Original Papers

65 Late Onset Glycogen Storage Disease Type II: Pitfalls in the Diagnosis
Papadimas, G.K.; Spengos, K.; Papadopoulos, C.; Manta, P. (Athens)

69 Somatotopic Location of Corticospinal Tracts in the Internal Capsule with MR Tractography
Lee, D.H. (Gangwondo); Kwon, Y.H. (Daegu); Hwang, Y.T. (Gangneung); Kim, J.H.; Park, J.W. (Gyeongbuk)

74 Which Cortical Area is Related to the Development of Dysphagia after Stroke? A Single Photon Emission Computed Tomography Study Using Novel Analytic Methods
Mommseni, R.; Abo, M.; Kakuda, W.; Uruja, G. (Tokyo)

81 Clinical Study of Twenty-One Patients with Pure Midbrain Infarction

107 Characteristics of Muscle Fibers in Rats with Limb Movements during Sleep after Spinal Cord Injury
Esteves, A.M.; Squarcini, C.F.R.; Lancellotti, C.L.P.; Tufik, S.; de Mello, M.T. (São Paulo)

116 Adapted Timed Up and Go: A Rapid Clinical Test to Assess Gait and Cognition in Multiple Sclerosis
Allali, G.; Laidet, M.; Assal, F. (Geneva); Beauchet, O. (Angers); Chofflon, M.; Armand, S.; Lalive, P.H. (Geneva)

Neurologic Image

90 Excessive Vomiting
Renard, D.; Jeanjean, L.; Labauge, P. (Nîmes)

Neurology and Art

92 Pirandello’s Analogy: A Source for a Better Understanding of the Social Impact of Stroke
van Haaren, M.A.C. (Leiden); Lawrence, M. (Glasgow); Goossens, P.H. (Leiden); van den Bossche, B. (Leiden/Leuven); Wermer, M.J.H.; Kaptein, A.A. (Leiden)

Historical Note

98 A Case of Charcotian grande hystérie: Observation by Julien Offray de La Mettrie in 1738
Walusinski, O. (Brux)

Review

121 Serum Levels of Matrix Metalloproteinases: Implications in Clinical Neurology
Romi, F.; Helgeland, G.; Gilhus, N.E. (Bergen)
Where do we come from? Is our destiny determined by the force of nature and certainly not devoid of beauty. The result is a collection of extraordinary essays on key issues in the natural sciences. It will appeal not only to scientists, but also to all inquisitive minds, regardless of educational and professional background.

Jean-Martin Charcot, the iconic 19th century French scientist, is still regarded today as the most famous and celebrated neurologist in the world. Despite the development of strong independent schools of thought in the USA, UK and Germany, his 'Salpêtrière' school has become symbolic of the early development and rise of neurological practices and research. This book presents a fresh look at the origins of nervous system medicine, and at the fate of Charcot's school and pupils. Special emphasis is placed upon the parallels and interactions between developments in neurology and mental medicine, clearly demonstrating that Charcot is not only the father of clinical neurology, but also wielded enormous influence upon the field we would come to know as psychiatry.

Providing new insights into the life and work of Charcot and his pupils, this book will make fascinating reading for neurologists, psychiatrists, physicians and historians.

Jean-Pierre Walusinski, O.; Parent, M.; Parent, A.

Birth of Modern Psychiatry and the Death of Alienism: the Legacy of Jean-Martin Charcot

Bogousslavsky, J.; Moulin, T.

Roger Tatu, L.; Poirier, J.; Parent, M.; Parent, A.

The Chair of Mental and Brain Diseases: the Succession of Charcot

Bogousslavsky, J.

Jules Joseph Déjerine versus Pierre Marie: The Chair of Mental and Brain Diseases

Bogousslavsky, J.

The Succession of Charcot: the Chair of Mental and Brain Diseases

Bogousslavsky, J.

Julien Bogousslavsky

Editors: Bogousslavsky, J.; Moulin, T.

Contents

Foreword: Bennett, R.J.M.

Preface: Bogousslavsky, J.

