

ROLE OF ENZYMES IN SEMEN

THESIS

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

❦ اللَّهُ مُلْكُ السَّمَوَاتِ

وَالْأَرْضِ يَخْلُقُ مَا يَشَاءُ يَهَبُ لِمَنْ يَشَاءُ إِنَّا

وَهَبُ لِمَنْ يَشَاءُ الذُّكُورَ ❦ أَوْ يُزَوِّجُهُمْ ذُكْرَانًا

وَأُنثَىٰ وَيَجْعَلُ مَنْ يَشَاءُ عَقِيمًا إِنَّهُ عَلِيمٌ قَدِيرٌ ❦

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ARABIC SUMMARY

INTRODUCTION

Semen is a fluid within which lie the secrets of our creation. The study of the biochemistry of this secretion remains to be of utmost importance. Such a study might help in grasping a little knowledge of the amazingly, well organized biochemical reactions carried out in this fluid and might enlighten the way for a biological explanation of the process of fertilization.

Studies on the enzymatic status of semen are still fragmentary, specialized and limited to few enzymes. The fertilizing capacity of a semen sample is usually estimated from the concentration of spermatozoa and their motility and morphology. There are however some samples which while having normal spermiograms are infertile. It would thus appear that the classical biological criteria of fertility are sometimes insufficient, and might usefully be complemented by some biochemical criteria.

One should remember that, in all species including man, during mating, the seminal plasma mixes rapidly with the vaginal and cervical secretions, and the physiological approach to understanding its function, would be the study of this final mixture, sorrowfully enough this has not been done.

Biochemical markers found in seminal plasma could be used to investigate abnormalities, in the secretory function of the adnexal sex glands, or abnormalities in the male reproductive tract.

The purpose of our work is to examine the enzymes in semen in both normal and subfertile individuals and to evaluate their diagnostic importance in relation to the clinical status and the morphology of semen.

ENZYMES

I.O.O. ENZYMES

I.O.O. ENZYMES

I.I.O. Introduction:

The major task of metabolism is to provide energy for the maintenance of life. This is accomplished by degrading chemical compounds of relatively high potential energy to products of low potential energy. The energy evolved in such processes is collected, stored, and utilized by the cell for those functions, the totality of which we call "life". Certain limitations are placed upon the chemical reactions of the body, owing to the necessity of preserving a "physiological" environment in the tissues. Thus, the pH cannot vary far from neutrality. This remarkable state of affairs is explained by the presence in the body a group of powerful catalysts the enzymes (Cantarow and Schepartz, 1967).

Enzyme are defined as being thermolabile, biochemical catalysts possessing a definite organic constitution, formed by living tissue, and in their action they are independent of the presence of these tissues. Enzymes possess a high