Epilepsy

Stanislaw J. Czuczwar, MD, PHD Editor







Edited by **STANISLAW J. CZUCZWAR, MD, PHD** Department of Pathophysiology, Medical University of Lublin, Lublin, Poland



Epilepsy

ISBN: 978-0-6453320-4-9 DOI: https://doi.org/10.36255/exon-publications-epilepsy

Edited by

Stanislaw J. Czuczwar, MD, PHD, Department of Pathophysiology, Medical University of Lublin, Lublin, Poland

Published by

Exon Publications, Brisbane, Australia

Copyright© 2022 Exon Publications

Copyright of individual chapters belongs to the respective authors. The authors grant unrestricted publishing and distribution rights to the publisher. The electronic versions of the chapters are published under Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0). https://creativecommons.org/ licenses/by-nc/4.0/. Users are allowed to share and adapt the chapters for any non-commercial purposes as long as the authors and the publisher are explicitly identified and properly acknowledged as the original source. The book in its entirety is subject to copyright by the publisher. The reproduction, modification, replication and display of the book in its entirety, in any form, by anyone, for commercial purposes are strictly prohibited without the written consent of the publisher.

Notice to the user

The views and opinions expressed in this book are believed to be accurate at the time of publication. The publisher, editors or authors cannot be held responsible or liable for any errors, omissions or consequences arising from the use of the information contained in this book. The publisher makes no warranty, implicit or explicit, with respect to the contents of this book, or its use.

First Published in April 2022 Printed in Australia

CONTENTS

Foreword		vii
Preface		ix
List	of Contributors	xi
1	Pathophysiological Mechanisms Underlying the Etiologies of Seizures and Epilepsy Alejandro Vera-González	1
2	The Anatomical Basis of Seizures Pradip Chauhan, Shalom Elsy Philip, Girish Chauhan, Simmi Mehra	15
3	Epilepsy Genetics: Advancements in the Field and Impact on Clinical Practice Senyene E. Hunter, Elizabeth Jalazo, Thomas R. Felton, Erin L. Heinzen, Yael Shiloh-Malawsky	25
4	Overlap Between Epilepsy and Neurodevelopmental Disorders: Insights from Clinical and Genetic Studies Hitomi Shimizu, Yoshiro Morimoto, Naoki Yamamoto, Tatsuyuki Tayama, Hiroki Ozawa, Akira Imamura	41
5	Modern Treatment of Status Epilepticus in Adults Kjell Heuser, Ketil Berg Olsen, Line Bédos Ulvin, Leif Gjerstad, Erik Taubøll	55
6	Canonical Transient Receptor Potential Channels as Novel Targets for Antiepileptic Drugs Fang Zheng	79

vi Contents

7	GABA_A Receptor Variants in Epilepsy Xu Fu, Ya-Juan Wang, Jing-Qiong Kang, Ting-Wei Mu	95
8	The Role of Milk Nutrition and Ketogenic Diet in Epileptic Disorders Maria Giovanna Ciliberti, Antonella Santillo, Rita Polito, Giovanni Messina, Marzia Albenzio	119
Index		129

Doi: https://doi.org/10.36255/exon-publications-epilepsy.Frontmatter