SUMMARY AND CONCLUSION

The present work based on the investigation of both mutagenic and lethal effect of MNNG and acriflavine on isolated wild strain of Pseudomonas pyocyanea. It was found that, with 5, and 10 mg MNNG/5 ml Pseudomonas pyocyanea suspension, complete lethality was obtained at all incubation periods of treatment. However, at a dose of 2.5 mg MNNG complete lethality was obtained only at 45 minutes incubation but at 15 and 3o minutes the survival percentage was equal to 0.93 and 0.05 respectively. Meanwhile at a dose of 1.25 mg MNNG, the survivals percentages were 4.13, 1.24 and 0.032 at 15, 30 and 45 minutes incubation respectively.

As regard to the mutagenic effect of MNNG at a dose of 1.25 mg, it was found that ten mutants were isolated after 15 minutes incubation and seven mutants after 30 minutes incubation with MNNG.

On the other hand with acriflavine complete lethality was obtained also at 5,7.5, 10 mg Ac, while at 2.5 mg

Ac 40 calonies were survived and gives percentage equal to 0.001. After examination of these survived colonies, one mutant was obtained.

In characterization of MNNG biochemical mutants it was noticed that arginine, histidine and thyronine requiring mutants were isolated after 15 and 30 minutes treatment with 1.25 mg MNNG with a higher percentage at 15 minutes for the histidine and arginine. Meanwhile tryptophan & cystine requiring mutants obtained only after 15 minutes treatment. On the other hand, isoleucine & aspargine requiring mutants obtained only after 30 minutes treatment.

Acriflavine mutant was found to be thyronine-isoleucine requiring mutant.

In comparative study changes, it was noticed that no changes in the morphological background. Some mutants loss the characteristic feature of exopigment production as cystine & histidine, other loss the ability to ferment

glucose as arginine and histidine requiring mutants. As regards to oxidase production histidine-requiring mutant became negative, on the other hand arginine became urease negative. Antibiotic sensitivity test shows that Nebcin was the effective antibiotic for the wild strain and all of its mutants, and mutants become resistant to some types of antibiotics after MNNG treatment.