the two compounds as compared with chloromphenecol were determined . The results inducate that the compound isolated from *Origanum vulgare* has the same MIC , value as chloromphenecol , while the compound separated from *Zingiber officinale* has a relatively higher MIC value and lower mean diameter of inhibition zones than the former indicating that the compound isolated from *Origanum vulgare* is more effective as an antibacterial agent than that of *Zingiber officinale.*