This publication primarily focuses on the macro- and micro- rheological behavior of blood and its formed elements, on interactions between the formed elements and blood vessel walls, and on the microvascular aspects of hemodynamics. Since many aspects of hemorheology and hemodynamics are affected by disease or clinical states, these effects are discussed as are hyperviscosity syndromes, therapy for disturbed blood rheology, and methods in hemorheology and hemodynamics. Sections of the Handbook include History of Hemorheology; Hemorheology, covering basic aspects, blood composition, blood rheology, cell mechanics, pathophysiology, methods and comparative studies; Hemodynamics, covering basic principles, microcirculation, in vivo effects, endothelium and methods; and Clinical Aspects of Hemorheology, covering hyperviscosity, clinical significance and treatment. The goal is to foster greater interchange between workers in the fields so as to promote collaborative efforts and, hopefully, improved health.

In selecting topics for this handbook the editors have attempted to provide a general overview of both basic science and clinical hemorheology and hemodynamics. Hemorheology and hemodynamics are closely related, the former dealing with all aspects of the flow and interactions of the individual blood cells mostly studied in vitro, the latter with the in vivo relationships among vessel architecture, driving pressure, flow rate and shear stress. The linkage between the in vitro and in vivo research described in the book will be of interest to both basic science and clinical investigators.

The editors of the handbook have each been active in the fields of bio- and hemorheology for many years, and have published extensively. They have successfully achieved their objective to publish a well-written and well-edited handbook that will be valuable for researchers and students in the field.
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