degenerative Diseases

Review

165 A Hypnic Hypothesis of Alzheimer's Disease

Clark, C.N.; Warren, J.D. (London)

Original Papers

177 Neuropathology of Partial PGC-1a Deficiency Recapitulates Features of Mitochondrial Encephalopathies but Not of Neurodegenerative Diseases

Szalardy, L.; Zadori, D.; Plangar, I.; Vecsei, L. (Szeged); Weydt, P.; Ludolph, A.C. (Ulm); Klivenyi, P. (Szeged); Kovacs, G.G. (Vienna)

189 Postmortem Brain Levels of Urate and Precursors in Parkinson's Disease and Related Disorders

McFarland, N.R. (Gainesville, Fla./Boston, Mass.); Burdett, T.; Desjardins, C.A.; Frosch, M.P.; Schwarzschild, M.A. (Boston, Mass.)

199 Quantitative Profiling and Identification of Plasma Proteins of Spinocerebellar Ataxia Type 2 Patients

Swarup, V.; Srivastava, A.K.; Padma, M.V.; Moganty, R.R. (New Delhi)

207 Molecular Characterization of X-Linked Adrenoleukodystrophy in a Tunisian Family: Identification of a Novel Missense Mutation in the *ABCD1* Gene

Kallabi, F.; Hadj Salem, I.; Ben Salah, G. (Sfax); Ben Turkia, H.; Ben Chehida, A.; Tebib, N. (Tunis); Fakhfakh, F.; Kamoun, H. (Sfax)

212 Substantia Nigra Hyperechogenicity as a Marker for Parkinson's Disease: A Population-Based Study

Mahlknecht, P.; Seppi, K.; Stockner, H.; Nocker, M.; Scherfler, C.; Kiechl, S.; Willeit, J.; Schmidauer, C. (Innsbruck); Gasperi, A.; Rungger, G. (Bruneck); Poewe, W. (Innsbruck)

after 218 Contents Vol. 12, 2013

S. Karger
Medical and Scientific Publishers
Basel · Freiburg · Paris ·
London · New York ·
New Delhi · Bangkok · Beijing ·
Tokyo · Kuala Lumpur ·
Singapore · Sydney



Rediscover Vesalius

The medical revolution of the 16th century brought to life for the 21st century



ANDREAS VESALIUS

The Fabric of the Human Body

An Annotated Translation of the 1543 and 1555 Editions of

"De Humani Corporis Fabrica" by

DANIEL H. GARRISON MALCOLM H. HAST

with contributions by Vivian Nutton and Nancy Siraisi

For the first time ever, both editions of Andreas Vesalius' masterpiece "De Humani Corporis Fabrica" are accessible in the English language. They were critically compared and published in a modern layout transforming the Renaissance anatomical atlas for the 21st-century reader. More than 5,000 annotations cover anything from antique sources over Galenic references to the medical and cultural background of Vesalius' time. Also included are Vesalius' handwritten notes for a never published third edition.

To enable the reader and medical student to really study Vesalius' woodcut illustrations, the images were digitally enhanced and often enlarged to feature his painstaking work of marking each pertinent anatomical part with characters. All over Vesalius' descriptive text, the standard Latin *Nomina Anatomica* and *Terminologia Anatomica* provide the reader with the modern medical terminology.

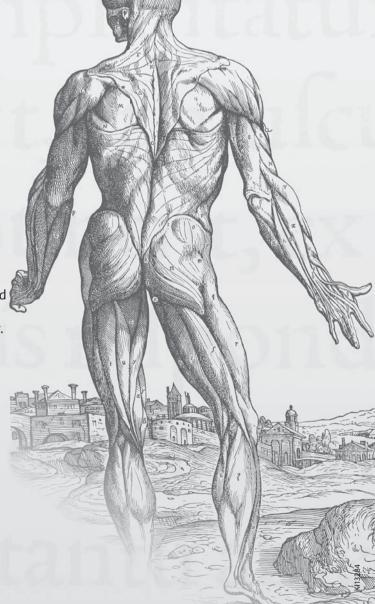
Vesalius, A., The Fabric of the Human Body
An Annotated Translation of the 1543 and 1555 Editions of
"De Humani Corporis Fabrica Libri Septem" by
D.H. Garrison and M.H. Hast
CXX + 1338 p., 340 fig., in two volumes, hard cover, with slip case, 2014
315 x 435 mm / 12 x 17", 16 kg / 35 lbs

