



NEUROBIOLOGICAL BASIS OF MIGRAINE

EDITED BY

**TURGAY DALKARA AND
MICHAEL A. MOSKOWITZ**

Neurobiological Basis of Migraine

Edited by

Turgay Dalkara, MD, PhD

Hacettepe University
Ankara
Turkey

Michael A. Moskowitz, MD

Harvard Medical School
Massachusetts General Hospital
Boston
Massachusetts
USA

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List of Contributors

Isamu Aiba

Developmental Neurogenetics
Laboratory
Department of Neurology
Baylor College of Medicine
Houston
Texas
USA

Messoud Ashina

Danish Headache Center, Department of
Neurology
Rigshospitalet, Glostrup
Faculty of Health and Medical Sciences
University of Copenhagen
Copenhagen
Denmark

Christopher W. Atcherley

Department of Collaborative Research
and Neurology
Mayo Clinic
Scottsdale
Arizona
USA

Cenk Ayata

Stroke Service and Neuroscience
Intensive Care Unit
Department of Neurology
Massachusetts General Hospital
Harvard Medical School
Boston
Massachusetts
USA

David A. Boas

Martinos Center for Biomedical Imaging
MGH
Harvard Medical School
Charlestown
Massachusetts
USA

David Borsook

P.A.I.N. Group
Department of Anesthesiology
Perioperative & Pain Medicine
Boston Children's Hospital, Harvard
Medical School
Boston
Massachusetts
USA

K.C. Brennan

Headache Physiology Laboratory
Departments of Neurology
University of Utah
Utah
USA

Rami Burstein

Department of Anesthesia
Critical Care and Pain Medicine
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston
Massachusetts
USA

Shih-Pin Chen

Department of Neurology
Taipei Veterans General Hospital
Taipei
Taiwan

F. Michael Cutrer

Department of Neurology
Mayo Clinic
Rochester
Minnesota
USA

Markus A. Dahlem

Department of Physics
Humboldt University of Berlin
Berlin
Germany

Turgay Dalkara

Department of Neurology
Faculty of Medicine and Institute of
Neurological Sciences and Psychiatry
Hacettepe University
Ankara
Turkey

Milena De Felice

School of Clinical Dentistry
University of Sheffield
South Yorkshire
United Kingdom

Anna Devor

Departments of Neurosciences and
Radiology
UCSD
La Jolla
California
USA

David W. Dodick

Mayo Clinic Hospital
Phoenix
Arizona
USA

Gregory Dussor

Behavioral and Brain Sciences
BSB-14, The University of Texas at Dallas
Richardson
Texas
USA

Mária Dux

Department of Physiology
University of Szeged
Szeged
Hungary

Else Eising

Department of Human Genetics
Leiden University Medical Center
Leiden
The Netherlands

Michel D. Ferrari

Department of Neurology
Leiden University Medical Center
Leiden
The Netherlands

G.F. Gebhart

Center for Pain Research
Department of Anesthesiology
School of Medicine
University of Pittsburgh
Pittsburgh
Pennsylvania
USA

Peter J. Goadsby

Headache Group – NIHR-Wellcome
Trust
King's Clinical Research Facility
King's College London
London
UK

Michael S. Gold

Center for Pain Research
Department of Neurobiology
School of Medicine
University of Pittsburgh
Pittsburgh
Pennsylvania
USA

Jakob Møller Hansen

Danish Headache Center
Department of Neurology
Rigshospitalet
Glostrup
Faculty of Health and Medical Sciences
University of Copenhagen
Copenhagen
Denmark

Richard J. Hargreaves

Biogen
Cambridge
Massachusetts
USA

Duncan J. Hodkinson

P.A.I.N. Group
Department of Anesthesiology
Perioperative & Pain Medicine
Boston Children's Hospital, Harvard
Medical School
Boston
Massachusetts
USA

Kıvılcım Kılıç

Department of Neurosciences
UCSD
La Jolla
California
USA

Jonghwan Lee

Martinos Center for Biomedical Imaging
MGH
Harvard Medical School
Charlestown
Massachusetts
USA

Dan Levy

Department of Anesthesia
Critical Care and Pain Medicine
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston
Massachusetts
USA

Agustin Melo-Carrillo

Department of Anesthesia
Critical Care and Pain Medicine
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston
Massachusetts
USA

Karl Messlinger

Institute of Physiology and
Pathophysiology
Friedrich-Alexander University
Erlangen-Nürnberg
Erlangen
Germany

Michael A. Moskowitz

Departments of Radiology and Neurology
Massachusetts General Hospital
Harvard Medical School
Boston
Massachusetts
USA

Kelsey Nation

Department of Pharmacology
University of Arizona
Tucson
Arizona
USA

Jeffrey Noebels

Developmental Neurogenetics
Laboratory
Department of Neurology
Baylor College of Medicine
Houston
Texas
USA

Rodrigo Nosedá

Department of Anesthesia
Critical Care and Pain Medicine
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston
Massachusetts
USA

