Preface

The vasculature of the central nervous system performs the vital tasks of perfusing the brain and spinal cord, and maintaining barrier functions that ensure a proper environment for neuronal activity. Additionally, the vasculature participates in other key functions, including the production of vasoconstricting and vasodilating substances, the provision of trophic support to the neuronal and glial parenchyma, the response to inflammatory stimuli, and the regulation of tissue remodeling and repair after injury. Hence, a rigorous understanding of vascular mechanisms is essential for the development of therapeutic strategies for brain and spinal cord trauma.

It is now an opportune time to incorporate the study of the vasculature in the field of CNS trauma science. Our hope in putting together this book is to provide a reference for clinicians and researchers who are undertaking further explorations of the CNS vasculature within the complex pathophysiology of injury and disease. We dedicate this book to investigators who are studying ways to treat patients and to improve the lives of survivors of brain and spinal cord trauma. And most importantly, we thank the many patients and families whose efforts to reclaim their lives after CNS trauma provide the inspiration for our work.

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