

Handbook of
Neurochemistry

SECOND EDITION

Volume 2
**EXPERIMENTAL
NEUROCHEMISTRY**

Edited by
Abel Lajtha

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Center for Neurochemistry
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Center for Neurochemistry, Ward's Island, New York

- Volume 1 • CHEMICAL AND CELLULAR ARCHITECTURE*
- Volume 2 • EXPERIMENTAL NEUROCHEMISTRY*
- Volume 3 • METABOLISM IN THE NERVOUS SYSTEM*
- Volume 4 • ENZYMES IN THE NERVOUS SYSTEM*
- Volume 5 • METABOLIC TURNOVER IN THE NERVOUS SYSTEM*
- Volume 6 • RECEPTORS IN THE NERVOUS SYSTEM*
- Volume 7 • STRUCTURAL ELEMENTS OF THE NERVOUS SYSTEM*
- Volume 8 • NEUROCHEMICAL SYSTEMS*
- Volume 9 • ALTERATIONS OF METABOLITES IN THE NERVOUS SYSTEM*
- Volume 10 • PATHOLOGICAL NEUROCHEMISTRY*

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Preface

The second volume of the *Handbook* does not parallel any volume of the first edition; it is one more sign, or reflection, of the expansion of the field. By emphasizing the experimental approach, it illustrates the tools that have recently become available for investigating the nervous system. Also, perhaps even more than other volumes, it illustrates the multidisciplinary nature of the field, requiring multidisciplinary methodology. It is now recognized that the availability of methodology is often the rate-limiting determinant of studies and that improvements or innovations in instrumentation can open up new avenues. A new improved method, although opening up new possibilities and being crucial to making advances, is only a tool whose use will determine its usefulness. If we do not recognize its possibilities, its use will be limited; if we do not recognize its limitations, it will mislead us. It is the possibilities and limitations and the results obtained that are illustrated here.

As with the other volumes of this *Handbook*, many more chapters could be included, and each of the present chapters could have been expanded severalfold. Some topics that could be included in this volume will be dealt with in later chapters; some are better discussed in texts of other disciplines. The purpose was not to include so much detail that further literature searches would not be necessary—it was to evaluate the approaches, the limitations, the possibilities, and then to indicate where further details can be found. The fact that the details of most of the approaches described here were not available when the first edition was written is but another illustration of the rapid and exciting development of neurochemistry.

Abel Lajtha

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