MICROBIOLOGICAL STUDIES ON COLIFORM GROUP

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A thesis submitted partial fulfillment

Of

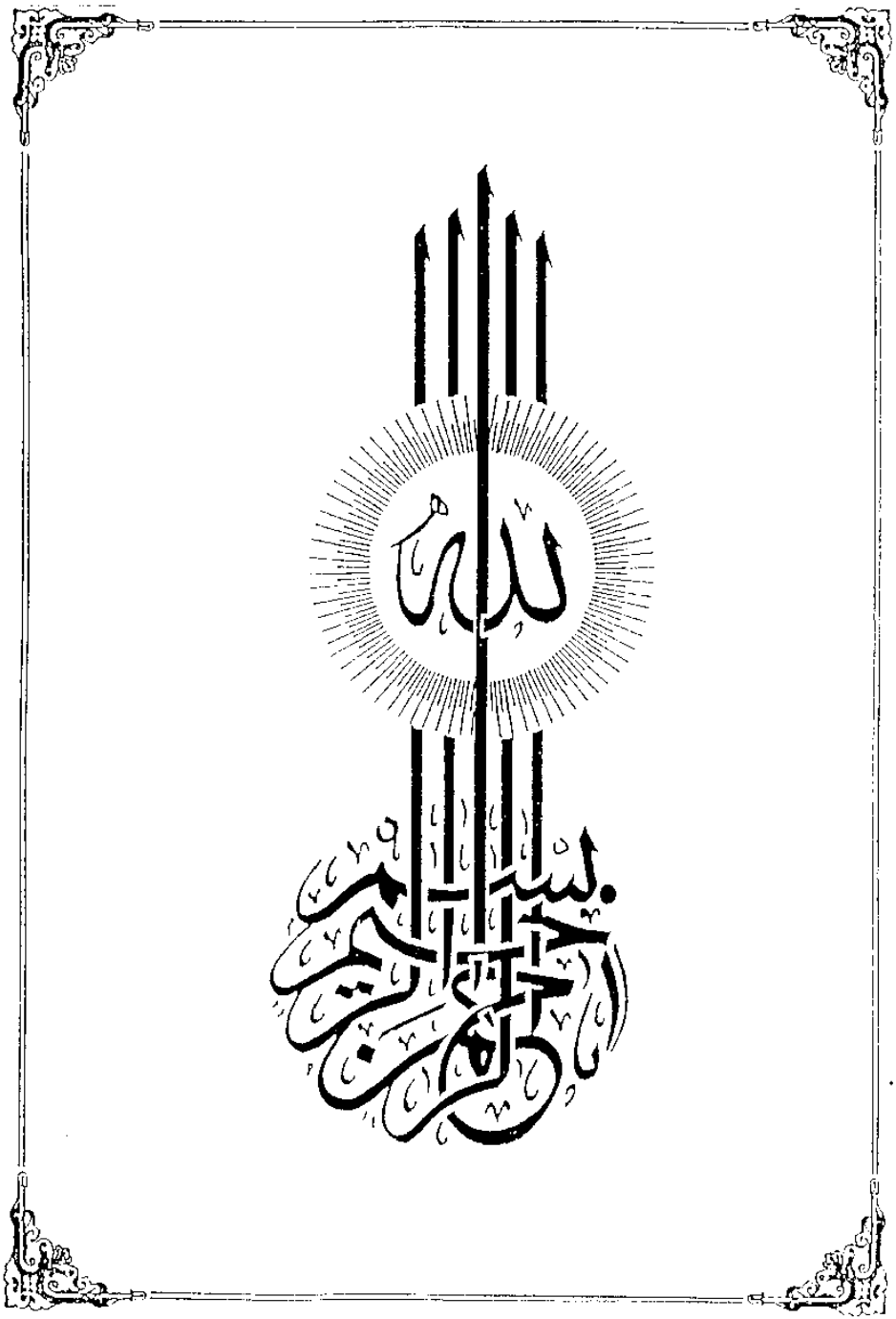
The requirements for the degree of

MASTER OF SCIENCE

In
Agriculture
(Agriculture Microbiology)

Department of Agric. Microbiology
Faculty of Agriculture
Ain Shams University

1999



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Date of examination : / /1999

ACKNOWLEDGMENT

Praise and thanks be to ALLAH, the most merciful for assisting and directing me to the right way

The author wishes greatly thanks to **Prof. Dr. Rawia F. Gamal,** Professor of Agric. Microbiology, Faculty of Agric., Ain Shams University for this direct supervision, suggesting the subject, continuous help and her advice during the preparation of this manuscript and completion of this thesis.

Many deeply grateful acknowledgment are extended to **Dr. M.A. Afifey**, Brigadier doctor in Public Health Microbiology, Head of the Laboratory Department, El-Gallaa Military, Hospital for armed forces families for his complete co-operation, advice and help. My sincere appreciation and deep gratitude are extended to **Dr. E. M. Ramadan,** Professor of Agric. Microbiology, Faculty of Agric., Ain Shams University for his advice and help during the period of his supervision.

Thanks to all staff members, the colleagues and workers in the Department of Agric. Microbiology. Finally, deepest gratitude for my family for their continous help and encouragement through this studies.

ABSTRACT

Manal Abd El-AAl Araby "Microbiological studies on coliform group", unpublished Master of Science, University of Ain Shams, Faculty of Agriculture, Department of Microbiology, 1999.

In order to know the microbiolocal studies of coliform group in urine and their interaction with other urinary pathogen strains, thirty four urine specimens were collected under sterile conditions from the male and female human suffering from urinary tract infection. The highest urinary tract infection in male and female groups were causative by the high incidence of *Escherichia coli* (1.35 ± 0.22) x 10^5 CFU/ml and (1.26± 0.14) x 10^5 CFU/ml respectively. The highest incidence of coliform group was noticed in group ranged <20-40 years, their incidence were decreased by increasing age. *E. coli* was the commonest cause of urinary tract infection followed by *Pseudomonas aeruginosa, Candida albicans, Enterobacter cloaceae, Proteus mirabilis, Klebsiella pneumonia pneumonia, Klebsiella pneumonia ozoenae* and *Staph. aureus*. Positive correlation in urine samples were noticed between albumin and each of age, turbidity, pH, and epithelial cells. Among fifteen antibiotics, Tarivid (OFX_{10}) gave high efficacy being 90% against 30 isolated urinary pathogen strains. The behaviour of urinary pathogen strains were studied on different media at different pH values. *E. coli* F_{25} gave high antagonistic activity against the growth of *En. cloacae* F_{17}, *Pr. mirabilis* M_4, *Ps. aeruginosa* F_{29}, *Staph. aureus* F_{18} and *C. albicans* F_{32} in decreasing order. The specific growth rates (μ) of the urinary pathogen strains (UPS) were higher in the presence of glucose. The incidence of some urinary pathogen strains (UPS) i.e *E. coli, Pr. mirabilis* and *En. cloacae* varied the chemical and physical properties of urine. The interaction between the urinary pathogen strains in

diabetic urine proved that *En. cloacae* was superior in suppression the growth of *E. coli* and *Candida albicans*.

Results of this study would reveal the dominant causative urinary pathogen strains, interaction between coliform group and other urinary pathogen strains (UPS).

Key Words: Urinary pathogens, urinary tract infections, UTI, Coliform group, Urinary pathogen strains (UPS), Antibiotics, growth parameters, Antagonism

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