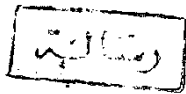


**Correlation between protein patterns in
serum and tears of normal and some
infectious eye diseases**

Thesis

**Submitted in partial fulfillment
for the master degree of science in Biochemistry**



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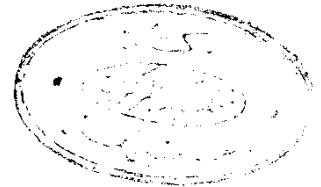
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CONTENTS

	Page
PREFACE	1
CHAPTERT I :	
1. LITERATURE REVIEW.	
1.1. THE EYE.	3
1.2. OCULAR SURFACE DEFENSE MECHANISM.	4
1.3. SOURCE AND FUNCTION OF TEARS.	9
1.4. COMPOSITION , PHYSICAL AND CHEMICAL PROPERTIES OF TEARS.	14
1.5. BIOCHEMICAL CHANGES ASSOCIATING CONJUNCTIVITIS.	28
1.5.1. I. LACTO FERRIN.	28
1.5.2. II . IMMUNOGLOBULINS.	36
1.5.3. III . LYSOZYME.	44
1.5.4. IV. PREALBUMIN.	48
1.5.5. V. COMPLEMENT.	49
1.6. CLINICAL NOTES ON CONJUNCTIVAL DISEASES.	50
1.6.1. BACTERIAL CONJUNCTIVITIS.	52
1. 6. 2. SPRING CATARRH VERNAL CONJUNCTIVITIS.	56
1. 6. 3. ACUTE OR SUBACUTE ALLERGIC CATARRHAL CONJUNCTIVITIS.	57
1. 6. 4. CHLAMYDIAL CONJUNCTIVITIS (TRACHOMA).	58

CHAPTER II :

2. MATERIALS AND METHODS.	66
2. 1. PRODUCTION OF ANTIBODIES AGAINST LACTOFERRIN.	69
2. 2. ESTIMATION OF ANITIBODIES TITER IN ANTISERUM.	70
2. 3. DETERMINATION OF ANTIBODY TITER BY ROCKET IMMUNOELECTROPHORESIS.	71
2. 4. DEVELOPMENT OF SINGLE RADIAL IMMUNODIFFUSION TECHNIQUE FOR ESTIMATION OF LACTOFERRIN.	72
2. 5. DETERMINATION OF BLOOD HAEMOGLOBIN CONCENTERATION.	79
2. 6. DETERMINATION OF SERUM IRON.	79
2. 7. DETERMINATION OF TOTAL IRON BINDING CAPACITY.	82
2. 8. DETERMINATION OF SERUM TOTAL PROTEIN.	83
2. 9. DETERMINATION OF TOTAL PROTEIN IN TEARS.	84
2. 10. ELECTROPHORETIC SEPARATION OF PROTEINS FOR BOTH SERUM AND TEARS.	87
2. 11. COLLECTION OF SAMPLES FOR BACTERIAL IDENTIFICATION.	91

CHAPTER III :

3. RESULT

3. 1. BLOOD HAEMOGLOBIN, SERUM IRON AND TOTAL IRON BINDING CAPACITY.	96
3. 2. THE LEVEL OF SERUM TRANSFERRIN AND TEAR LACTOFERRIN.	97
3. 3. THE LEVEL OF IgG AND IgA IN SERUM AND TEARS.	105
3. 4. SERUM TOTAL PROTEIN AND ELECTROPHORETICALLY SEPARATED FRACTIONS.	114
3. 5. TEAR TOTAL PROTEIN AND ELECTROPHORETICALLY SEPARATED FRACTIONS.....	132

CHAPTER . IV :

DISCUSSION	142
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CHAPTER V :

SUMMARY.	155
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REFRENCES	161
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ARABIC SUMMARY.

Preface

Tear fluid contains a high concentration of proteins . The proteins in tears may be distinguished into 3 main types namely albumin , γ -globulins and lysozyme. It is established that the antimicrobial activity of tears is in the γ -globulins and lysozyme fractions (Vaughan and Asbury, 1980) .

Lactoferrin which was discovered in bovine milk has been detected in the neutrophils and in tears . This protein molecule is similar to transferrin present in blood and can bind reversibly to two atoms of iron (Selinger, et al, 1979) . The capacity of lactoferrin or transferrin to bind iron makes it important as a factor that inhibit proliferation of several bacteria especially Gram negative bacteria due to removal of iron from the medium (Reiter, 1983) .

In addition to this function , lactoferrin was also reported to protect tissues from oxidative damage by inhibition of lipid peroxidation (Gutteridge et al, 1981) . Several other functions were reported to be performed by lactoferrin dealing with the immunity of the eye , it functions as a natural killer cells (Nishiya and Horwitz, 1982) , it suppresses the in vitro primary antibody response (Duncan and Mc Arthur , 1981) , exhibits anticomplementary effects (Kijlstra and Jeurissen, 1982) and stimulates the leucocytes (Kijlstra and Broersma, 1984) .

It is thus clear that lactoferrin has both bacteriostatic and bacteriocidal properties and may interact with specific antibody to produce an antimicrobial system more powerful than either lactoferrin or specific antibody alone .

On the other hand blood transferrin which is similar to lactoferrin also performs several of these functions performed by lactoferrin . It is known that