Birth of Modern Psychiatry and the Death of Alienism: the Legacy of Jean-Martin Charcot

Bogousslavsky, J.; Moulin, T.

Jean-Martin Charcot’s House Officers at La Salpêtrière Hospital: Walusinski, O.

The Chair of Mental and Brain Diseases: Charcot’s Pupils – Benjamin Ball, Alex Jaffey and Gilbert Bulet: Tiberghien, D.

Edouard Brissaud, Fulgence Raymond and the Succession of Charcot: Moulin, T.

Great Careers: Cornil, Bouchard, Bourneville and Proust: Parent, M.; Parent, A.

Paul Sollier: The First Clinical Neurologist: Walusinski, O.

Jean-Martin Charcot, the iconic 19th century French scientist, is still regarded today as the most famous and celebrated neurologist in the world. Despite the development of strong independent schools of thought in the USA, UK and Germany, his ‘Salpêtrière’ school has become symbolic of the early development and rise of neurological practices and research. This book presents a fresh look at the origins of nervous system medicine, and at the fate of Charcot’s school and pupils. Special emphasis is placed upon the parallels and interactions between developments in neurology and mental medicine, clearly demonstrating that Charcot is not only the father of clinical neurology, but also wielded enormous influence upon the field we would come to know as psychiatry.

Providing new insights into the life and work of Charcot and his pupils, this book will make fascinating reading for neurologists, psychiatrists, physicians and historians.

Jean-Pierre Walusinski, O.; Parent, M.; Parent, A.

Birth of Modern Psychiatry and the Death of Alienism: the Legacy of Jean-Martin Charcot

Bogousslavsky, J.; Moulin, T.

Roger Tatu, L.; Poirier, J.; Parent, M.; Parent, A.

The Chair of Mental and Brain Diseases: the Succession of Charcot

Bogousslavsky, J.

Jules Joseph Déjerine versus Pierre Marie: The Chair of Mental and Brain Diseases

Bogousslavsky, J.

The Succession of Charcot: the Chair of Mental and Brain Diseases

Bogousslavsky, J.

Julien Bogousslavsky

Editors: Bogousslavsky, J.; Moulin, T.

Contents

Foreword: Bennett, R.J.M.

Preface: Bogousslavsky, J.

Birth of Modern Psychiatry and the Death of Alienism: the Legacy of Jean-Martin Charcot

Bogousslavsky, J.; Moulin, T.

Jean-Martin Charcot’s House Officers at La Salpêtrière Hospital: Walusinski, O.

The Chair of Mental and Brain Diseases: Charcot’s Pupils – Benjamin Ball, Alex Jaffey and Gilbert Bulet: Tiberghien, D.

Edouard Brissaud, Fulgence Raymond and the Succession of Charcot: Moulin, T.

Great Careers: Cornil, Bouchard, Bourneville and Proust: Parent, M.; Parent, A.

Paul Sollier: The First Clinical Neurologist: Walusinski, O.

Jean-Martin Charcot, the iconic 19th century French scientist, is still regarded today as the most famous and celebrated neurologist in the world. Despite the development of strong independent schools of thought in the USA, UK and Germany, his ‘Salpêtrière’ school has become symbolic of the early development and rise of neurological practices and research. This book presents a fresh look at the origins of nervous system medicine, and at the fate of Charcot’s school and pupils. Special emphasis is placed upon the parallels and interactions between developments in neurology and mental medicine, clearly demonstrating that Charcot is not only the father of clinical neurology, but also wielded enormous influence upon the field we would come to know as psychiatry.

Providing new insights into the life and work of Charcot and his pupils, this book will make fascinating reading for neurologists, psychiatrists, physicians and historians.

Jean-Pierre Walusinski, O.; Parent, M.; Parent, A.

Birth of Modern Psychiatry and the Death of Alienism: the Legacy of Jean-Martin Charcot

Bogousslavsky, J.; Moulin, T.

Roger Tatu, L.; Poirier, J.; Parent, M.; Parent, A.

The Chair of Mental and Brain Diseases: the Succession of Charcot

Bogousslavsky, J.