CHF 1,500.- / **EUR 1,250.-** / **USD 1,650.00** ISBN 978-3-318-02246-9

www.karger.com

Postage and handling included VAT & import taxes excluded, no right to return Prices subject to change, EUR price for Germany, USD price for USA and Latin America only





Neurodegenerative Diseases

Editors-in-Chief

R.M. Nitsch, Zürich C. Hock, Zürich L. Rajendran, Zürich

Section Editors

Modeling Neurodegenerative Diseases in vivo

J.-P. Loeffler, Strasbourg J.-L. Gonzalez de Aguilar, Strasbourg

Clinical Drug Trial Section

P. Herrling, Basel V. Pogačić Kramp, Basel

Editorial Board

Neurobiology

Molecular Biology
K. Beyreuther, Heidelberg
R. Klein, Martinsried
M.S. Levine, Los Angeles, Calif.
B. Martoglio, Basel
S.S. Sisodia, Chicago, Ill.
E.E. Wanker, Berlin

Cell Biology M.F. Beal, New York, N.Y. A. Björklund, Lund S. Gandy, New York, N.Y. M. Goedert, Cambridge C. Haass, München K. Iqbal, Staten Island, N.Y. T. Iwatsubo, Tokyo E.H. Koo, San Diego, Calif. G. Nikkhah, Freiburg N.K. Robakis, New York, N.Y. D.J. Selkoe, Boston, Mass. G. Thinakaran, Chicago, Ill. K. Unsicker, Freiburg B. Wolozin, Maywood, Ill. B.A. Yankner, Boston, Mass.

Animal Models
R. Baumeister, Freiburg
K. Duff, New York, N.Y.
D.L. Price, Baltimore, Md.
J. Shen, Boston, Mass.
O. von Bohlen und Halbach, Greifswald

Structural Biology R. Glockshuber, Zürich B. Solomon, Tel Aviv C. Soto, Houston, Tex.

Clinical Research

Genetics
A. Brice, Paris
J. Hardy, Bethesda, Md.
L. Lannfelt, Uppsala
W. Le, Shanghai
H. Lehrach, Berlin
S. Lovestone, London
J. Mallet, Paris

E.I. Rogaev, Moskva G.D. Schellenberg, Philadelphia, Pa. C.E. Shaw, London A. Singleton, Bethesda, Md. P.H. St George-Hyslop, Toronto, Ont. R.E. Tanzi, Boston, Mass. C. Van Broeckhoven, Antwerpen

Neuropathology
A. Aguzzi, Zürich
B. Ghetti, Indianapolis, Ind.
C.L. Masters, Melbourne, Vic.
M.G. Spillantini, Cambridge

Imaging N.C. Fox, London R.S. Frackowiak, Lausanne G.B. Frisoni, Brescia A. Villringer, Berlin

Biological Markers K. Blennow, Mölndal T.N. Chase, Washington, D.C. J. Ghika, Lausanne J.H. Growdon, Boston, Mass.

Therapy
M. Bähr, Göttingen
S.T. DeKosky, Pittsburgh, Pa.
J. Dichgans, Tübingen
B. Dubois, Paris
W.H. Oertel, Marburg
M.N. Rossor, London

Drug Discovery

Biotechnology
P. Aebischer, Lausanne
D.B. Schenk, San Francisco, Calif.
Pharmaceuticals

K.M. Felsenstein, Spring House, Pa. A. Fisher, Ness Ziona
L.L. Iversen, Oxford
J.A. Kemp, Hamburg
M. Miyamoto, Tokyo
H. Möhler, Zürich
B. Schmidt, Darmstadt
H. Soreq, Jerusalem
M. Takeda, Osaka
M.B.H. Youdim, Haifa

