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The Hippocampus in Clinical Neuroscience

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Preface

This publication is the result of many years of clinical and academic interest in the hippocampus, perhaps the most intriguing structure of the human brain. Damage to this structure, one of the oldest parts of the brain integrated in highly complex networks, causes symptoms ranging from transient dysfunction accompanied by tiny lesions to severely debilitating cognitive disorders with marked tissue loss. Besides the motivation to provide information on clinical function and dysfunction of the hippocampus from a neurologist’s point of view, several other chapters arose from discussions with expert colleagues from other neuroscience disciplines participating in our collaborative research effort dedicated to ‘learning, memory, and brain plasticity’.

Although overlaps between the different fields of hippocampus research, by their very nature, cannot be avoided completely, the editors allocated the individual contributions to three general sections. Section 1 of the book summarizes the current knowledge regarding structure and physiology of the hippocampus, and establishes the ties to basic neuroscience. Section 2 deals with the function of the hippocampus in humans and its assessment. Finally, Section 3 reviews common pathological conditions affecting the hippocampus with a chapter devoted to the effects of stress on hippocampus-mediated memory function and its relevance for selected disorders.

We wish to thank the editorial staff at Karger Publishers for their continuous guidance and advice, and all of the contributing authors for the time and effort they have invested in this project. We hope the reader will enjoy the book as much as we did preparing it, and will find it instructional and useful.

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