Jules Joseph Déjerine versus Pierre Marie: The Chair of Mental and Brain Diseases

Bogousslavsky, J.

The Succession of Charcot: the Chair of Mental and Brain Diseases

Bogousslavsky, J.

Julien Bogousslavsky

Editors: Bogousslavsky, J.; Moulin, T.

Contents

Foreword: Bennett, R.J.M.

Preface: Bogousslavsky, J.

Birth of Modern Psychiatry and the Death of Alienism: the Legacy of Jean-Martin Charcot

Bogousslavsky, J.; Moulin, T.

Jean-Martin Charcot’s House Officers at La Salpêtrière Hospital: Walusinski, O.

The Chair of Mental and Brain Diseases: Charcot’s Pupils – Benjamin Ball, Alex Jaffey and Gilbert Bulet: Tiberghien, D.

Edouard Brissaud, Fulgence Raymond and the Succession of Charcot: Moulin, T.

Great Careers: Cornil, Bouchard, Bourneville and Proust: Parent, M.; Parent, A.

Paul Sollier: The First Clinical Neurologist: Walusinski, O.
European Neurology

Founded 1897 as 'Monatsschrift für Psychiatrie und Neurologie',
continued 1957–1967 as 'Psychiatria et Neurologia'
Founders: C. Wernicke and Th. Ziehen.

Editor-in-Chief
J. Bogousslavsky, Montreux

Editorial Board

H. Adeli, Columbus, Ohio
A. Amato, Boston, Mass.
J.-M. Annoni, Fribourg
S.R. Benbadis, Tampa, Fla.
F. Boller, Rockville, Md.
E. Broussolle, Lyon
C. Buckley, Oxford
J.-M. Burgunder, Berne
R.J. Castellani, Baltimore, Md.
A.K. Chatterjee, Philadelphia, Penn.
N.M.J. Edelstyn, Staffordshire
G.R. de Freitas, Rio de Janeiro
J.L. de Reuck, Gent
G. Deuschl, Kiel
V. Di Piero, Rome
T. Ettlin, Rheinfelden
M. Filippi, Milan
S. Gauthier, Montreal, Que.
P. Giannakopoulos, Geneva
F. Graus, Barcelona
B. Greenberg, Dallas, Tex.
H.-P. Hartung, Düsseldorf
R.A. Hauser, Tampa, Fla.
J.J. Hauw, Paris
T.S. Jensen, Aarhus
R.N. Kalaria, Newcastle upon Tyne
T. Karapanayiotides, Thessaloniki
J.S. Kim, Seoul
K. Kimura, Kurashiki

U. Koedel, Munich
H. Lassmann, Vienna
N. Leigh, London
K.O. Lövblad, Geneva
P. Maeder, Lausanne
A. May, Hamburg
M.N. Meriggioli, Chicago, Ill.
J. Mocayo Gaete, Quito
T. Moulin, Besançon
H. Naritomi, Osaka
E. Nobile-Orazi, Milan
M. Paciaroni, Perugia
A.O. Rossetti, Lausanne
D. Russell, Oslo
S. Sacco, L’Aquila
K. Schaller, Geneva
M. Schüpbach, Berne
N. Scolding, Bristol
M. Seeck, Geneva
V. Silani, Milan
C.J.M. Sindic, Bruxelles
L. Tatu, Besançon
B.E. Tettenborn, St. Gallen
A. Tsiskaridze, Tbilisi
J.M. Vallat, Limoges
P. Van den Bergh, Brussels
B.V. Vaughn, Chapel Hill, N.C.
O.W. Walusinski, Brou

Printed in Switzerland
on acid-free and non-aging paper (ISO 9706) by
Reinhardt Druck, Basel
Appears monthly:
2 volumes per year
(12 issues)
Guidelines for Authors

Aims and Scope
'European Neurology' publishes original papers, reviews and letters to the editor. Papers presented in this journal cover clinical aspects of diseases of the nervous system and muscles, as well as their neuropathological, biochemical, and electrophysiological basis. New diagnostic procedures, pharmaceutical and surgical treatments are evaluated from clinical evidence and basic investigative studies. The journal also features original works and reviews on the history of neurology.

