

# Chapter 1

## Introduction

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**Abstract** The depth and breadth of knowledge regarding cerebellar functions in health and disease continue to grow exponentially. Most of the currently available books dealing with the cerebellum and its disorders are highly specialized, usually written for neurologists with a particular interest in the cerebellar disorders. The four-volume *Handbook of the Cerebellum and Cerebellar Disorders* (Springer 2013) is the most comprehensive monograph on the cerebellum published to date covering both fundamental and clinical aspects. As valuable a resource as this has proven to be, however, the treatise is too extensive for students, and not practical as a brief, authoritative overview of the subject. The editors therefore concluded that there is a compelling need to distill the vast amount of basic science and clinical information in the four-volume text into a clear and concise précis of the work accessible to clinicians and students. Hence, this work, *Essentials of the Handbook of the Cerebellum and Cerebellar Disorders*.

**Keywords** Essentials • Cerebellum • Cerebellar disorders • Ataxia • Students

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D.L. Gruol et al. (eds.), *Essentials of Cerebellum and Cerebellar Disorders*,  
DOI 10.1007/978-3-319-24551-5\_1

The depth and breadth of knowledge regarding cerebellar functions in health and disease continue to grow exponentially. Most of the currently available books dealing with the cerebellum and its disorders are highly specialized, usually written for neurologists with a particular interest in the cerebellar disorders. The four-volume *Handbook of the Cerebellum and Cerebellar Disorders* (Springer 2013) is the most comprehensive monograph on the cerebellum published to date on fundamental and clinical aspects. As valuable a resource as this has proven to be, however, the treatise is too extensive for students, and not practical as a brief, authoritative overview of the subject. The editors therefore concluded that there is a compelling need to distill the vast amount of basic science and clinical information in the four-volume text into a clear and concise précis of the work accessible to clinicians and students. Hence, this work, *Essentials of the Handbook of the Cerebellum and Cerebellar Disorders*.

The editors of *Essentials* have selected what we believe to be major topics with direct scientific and clinical implications for understanding cerebellar anatomy, physiology, clinical neurology, and management of cerebellar disorders. With this monograph, we hope to foster a deeper understanding of the most important aspects of the complex phenomena that characterize cerebellar neurology. In so doing, we hope to encourage students to further explore its many facets, ranging from ataxiology (the study of cerebellar motor disorders) to the cognitive neuroscience of the cerebellum and its connections.

The pocket format of the book makes it readily available for consultation. The chapters are arranged in eleven sections covering fundamental, translational and clinical aspects of the cerebellum and cerebellar disorders. The length of each chapter is approximately four printed pages, enabling the reader to review the necessary information rapidly and efficiently. Critical references provided at the end of each chapter can be consulted for more in-depth information.

The editors are grateful for the outstanding contributions to this work by the renowned international panel of experts in some of the premier clinical centers, universities, and research centers in the USA, Europe, and Asia. We hope that this concise volume achieves its purpose of stimulating students, trainees, and practitioners to enhance their knowledge of the cerebellum and its disorders, and promote further clinical and scientific exploration in the field.