

## PREFACE

This book is dedicated to Dr. Bradford Berk who along with many of our colleagues made seminal contributions that promoted the importance of the field of “Hemodynamics & Mechanobiology in Vascular Endothelium”. Their contribution has paved the way for the post-genomic era of research in the cardiovascular and mechanobiology community.

The central theme of this book focuses on mechanosignal transduction and vascular disease in response to the dynamics of blood flow. A cadre of leading investigators in this field has contributed to the state-of-the-art topics that have enriched our knowledge with relevance to vascular therapeutics and interventions. The authors have intended to provide an overview, followed by an in-depth analysis as a basis for the emerging vascular fields, including but not limited to redox signaling and inflammatory responses, tissue engineering and regenerative medicine, genomics and bioinformatics, as well as micro- and nanotechnology.

The reader should be able to embark on a vascular journey from molecular and cellular basis to organs and organisms in the context of fluid shear stress and atherosclerosis. The editors welcome reader’s critiques that will be critical to enhance the future edition. Your invaluable contribution as the student, academician, clinician, and/or researcher from pharmaceutical and biotechnology industries would further build the foundation for the new generation of vascular biologists and biomedical engineers. Finally, we are grateful for how much our research has been enriched by our ties with our mentors, teachers, colleagues, students, and patients.

Tzung K. Hsiai  
Brett R. Blackman  
Hanjoong Jo  
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