Submission
Only original papers written in English are considered and should be submitted online:
www.karger.com/ene

Should you experience any problems with your submission, please contact:
enec@karger.ch
S. Karger AG
Editorial Office ‘European Neurology’
P.O. Box
CH-4009 Basel (Switzerland)
Tel. +41 61 306 1573
Fax +41 61 306 1434

Names, postal and e-mail addresses of 6 experts in the appropriate area of research should accompany each manuscript. Referees suggested should not be from the same institution or be research collaborators of the author(s).

Conditions
All manuscripts are subject to editorial review. Manuscripts are received with the explicit understanding that they are not under simultaneous consideration by any other publication. Submission of an article for publication implies transfer of the copyright from the author to the publisher upon acceptance. Accepted papers become the permanent property of 'European Neurology' and may not be reproduced by any means in whole or in part, without the written consent of the publisher. It is the author's responsibility to obtain permission to reproduce illustrations, tables, etc. from other publications.

Conflicts of Interest
Authors are required to disclose any sponsorship or funding arrangements relating to their research and all authors should disclose any possible conflicts of interest. Conflict of interest statements will be published at the end of the article.

Ethics
Published research must comply with the guidelines for human studies and animal welfare regulations. Authors should state that subjects have given their informed consent and that the study protocol has been approved by the institute's committee on human research. Further, they should also state that animal experiments conform to institutional standards.

Categories of Manuscripts
Original Papers are full-length research papers which will be considered for the journal. Articles cover topics relevant to clinical studies. Basic and experimental work appears only if directly related to clinical issues (max. 3000 words).

Reviews are comprehensive, state-of-the-art papers of important clinical problems. Reviews may be invited by the Editor or they may be unsolicited views (max. 5000 words).

Neuroimages are previously unpublished photomicrographs, patient photographs, neuroradiologic images, or other pictorial material (max. 100 words, two figures with legend, and up to two references).

Arrangement
Title page: The first page of each paper should indicate the title, the authors' names, the institute where the work was conducted, and a short title for use as running head.

Full address: The exact postal address of the corresponding author complete with postal code must be given at the bottom of the title page. Please also supply phone and fax numbers, as well as e-mail address.

Key words: Please supply 3–10 key words in English that reflect the content of the paper.

Abstract: Each paper needs an abstract of up to 10 lines (except for letters to the editor).

Footnotes: Avoid footnotes.

Tables and illustrations: Tables and illustrations (both numbered in Arabic numerals) should be prepared on separate pages. Tables require a heading and figures a legend, also prepared on a separate page. For the reproduction of illustrations, only good drawings and original photographs can be accepted; negatives or photocopies cannot be used. Due to technical reasons, figures with a screen background should not be submitted. When possible, group several illustrations in one block for reproduction (max. size 180 × 223 mm) or provide crop marks. Electronically submitted b/w half-tone and color illustrations must have a final resolution of 300 dpi after scaling, line drawings one of 800–1200 dpi.

Color illustrations
Online edition: Color illustrations are reproduced free of charge. In the print version, the illustrations are reproduced in black and white. Please avoid referring to the colors in the text and figure legends.

Print edition: Up to 6 color illustrations per page can be integrated within the text at CHF 800.– per page.

References: In the text identify references by Arabic numerals [in square brackets]. Material submitted for publication but not yet accepted should be noted as ‘unpublished data’ and not be included in the reference list. The list of references should include only those publications which are cited in the text. Do not alphabetize; number references in the order in which they are first mentioned in the text. The surnames of the authors followed by initials should be given. There should be no punctuation other than a comma to separate the authors. Preferably, please cite all authors. Abbreviate journal names according to the Index Medicus system. Also see International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals (www.icmje.org).

Examples
(b) Papers published only with DOI numbers: Theoharides TC, Boucher W, Spear K: Serum inter-leukin-6 reflects disease severity and osteoporosis in mastocytosis patients. Int Arch Allergy Immunol DOI: 10.1159/000063858.

