STUDY OF IMMUNE STATUS OF FEMALES IN THE CHILD BEARING PERIOD AGAINST RUBELLA AND CYTOMEGALO VIRUSES

THESIS

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Master Degree

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By

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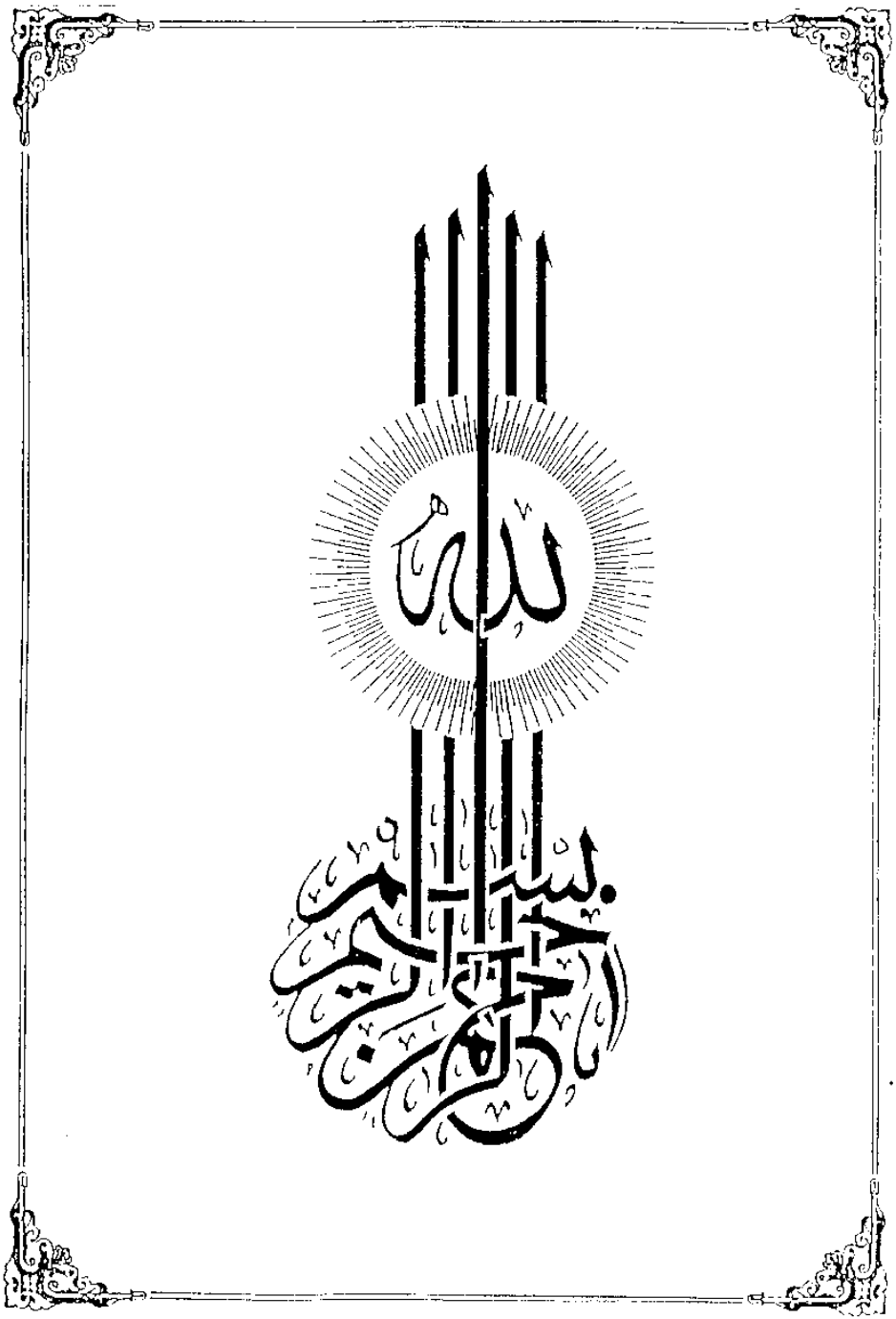

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INTRODUCTION

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The most common agents causing congenital infections and hence congenital malformations are rubella, cytomegalovirus and herpes simplex 2 virus ***(Azab et al., 1992).***

Primary infection of the mother with cytomegalovirus during the first trimester usually produces severe congenital malformations of the fetus e.g., microcephaly, deafness...etc. compared to less severe malformations if the infection occurs at the second trimester. Third trimesteric infections produce no congenital malformations of the fetus ***(Randle et al., 1986).***

Cytomegalovirus is the most common perinatal viral infection occurring in about 1% of all live births in the United States ***(Wreghitt et al., 1986).***

Newborns need protection against cytomegalovirus congenital disease and maternal immunization may provide such protection because newborns who acquire cytomegalovirus transplacentally are protected against congenital disease if their mothers had antibodies to human cytomegalovirus before pregnancy ***(Fowler et al., 1992).***

Rubella virus is another common agent causing congenital malformations. Rubella infection during the first trimester of pregnancy is the most critical as it results in congenital anomalies in the newborn in about 50% of cases whereas infection in the second trimester results in defects in 20% of cases and incidence decreases to 4% if rubella infection occurred in the third trimester ***(Hanshow et al., 1989).***

One attack of rubella confers a life long immunity, so by vaccination of females in the child bearing period before pregnancy we can avoid congenital malformations of the newborn ***(Martin et al., 1989).***

AIM OF THE WORK

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The aim of this work was to:

- Determine the immune status of the females in the childbearing period against *Cytomegalo* and *Rubella* viruses.
- Develop proper vaccination scheme against *Cytomegalo* and *Rubella* viruses to protect the newborns against the severe congenita malformations resulting from maternal infection during pregnancy.