

Bipolar Disorders

Basic Mechanisms and Therapeutic Implications

Third Edition

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Edited by

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Preface

Over the past two decades, fostered by developments in the clinical neurosciences, considerable progress has occurred in the understanding of brain function and abnormalities involved in neuropsychiatric disorders. Despite this growing area of research, available information on the basic brain mechanisms of bipolar and unipolar mood disorders is still limited. In recent years, this important gap has been increasingly addressed. The enormous public health importance of bipolar disorder has been recognized and research initiatives have begun to elucidate its pathophysiology. These research initiatives will likely lead to breakthroughs in the understanding of causation and foster the development of novel treatments.

Of particular relevance and interest are developments in molecular biology and neuropsychopharmacology which provide new ways to study neuronal function and cell signaling. A focus on mechanisms of neuronal resilience and death, as well as inflammatory mechanisms and oxidative stress, has contributed exciting new hypotheses in recent years that are now being tested. Developments in neuroimaging have made possible the *in vivo* study of brain systems and pathways, as well as both neurotransmission and metabolic processes. Important tools from the field of genetics have become available and are being applied to further the understanding of mechanisms involved in bipolar disorder and intermediate phenotypes that may be linked to it. These novel research avenues have provided new dimensions in exploring the biological mechanisms involved in causation. These advances are gradually being translated into new approaches for the treatment of these severe mental illnesses.

To fill the gap in information related to basic mechanisms possibly involved and to try to build the bridge from basic research developments to benefits to our patients at the bedside, we are happy to present the third edition of our textbook, *Bipolar Disorders – Basic Mechanisms and Therapeutic Implications*. There is considerable research that has accumulated since our second issue was published in 2007 and we felt that 2016 would be a very appropriate time for our third issue to come out. This volume presents important contributions by the leaders in the particular areas of research pertinent to bipolar disorder. We have included chapters on genetics, neuroimaging, neuropsychopharmacology, oxidative stress and neuronal resilience, inflammatory mechanisms, psychosocial factors, childhood onset and late-life bipolar disorder, and several other important topics. The potential therapeutic implications of new research are emphasized throughout the book.

We are honored to have had the collaboration of this outstanding group of leading researchers and believe this volume will be a valuable resource for academicians and practitioners in the field of Psychiatry. It is presented as a complete and accessible reference to the most updated information on the biological basis and emerging therapeutics of bipolar disorder. It should be useful as supplemental reading for graduate and postgraduate courses on the neurobiology of mental illness. Mental health practitioners will find it useful as an updated source with the most recent research progress in this field. We hope you will share our excitement with these new developments which bring continued hope for more effective treatments to best help our patients and their families.

Jair C. Soares, M.D. and Allan H. Young, M.D.