Reference Management Software: Use of EndNote is recommended for easy management and formatting of citations and reference lists.

Digital Object Identifier (DOI)
S. Karger Publishers issues DOIs as unique identifiers for articles. A DOI number will be printed on the title page of each article. DOIs can be useful in the future for identifying and citing articles published online without volume or issue information. More information can be found at www.doi.org.

Supplementary Material
Supplementary material is restricted to additional data that are not necessary for the scientific integrity and conclusions of the paper. Please note that all supplementary files will undergo editor’s review and should be submitted together with the original manuscript. The Editors reserve the right to limit the scope and length of the supplementary material. Supplementary material must meet production quality standards for Web publication without the need for any modification or editing. In general, supplementary files should not exceed 10 MB in size. All figures and tables should have titles and legends and all should be supplied separately and named clearly. Acceptable files and formats are: Word or PDF files, Excel spreadsheets (only if the data cannot be converted properly to a PDF file), and video files (.mov, .avi, .mpeg).

Author’s Choice™
Karger’s Author’s Choice™ service broadens the reach of your article and gives all users worldwide free and full access for reading, downloading and printing at www.karger.com. The option is available for a one-time fee of CHF 3000.–, which is a permissible cost in grant allocation. More information can be found at www.karger.com/ authors_choice.

NIH-Funded Research
The U.S. National Institutes of Health (NIH) mandates under the NIH Public Access Policy that final, peer-reviewed manuscripts appear in its digital database within 12 months of the official publication date. As a service to authors, Karger submits the final version of your article on your behalf to PubMed Central. For those selecting our premium Author’s Choice™ service, we will send your article immediately upon publishing, accelerating the accessibility of your work without the usual embargo. More details on NIH’s Public Access Policy is available at http://publicaccess.nih.gov/policy.htm

Self-Archiving
Karger permits authors to archive their pre-prints (i.e. pre-refereeing) or post-prints (i.e. final draft post-refereeing) on their personal or institution’s servers, provided the following conditions are met: Articles may not be used for commercial purposes, must be linked to the publisher’s version, and must acknowledge the publisher’s copyright. Authors selecting Karger’s Author’s Choice™ feature, however, are also permitted to archive the final, published version of their article, which includes copy-editing and design improvements as well as citation links.

Page Charges
There are no page charges for papers of 3 or fewer printed pages (including tables, illustrations and references). Each additional complete or partial page is charged to the author at CHF 325.–. The allotted size of paper is equal to approx. 8 manuscript pages (including tables, illustrations and references).

Proofs
Unless indicated otherwise, proofs are sent to the corresponding author and should be returned with the least possible delay. Alterations other than the correction of printer’s errors are charged to the author.

Reprints
Order forms and a price list are sent with the proofs. Orders submitted after the issue is printed are subject to considerably higher prices.
XXI European Stroke Conference
Lisbon, Portugal, 22 – 25 May 2012

Registration
Deadline for reduced registration fee:
27 April 2012
Please visit: www.eurostroke.eu

Topics
Epidemiology of stroke
Acute stroke: emergency management, stroke units and complications
Acute stroke: clinical patterns and practice
Acute stroke: current treatment
Acute stroke: new treatment concepts
Acute cerebrovascular events (ACE):
TIA and minor strokes
Stroke prognosis
Stroke prevention
Interesting and challenging cases
Vascular imaging
Brain imaging
Etiology of stroke and risk factors
Rehabilitation and reorganisation after stroke
Vascular surgery and neurosurgery/
Interventional neuroradiology
Intracerebral/subarachnoid haemorrhage and venous diseases
Management and economics
Heart and brain
Behavioural disorders and post-stroke dementia
Small vessel stroke and white matter disease
Experimental studies
Vascular biology
Large clinical trials (RCTs)
Meta-analysis and reviews

Information
ESC 2012
c/o Congrex Switzerland Ltd.
Peter Merian-Strasse 80
PO Box
4002 Basel, Switzerland
Phone ++41 61 686 77 11
Fax ++41 61 686 77 88
E-mail esc@congrex.com
www.eurostroke.eu
Contents

