SALIVARY HORMONES : ASSESSMENT AND PRACTICAL USE IN BIOLOGY AND MEDICINE

THESIS

Submitted to the Faculty of Science
Ain - Shams University , in Partial
Fulfillment for the Degree of
Master of Science
(Physiology)

BY

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1991

Salivary Hormones : Assessment and Practical Use in Biology and Medicine

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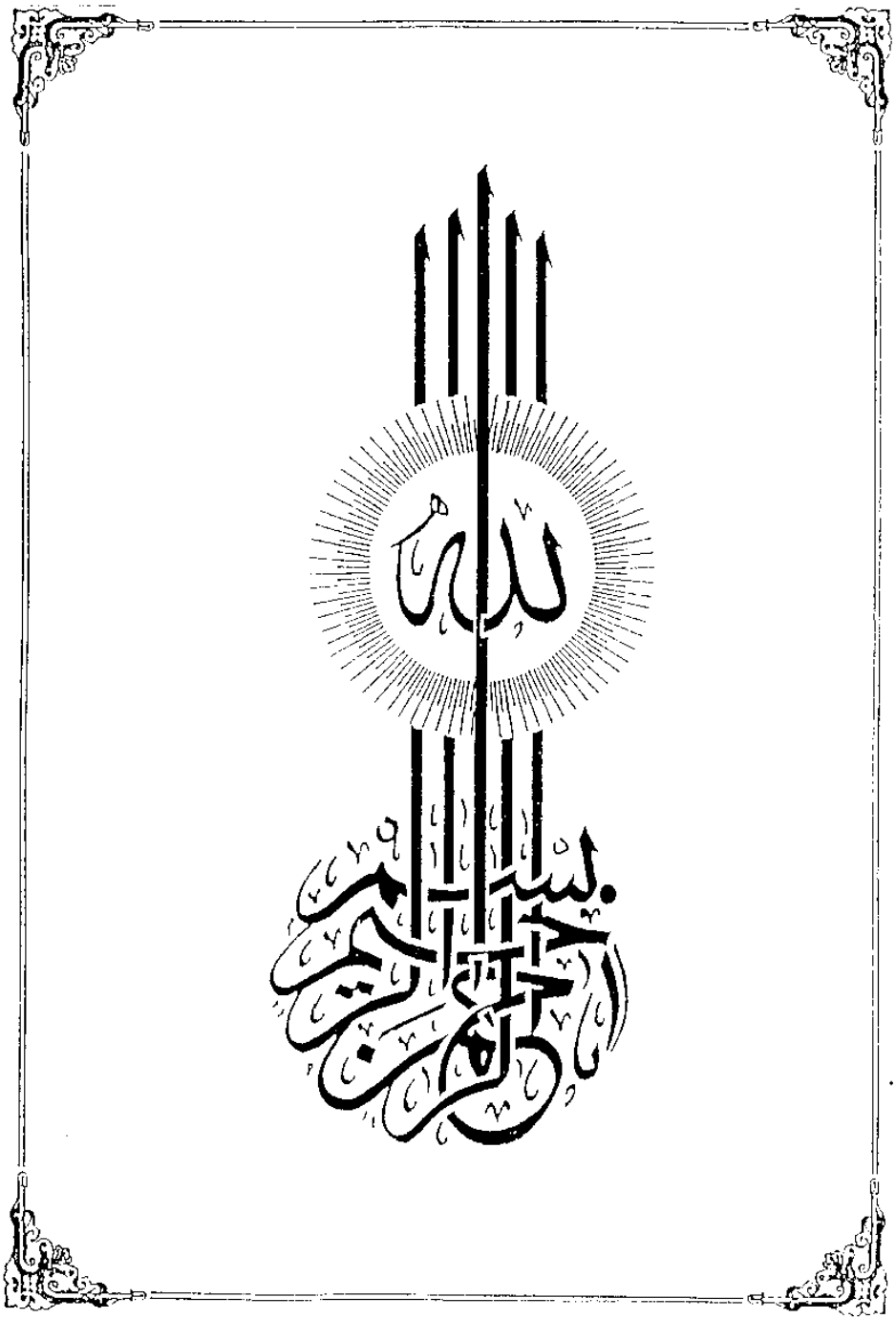

ACKNOWLEDGEMENTS

The author wishes to express her deep gratitude and appreciation to her thesis committee members, Professors M.E. Gabr and I.I.Ibrahim for their guidance, encouragements and constructive comments.

She is obliged to Professor Dr. Monir El Sayed Ahmed Gabr, Professor of Comparative Physiology and Radiobiology, Faculty of Science, Ain Shams University for his kind supervision, valuable guidance, fruitful suggestions, continuous efforts and careful review of the manuscript.

She is greatly indebted to Professor Dr. Ibrahim Issa Ibrahim, Chairman of Radiobiology Department, Atomic Energy Authority for providing the research facilities anf for many helpful comments and suggestions as well as his sincere help in the radioimmunoassay procedures, keen interest in the process of the work and helpful advice which made her accomplish this work in the present form.

She offers her deepest thanks to Dr. Laila Sadek Hanna, Lecturer, Radiobiology Department, Atomic Energy Authority for her keen interest and continuous effort and sincere help throughout the stages of this work. She would like, as well, to thank all those who shared this work in whatsoever way, hoping that it may be of some interest.

DEDICATION

TO THE MEMORY OF MY BELOVED FATHER

Hoping that this work may be of any compensation for all the sacrifices, efforts, care and love you have always given to me.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION AND AIM OF THE WORK

Chapter I

INTRODUCTION AND AIM OF WORK

Determination of hormones in peripheral blood are of utmost importance for accurate diagnosis and proper management of various endocrinopathies. During the last two decades, tremendous progress has been achieved in the era of the methodology of hormonal assessment due to the development of the so called radioimmunoassay techniques (RIA). These techniques are characterized by extreme specificity, sensitivity and precision. The use of such techniques with those criteria had resulted in better understanding and the clarification of some unresolved aspects in the field of endocrinology in general and reproductive endocrinology, in particular.

Although the practical application of RIA techniques for the estimation of hormones and other compounds in peripheral blood is widening, yet the use of other biological fluids replacing in many instances peripberal blood is required, where serial blood sampling are required for accurate diagnosis and proper management such as:

- For accurate assessment of ovarian function, serial determination of gonadal steroid hormones in

the peripheral circulation are required (Goldzeieher et al., 1976). The advantage of serial RIA determination of progesterone in serum or plasma as a reliable index for monitoring ovulation and corpus luteum function is already well documented (Landgren et al., 1980). The need for serial determinations is also evident for the purposes of accurate diagnosis of ovulatory disorders and monitoring the treatment where samples collected at weekly or fortnightly intervals should be used for the estimation of FSH, LH and PML in blood along with basal body temperature and endometrial biopsy.

- In case of female infertility, critical evaluation of gonodal dysfunction can be determined by means of data derived from daily blood sampling (Cooke, 1976), however, such sampling requires expensive clinical support and is not applicable to routine investigation of women attending infertility clinics.

- Studies on the efficacy and safety of fertility regulating agents on populations in developing countries can sometimes be hindered by lack of