

## CONTENTS

Introduction .....	1
Dedication .....	3

### CHAPTER I

#### Platelet Physiology 5

Daniel Deykin, M.D., Chief, Medical Service;  
Professor of Medicine, Boston University and  
Tufts University School of Medicine, Boston, Massachusetts

<i>Normal platelet function</i> , 5	<i>Hereditary disorders of platelet</i>
<i>Reaction to collagen</i> , 5	<i>function</i> , 8
<i>Release reaction</i> , 6	<i>Bleeding time</i> , 9
<i>Role of ADP</i> , 6	<i>Aspirin challenge test</i> , 9
<i>Role of prostaglandins</i> , 6	<i>Aggregation</i> , 9
<i>Factor VIII protein</i> , 7	<i>Factor VIII assay</i> , 10
<i>von Willebrand's disease</i> , 7	<i>Principal categories of hereditary</i>
<i>"Platelet factor 3,"</i> 8	<i>disorders</i> , 10

### CHAPTER II

#### Interaction of Soluble Procoagulants in Blood Clotting 15

Oscar D. Ratnoff, M.D., Professor of Medicine,  
Case Western Reserve University School of Medicine  
and University Hospitals of Cleveland; Career Investigator  
of the American Heart Association; Cleveland, Ohio

<i>Intrinsic pathway</i> , 15	<i>Vitamin K-dependent factors</i> , 22
<i>"Cascade" sequence</i> , 15	<i>Clinical implications</i> , 22
<i>Thrombin formation</i> , 17	<i>Partial thromboplastin time</i> , 22
<i>"Platelet factor 3,"</i> 19	<i>Prothrombin time</i> , 22
<i>Extrinsic pathway</i> , 19	<i>Factor assays</i> , 23
<i>Antithrombin III</i> , 20	<i>Thrombin time</i> , 24
<i>Formation of fibrin</i> , 20	

### CHAPTER III

#### Protease Inhibitors of Blood Coagulation 25

Robert D. Rosenberg, M.D., Ph.D., Assistant Professor of Medicine,  
Harvard Medical School; Chief of Thrombosis and Hemostasis Unit,  
Beth Israel Hospital and the  
Sidney Farber Cancer Center; Boston, Massachusetts

<i>Introduction</i> , 25	<i>Antithrombin-heparin cofactor</i> , 34
<i>Alpha-2 macroglobulin</i> , 27	<i>Historical perspective</i> , 34
<i>Historical perspective</i> , 27	<i>Purification and properties</i> , 35
<i>Purification and structure</i> , 27	<i>Heparin mechanisms</i> , 37
<i>Inhibitory spectrum</i> , 28	<i>Coagulation serine protease</i>
<i>Enzyme interaction</i> , 29	<i>interaction</i> , 39
<i>Biologic role</i> , 32	<i>Biologic role</i> , 42

## CHAPTER IV

### The Control of Hemorrhage 51

A. Marengo-Rowe, M.B., D.C.P., M.R.C. Path, Director of Special Hematology  
Baylor University Medical Center, Dallas, Texas

*Introduction, 51*

*Approach to the patient, 51*

*Laboratory tests, 52*

*Sample collection, 53*

*Test compendium—Table 2, 54*

*Diagnosis, 55*

*Management principles, 57*

*Platelets, 58*

*Frozen plasma, 61*

*Cryoprecipitate, 63*

*Factor concentrates, 64*

*Summary, 65*