See the journal website for contents
Twenty-second Meeting of the European Neurological Society

9 – 12 June 2012

Prague, Czech Republic

Neurology: Learning, knowledge, progress and the future

Key symposia:

Parkinson syndrome: an everlasting challenge
Neuroimaging and early diagnosis of neurological disease
Stem cells ready for clinical practice
MS and acquired demyelinating disorders
Neurology and sleep-wake disorders

The congress programme includes 22 teaching courses, 11 workshops, practical sessions in clinical neurophysiology, interactive case presentations and selected scientific sessions in the form of oral and poster sessions.

Early registration deadline: 22 March 2012

For further information please contact:
ENS 2012, c/o Congrex Switzerland Ltd.
Peter Merian-Strasse 80, 4002 Basel / Switzerland
Phone +41 61 686 77 77 Fax +41 61 686 77 88
Email basel@congrex.com

www.ensinfo.org
EFNS STOCKHOLM 2012

16TH CONGRESS OF THE EUROPEAN FEDERATION OF NEUROLOGICAL SOCIETIES
STOCKHOLM, SWEDEN, SEPTEMBER 8 – 11, 2012
WWW.EFNS.ORG/EFNS2012

SUBMIT YOUR ABSTRACT NOW
SUBMISSION DEADLINE: MARCH 15, 2012

EFNS 2012
EMAIL stockholm2012@efns.org WEB www.efns.org/efns2012
An excellent overview on current stroke syndromes, including problematic clinical pictures

Manifestations of Stroke

Editors
Maurizio Paciaroni
Giancarlo Agnelli
Valeria Caso
Julien Bogousslavsky

Contents
Preface: Paciaroni, M.; Agnelli, G.; Caso, V.; Bogousslavsky, J.

Neurologic and Other Disorders
Motor Syndromes: Corea, F.; Michel, S.
Sensory Syndromes: Klingner, C.M.; Witte, O.W.; Günther, A.

Headache: Cittadini, E.; Caso, V.

Eye Movement Abnormalities: Moncaya, J.; Bogousslavsky, J.

Visual Dysfunctions: Paciaroni, M.; Bogousslavsky, J.; Caso, V.; Agnelli, G.

Dizziness and Vertigo: Delo-Morte, D.; Rundek, T.

Auditory Dysfunction: Baldi, A.; Tenaglia, S.

Dizziness and Vertigo: Delo-Morte, D.; Rundek, T.

Auditory Dysfunction: Baldi, A.; Tenaglia, S.

Aphasia and Other Language Disorders: de Freitas, G.R.

Seizures: Alberti, A.

Impaired Consciousness: Acciarresi, M.; Alberti, A.

Sleep Changes: Alberti, A.

Post-Stroke Dementia and Cognitive Impairment: Pasi, M.; Poggesi, A.; Salvadori, E.; Piantoni, L.

Motor Disorders after Stroke: Carota, A.; Bogousslavsky, J.

Agnosia, Apraxia, Callosal Disconnection and Other Specific Cognitive Disorders: Acciarresi, M.

Muscle, Peripheral Nerve and Autonomic Changes: Tomic, G.; Pavlovic, A.

Dysphagia – Pathophysiology, Diagnosis and Treatment: Ciancioni, E.; Di Pisco, V.

Ventilatory Disorders: Silvestrelli, G.; Lanari, A.; Droghetti, A.

Lacunar versus Non-Lacunar Syndromes: Micheli, S.; Corea, F.

Topographic Syndromes
Superficial Middle Cerebral Artery Territory Infarction: Delgado, M.G.; Bogousslavsky, J.
Lenticulostriate Infarction: Decavel, P.; Vuillier, F.; Moulin, T.
Anterior Cerebral Artery and Heubner’s Artery Territory Infarction: Toyoda, K.