Michael H. Ossipov

Department of Pharmacology
University of Arizona
Tucson
Arizona
USA

Daniela Pietrobon

Department of Biomedical Sciences
University of Padova

and

CNR Institute of Neuroscience
Padova
Italy

Frank Porreca

Department of Collaborative Research
and Neurology
Mayo Clinic
Scottsdale
Arizona
USA

and

Department of Pharmacology
University of Arizona
Tucson
Arizona
USA

Andrew F. Russo

Neuroscience Program
Department of Molecular Physiology and
Biophysics
VA Center for the Prevention and
Treatment of Visual Loss
University of Iowa
Iowa City
Iowa
USA

Payam A. Saisan

Department of Neurosciences
UCSD
La Jolla
California
USA

Sava Sakadžić

Martinos Center for Biomedical Imaging
MGH
Harvard Medical School
Charlestown
Massachusetts
USA

Aaron Schain

Department of Anesthesia
Critical Care and Pain Medicine
Beth Israel Deaconess Medical Center,
Harvard Medical School
Boston
Massachusetts
USA

Ryan Smith

Department of Molecular Physiology and
Biophysics
VA Center for the Prevention and
Treatment of Visual Loss
Iowa City
Iowa
USA

Levi P. Sowers

Department of Molecular Physiology and
Biophysics
VA Center for the Prevention and
Treatment of Visual Loss
University of Iowa
Iowa City
Iowa
USA

Andrew M. Strassman

Department of Anesthesia
Critical Care and Pain Medicine
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston
Massachusetts
USA

Gisela M. Terwindt

Department of Neurology
Leiden University Medical Center
Leiden
The Netherlands

Jeremy Theriot

Headache Physiology Laboratory
Department of Neurology
University of Utah
Salt Lake City
Utah
USA

Peifang Tian

Department of Physics
John Carroll University
University Heights
Ohio
USA

Else A. Tolner

Department of Neurology
Leiden University Medical Center
Leiden
The Netherlands

Annie E. Tye

Neuroscience Program
University of Iowa
Iowa City
Iowa
USA

Hana Uhlirova

Department of Radiology
UCSD
La Jolla
California
USA

Arn M.J.M. van den Maagdenberg

Department of Human Genetics
Leiden University Medical Center
Leiden
The Netherlands

Michele Viana

Headache Science Center
C. Mondino National Neurological
Institute
Pavia
Italy

Luis Villanueva

Institut National de la Santé et de la
Recherche Médicale/Université Paris
Descartes
Centre de Psychiatrie et Neurosciences
Paris
France

Sergei A. Vinogradov

Departments of Biochemistry and
Biophysics and Chemistry
University of Pennsylvania
Philadelphia
Pennsylvania
USA

Sophie L. Wilcox

P.A.I.N. Group
Department of Anesthesiology
Perioperative & Pain Medicine
Boston Children's Hospital
Harvard Medical School
Boston
Massachusetts
USA

Jennifer Y. Xie

Department of Pharmacology
University of Arizona
Tucson
Arizona
USA

Mohammad Abbas Yaseen

Martinos Center for Biomedical Imaging
MGH
Harvard Medical School
Charlestown
Massachusetts
USA

Foreword

When I studied psychology between 1969 and 1975, I took a course on psychosomatic diseases. The professor presented migraine as a typical example of disease which was clearly a psychological problem without a biological basis. There were compelling arguments, like migraine attacks triggered by stress and a strong co-morbidity with anxiety disorders. How much has changed since these times?

When I started to see migraine patients as a young neurology resident, it became immediately clear to me that migraine was clearly more than a psychological problem. Why had the psychologists neglected the results from twin studies? The phenotype of migraine attacks was extremely homogeneous across patients.

Now is the time to summarize the progress in the neurobiological basis of migraine we have made in the last 40 years. The editors have recruited the best scientists and clinicians in the field of migraine research for a display of amazing research results. We are now able to assign all phases of a migraine attack, from prodromes, aura, headache, autonomic symptoms, photo- and phonophobia and postdromes, to anatomical structures, modifications in the pain transmission and modulation system and higher cortical functions.

A major challenge is still the treatment of acute migraine attacks and migraine prevention. Triptans were developed as attack treatment, under the assumption that they would constrict dilated vessels in the dura and the base of the brain. Later, it turned out that they have major effects on pain transmission in the trigemino-thalamic pathways. We desperately need more effective and better tolerated drugs for migraine prevention. The migraine-preventive properties of available medications like beta-blockers, flunarizine, valproic acid, topiramate, amitriptyline and onabotulinum-toxin A were detected “by chance” when these drugs were used for other indications in patients with migraine. CGRP was identified as a major player in the pathophysiology of migraine. At present, four antibodies against CGRP or the CGRP receptor are under development for migraine prevention. This is a good example of translational research, where observations from pathophysiological studies have resulted in new treatment approaches.

Who should read this book? Anyone who is interested in migraine as a disease and in migraine patients. I hope that many young researchers and clinicians will become motivated to move into the very promising field of headache research.

Hans-Christoph Diener
Senior Professor of Clinical Neurosciences
Department of Neurology
University Duisburg-Essen
Essen Germany
E-Mail: hans.diener@uk-essen.de

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