PRIMER ON

CEREBROVASCULAR DISEASES

SECOND EDITION

edited by

LOUIS R. CAPLAN • JOSÉ BILLER • MEGAN C. LEARY
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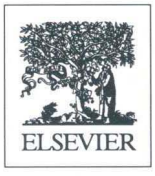

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Cover: Cover design by Lauren J. Lo. Images kindly provided by Dr. José Biller, Dr. Thomas P. Davis, Dr. Joe Herndon, Dr. Dong-Eog Kim, Ms. Caroline Sodja (NRC), and Dr. Danica Stanimirovic. Left panel: immunostaining of ZO-1 (red) and DAPI (blue) in cerebral endothelial cell cultures; Middle panel: angiogram of arteriovenous malformation; Right panel: infarct frequency map derived from a database of 400 diffusion-weighted MRI scans from patients with acute middle cerebral artery strokes; Background: IBA-positive (red) peri-vascular microglia and MHCII-positive (green) cerebral endothelium.

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Introduction

Twenty years have passed since the first edition of *Primer on Cerebrovascular Diseases* was published.[1] The book sought to reduce the growing gap in the cerebrovascular field between physicians and surgeons who actively treated patients and researchers who worked in basic and clinical research. The term "translational medicine" was first being discussed at that time. All agreed that the best way to ensure progress was intimate communication and cooperation between clinicians and researchers. Clinicians needed to have some sense about what was happening and forthcoming from the laboratory and researchers needed to know what were the most important targets to help patient care at the bedside and in the clinic. Dr. Arthur Kornberg, who received the Nobel Prize in Physiology and Medicine in 1959 for his work on DNA, commented in his autobiography[2] that the single most important year in his training was his clinical internship. That exposure provided targets for needed advancement for his entire career, which was spent in various basic research laboratories.

During the past two decades since publication of the first edition, the clinical-research gap has probably widened. Clinicians and surgeons have become even more specialized, each dealing with more restricted situations, technology, compounds, and conditions. Basic researchers have had to become even more competitive for grants. Many work in very specialized areas. I have been at Princeton Cerebrovascular Disease Conference meetings in which all attendees are instructed to sit through all sessions—researchers listening to clinical topics and clinicians taking in research discussions. My sense was that these did not work well. Clinical and research topics were too focused; researchers lacked the clinical background to place the discussions into perspective and clinicians were at sea in the biochemical and technical details of the basic discussions. A few days was too short a time for the education needed.

This second edition of the Primer is aimed directly at providing a clinical-research interface, a repository of information that is basic, concise, simply written, and easily understood for individuals who are unfamiliar with a particular topic. Unlike a short meeting, a volume (hard copy or e-book) can serve as a frequently perused source of information that can bridge a large educational–informational gap. This edition has expanded with more editors and more topics. Editors have carefully selected authors who are working within their topics. They are instructed to make their chapters concise and easily understood. The volume has been thoroughly edited to ensure simplicity and completeness. I hope that it will help reduce the gap and aid progress in translational research and in the clinical care of future stroke patients.

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1. Caplan LR, Siesjo BK, Weir B, Welch KM , Reis DJ. *Primer on Cerebrovascular Diseases*, San Diego, Academic press, 1997
2. Kornberg A. *For the love of enzymes. The odyssey of a biochemist*. Harvard U press, Cambridge, 1989

PRIMER ON CEREBROVASCULAR DISEASES

SECOND EDITION

Contents