Anterior Choroidal Artery Territory Infarction: Pezzella, F.R.; Vadala, R.
Posterior Cerebral Artery Territory Infarction: Cereda, C.; Carrera, E.
Thalamic Infarcts and Hemorrhages: Amici, S.
Caudate Infarcts and Hemorrhages: Pezzella, F.R.; Vadalà, R.
Putaminal Hemorrhages: Ghetti, G.
Lobar Hemorrhages: Lunardi, P.
Subarachnoid and Intraventricular Hemorrhage: Venti, M.

Large Middle Cerebral Artery and Panhemispheric Infarction: Giossi, A.; Volonghi, I.; Del Zotto, E.; Costa, P.; Padovani, A.; Pezzini, A.
Midbrain Infarcts and Hemorrhages: Moncayo, J.
Pontine Infarcts and Hemorrhages: Moncayo, J.
Medullary Infarcts and Hemorrhages: Barlino, K.
Cerebellar Infarcts and Hemorrhages: Venti, M.
Extended Infarcts in the Vertebrobasilar Territory: Santulucia, P.
Border-Zone and Watershed Infarctions: D’Amore, C.; Paciaroni, M.
Acute and Chronic Carotid Occlusion Syndromes: Lanari, A.; Silvestrelli, G.
Venous Ischemic Syndromes: Ageno, W.; Dentali, F.
Spinal Cord Syndromes: Novy, J.
Peripheral Nerve Stimulation

Editor
Konstantin V. Slavin

In a rapidly growing field of neuromodulation against pain, this excellent publication presents a unique compilation of the latest theoretical and practical information for electrical stimulation of the peripheral nerves. Chapters cover the use of peripheral nerve stimulation in particular indications such as migraine, cluster headache, pain in Chiari malformation and fibromyalgia, as well as in specific body parts such as head and neck, trunk, and extremities. Furthermore, chapters on history, technical aspects, mechanism of action, terminology, complications and other important aspects of this pain-relieving modality give you a full overview of the field. Written by leading experts, this publication provides a comprehensive and updated summary of the currently available scientific information on peripheral nerve stimulation.

All chapters contain original information making this book an invaluable reference for all who deal with the management of severe and chronic pain – including neurosurgeons and neurosurgical trainees, pain specialists and practitioners, anesthesiologists and neurologists.

Contents

Series Editor’s Note: Lunsford, L.D.
Preface: Burchiel, K.J.
History of Peripheral Nerve Stimulation: Slavin, K.V.
Central Mechanisms of Peripheral Nerve Stimulation in Headache Disorders: Bartsch, T.; Goosby, P.J.
Peripheral Nerve Stimulation for Chronic Neuropathic Pain: Al-Jehani, H.; Jacques, L.
Percutaneous Peripheral Nerve Stimulation: Aló, K.M.; Abramova, M.V.; Richter, E.O.
Peripheral Nerve Stimulation for the Treatment of Truncal Pain: Cairns, K.D.; McRoberts W.P.; Deer, T.
Peripheral Subcutaneous Stimulation for Intractable Abdominal Pain: Barolat, G.
Subcutaneous Occipital Region Stimulation for Intractable Headache Syndromes: Weiner, R.L.
Peripheral Nerve Stimulation for Occipital Neuropathy: Surgical Leads: Kapural, L.; Sable, J.
Occipital Nerve Stimulation: Technical and Surgical Aspects of Implantation: Trentman, T.L.; Zimmerman, R.S.; Dodick, D.W.
Peripheral Neuromodulation for Migraine Headache: Ellens, D.J.; Levy, R.M.

Peripheral Nerve Stimulation in Chronic Cluster Headache: Magis, D.; Schoenen, J.
‘Hybrid Neurostimulator’: Simultaneous Use of Spinal Cord and Peripheral Nerve Field Stimulation to Treat Low Back and Leg Pain: Lipov, E.G.
Stimulation of the Peripheral Nervous System for the Painful Extremity: McRoberts, W.P.; Cairns, K.D.; Deer, T.
Spinal Nerve Root Stimulation: Kelner, C.P.; Kelner, M.A.; Winfree, C.J.
Technical Aspects of Peripheral Nerve Stimulation: Hardware and Complications: Slavin, K.V.
Peripheral Nerve Stimulation: Definition: Abejón, D.; Pérez-Cajaraville, J.
The Future of Peripheral Nerve Stimulation: Stanton-Hicks, M.; Panourias, I.G.; Sakas, D.E.; Slavin, K.V.

