CONTENTS

1. GENERAL INTRODUCTION .. .. .. .. 1
2. REVIEW OF LITERATURE .. .. .. .. 8
   A. General Remarks .. .. .. .. 11
   B. Hormonal Influence on the Prostate .. .. 16
   C. Anatomy of the Prostate .. .. .. 32
   D. Histochemistry of the Normal and Diseased Prostate .. .. .. 64
   E. Influence of Altered Hormonal States on the Prostate Histochemistry .. .. .. 83
3. MATERIALS AND METHODS .. .. .. .. 100
4. PRESENT STUDIES .. .. .. .. 108
   Preface .. .. .. .. 109

Chapter I

Effect of Altered Hormonal States on the Histochemical Distribution of Proteins in the Rat Prostatic Complex (Ventral and Dorsolateral) .. .. .. .. 111
   Summary .. .. .. .. 112
   Introduction .. .. .. .. 114
   Results .. .. .. .. 116
   Discussion .. .. .. .. 149
   Explanation of Figures .. .. .. 156

Chapter II

Effect of Altered Hormonal States on the Histochemical Distribution of Nucleic Acids in the Rat Prostatic Complex (Ventral and Dorsolateral) .. .. .. 158
Chapter III

SECTION A

Effect of Altered Hormonal States on the Histochemical Distribution of Alkaline and Acid Phosphatase Activity in the Rat Prostatic Complex (Ventral and Dorsolateral)

Summary
Introduction
Results
Discussion
Explanation of Figures

SECTION B

Effect of Altered Hormonal States on the Histochemical Distribution of Lipase Activity in the Rat Prostatic Complex (Ventral and Dorsolateral)
SECTION C

Effect of Altered Hormonal States on the Histochemical Distribution of Succinic Dehydrogenase Activity in the Rat Prostatic Complex (Ventral and Dorsolateral) 252

Summary 253
Introduction 254
Results 256
Discussion 267
Explanation of Figures 274

Chapter IV

SECTION A

Effect of Altered Hormonal States on the Histochemical Distribution of Polysaccharides in the Rat Prostatic Complex (Ventral and Dorsolateral) 276

Summary 277
Introduction 278
Results 280
Discussion 293
Explanation of Figures 298

SECTION B

Effect of Altered Hormonal States on the Mast Cells of Rat Prostatic Complex (Ventral and Dorsolateral) 300

Summary 301
Introduction 302
Results 303
Chapter V

Effect of Altered Hormonal States on the Histochemical Distribution of Lipids in the Rat Prostatic Complex (Ventral and Dorsolateral) 319

Summary 320
Introduction 321
Results 322
Discussion 333
Explanation of Figures 336

5. GENERAL SUMMARY AND REFLECTIONS 338

6. REFERENCES 349