



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

SOME BIOCHEMICAL EFFECTS OF LONG TERM
ADMINISTRATION OF JURAK SMOKE
CONDENSATE IN MICE

by

ADIL. R. E. AHMAD

SUPERVISED by

Dr. M. M. El-MERZABANI

IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF
THE COURSE BIOC 491

KING ABDUL-AZIZ UNIVERSITY
FACULTY OF SCEINCE
BIOCHEMICAL DEPARTMENT

1409 / 1988

C O N T E N T S

| | Page |
|--|------|
| Acknowledgment | i |
| Aim | ii |
| Summary | iii |
| 1- Introduction and review of literature | |
| 1.1. Introduction | 1 |
| 1.2. Smoking mortality | 2 |
| 1.3. Chemical constituents of cigarette smoke .. | 5 |
| 1.4. Lung cancer and other tobacco use | 7 |
| 1.5. Smoking of Jurak | 9 |
| 1.6. Analysis of Jurak paste | 9 |
| 1.7. Biochemical effects of Jurak smoke | 10 |
| 2- Material and methods | |
| 2.1. Preparation of Jurak smoke condensate | 12 |
| 2.2. Animals | 13 |
| 2.3. Administration of Jurak smoke | 13 |
| 2.4. Preparation of tissue homogenate | 15 |
| 2.5. Chemical determination of DNA,RNA | |
| Protein and Lipids | 15 |
| 2.5.1.Extraction of nucleic acid from | |
| tissue homogenats | 15 |

| | |
|--|----|
| 2.5.2. Determination of DNA | 16 |
| 2.5.3. Determination of RNA | 17 |
| 2.5.4. Protein estimation | 20 |
| 2.5.5. Quantitative estimation of Lipids | 21 |

3- Results

| | |
|--|----|
| 3.1. Effect of Jurak smoke condensate on the content of some biomolecule in mice liver and intestine | 25 |
| 3.1.1. DNA content | 25 |
| 3.1.2. RNA content | 28 |
| 3.1.3. Protein content | 28 |
| 3.1.4. Lipid content | 33 |

4- Discussion

| | |
|--|----|
| 4.1. Effect of Jurak smoke condensate on | 36 |
| mice liver and intestine DNA,RNA, Protein and total Lipids. | |

| | |
|------------------|----|
| References | 39 |
|------------------|----|

| | |
|----------------|--|
| Appendix | |
|----------------|--|

Arabic summary

ACKNOWLEDGEMENT

I am deeply indebted to Dr.S.M.Khoga chairman Biochemistry Department for his kind support and continuous encouragement.

I am also indebted to Dr.M.M.EL-Merzabani for suggesting and supervising the research project.

The endless efforts and help extended to me by all the family of the Biochemistry Department is highly appreciated.