www.karger.com/prnes

Please send: ______ copies
Postage and handling free with prepaid payment
Payment:
[ ] American Express [ ] Diners [ ] Eurocard
[ ] MasterCard [ ] Visa
Card No.: ________
Exp. date: ________
CVV/CVC (3 digits in the signature field on the back of Visa and MasterCard)
[ ] Check enclosed [ ] Please bill me

Orders may be placed with any bookshop, subscription agency, directly with the publisher or through a Karger distributor.

Fax: +41 61 306 12 34
S. Karger AG, P.O. Box, CH–4009 Basel (Switzerland)
E-Mail orders@karger.ch, www.karger.com

Name/Address: ___________________________________________ ___________________________________________
________________________________________
Date: ________________
Signature: ________________

Downloaded by: ____________________ Date: ________________
A collection of extraordinary essays on key issues in the natural sciences

GOTTFRID SCHATZ

A MATTER OF WONDER
WHAT BIOLOGY REVEALS ABOUT US, OUR WORLD, AND OUR DREAMS

Where do we come from? Is our destiny determined by the genes we inherit? Do we all see the same blue color when we look at the sky? In this book Gottfried (Jeff) Schatz, the world-renowned biochemist, gives lucid – albeit often surprising – answers to universal questions and takes the reader on a fascinating journey of discovery across the boundaries of scientific disciplines. With passion and a keen sense of wonder he draws on philosophy, cultural history and art to formulate his reflections on the mystery of life. The key to understanding life is to be found in its chemistry, and he proves that this is no dry endeavor and certainly not devoid of beauty. The result is a collection of eloquently and poetically written essays dealing with key issues in the natural sciences. It will appeal not only to scientists, but also to all inquisitive minds, regardless of educational and professional background.
Original Papers

65 Late Onset Glycogen Storage Disease Type II: Pitfalls in the Diagnosis
Papadimas, G.K.; Spengos, K.; Papadopoulos, C.; Manta, P. (Athens)

69 Somatotopic Location of Corticospinal Tracts in the Internal Capsule with MR Tractography
Lee, D.H. (Gangwondo); Kwon, Y.H. (Daegu); Hwang, Y.T. (Gangneung); Kim, J.H.; Park, J.W. (Gyeongbuk)

Mommsen, R.; Abo, M.; Kakuda, W.; Uruma, G. (Tokyo)

81 Clinical Study of Twenty-One Patients with Pure Midbrain Infarction

107 Characteristics of Muscle Fibers in Rats with Limb Movements during Sleep after Spinal Cord Injury
Esteves, A.M.; Squarcini, C.F.R.; Lancellotti, C.L.P.; Tufik, S.; de Mello, M.T. (São Paulo)

116 Adapted Timed Up and Go: A Rapid Clinical Test to Assess Gait and Cognition in Multiple Sclerosis
Allali, G.; Laidet, M.; Assal, F. (Geneva); Beauchet, O. (Angers); Chofflon, M.; Armand, S.; Lalive, P.H. (Geneva)

Neurologic Image

90 Excessive Vomiting
Renard, D.; Jeanjean, L.; Labauge, P. (Nîmes)

Neurology and Art

92 Pirandello’s Analogy: A Source for a Better Understanding of the Social Impact of Stroke
van Haaren, M.A.C.; Lawrence, M. (Glasgow); Goossens, P.H. (Leiden); van den Bossche, B. (Leiden/Leuven); Wermer, M.J.H.; Kaptein, A.A. (Leiden)

Historical Note

98 A Case of Charcotian grande hystérie: Observation by Julien Offray de La Mettrie in 1738
Walenski, O. (Brou)

Review

121 Serum Levels of Matrix Metalloproteinases: Implications in Clinical Neurology
Romi, F.; Helgeland, G.; Gilhus, N.E. (Bergen)