Guidelines for Authors

Neurodegenerative Diseases

'Neurodegenerative Diseases' is a multidisciplinary journal for the publication of advances in the understanding of 'Neurodegenerative Diseases', including Alzheimer disease, Parkinson's disease, amyotrophic lateral sclerosis, Huntington disease and related neurological and psychiatric disorders, 'Neurodegenerative Diseases' publishes results from basic and clinical scientific research programs designed to better understand the normal functions of genes and proteins involved in 'Neurodegenerative Diseases', to characterize their role in pathogenic disease mechanisms, to model their functions in animals and to explore their roles in the diagnosis, treatment and prevention of 'Neurodegenerative Diseases'. It is our firm belief that successful strategies for novel treatments of 'Neurodegenerative Diseases' will emerge from the intelligent integration of basic neurobiology with clinical sciences. Therefore, 'Neurodegenerative Diseases' will accept high-quality papers from a broad spectrum of scientific research areas ranging from molecular and cell biology to neuroscience, pharmacology, genetics and the clinical sci-

'Neurodegenerative Diseases' is a peer-reviewed journal that publishes original research in the form of Articles and Brief Communications to 'Neurodegenerative Diseases' as well as Review Articles, Mini Reviews and Commentaries.

Submission

Only original papers written in English are considered and should be submitted online:

www.karger.com/ndd

Should you experience any problems with your submission, please contact:

ndd@karger.ch

Editorial Office 'Neurodegenerative Diseases' S. Karger AG P.O. Box CH–4009 Basel (Switzerland) Tel. +41 61 306 1358 Fax +41 61 306 1434

Names, postal and e-mail addresses of four experts in the appropriate area of research should accompany each manuscript. Selected scientist(s) will be invited to act as referee(s). Referees suggested should not be from the same institution as the author and should have expert knowledge of the subject.

Articles should be fully documented reports of original research. They must describe significant and original observations to be critically evaluated and, if necessary, repeated. They do not normally exceed 6 printed pages including all figures, tables and references.

Brief Communications to Neurodegenerative Diseases are short reports of original research and are intended to provide a rapid means of reporting new findings of sufficient importance. They do not normally exceed 2 printed pages including an abstract, essential references and not more than 3 tables or figures.

Review Articles, Mini Reviews and Commentaries are either invited by the Editors or may be submitted for consideration. Authors who wish to contribute a manuscript to one of these categories should contact the Editor-in-Chief.

Review Articles describe new developments of interdisciplinary significance and highlight unresolved questions and future directions. They do not generally occupy more than 9 printed pages. Mini Reviews should focus on topics of current interest and not exceed 5 printed pages.

Commentaries should offer a more personalized perspective on a topic that will be of interest to the general readership and fill an integral number of printed pages, generally one or two, including one or two small figures. All contributions to these categories will be subjected to editorial review.

Reports should comprise title page, Key Words, Abstract, Introduction, Results and Discussion, References, tables, figure legends, and figures – in this order.

Special Section:

Modeling Neurodegenerative Diseases in vivo

Editorial policies and guidelines for submission to this section are as those given for the prime section of 'Neurodegenerative Diseases', except that the editorial responsibility falls within the province of the section editors Jean-Philippe Loeffler and José-Luis Gonzalez de Aguilar, Strasbourg. Contributions should be submitted online:

www.karger.com/ndd

Please mention in your convering letter that your article is submitted for publication in 'Modeling Neuro-degenerative Diseases in vivo'.

Conditions

Only manuscripts that conform to the Guidelines for Authors will be considered and are subject to editorial review.

The manuscript must be accompanied by a cover letter stating that all authors have seen and given their approval for submission of the manuscript to be considered for publication in 'Neurodegenerative Diseases'. Manuscripts are accepted for review with the understanding that persons cited in unpublished work have approved such citations. Authors are required to identify a minimum of four preferred reviewers.

Manuscripts are received with the explicit understanding that they are not under simultaneous consideration by any other publication or have not already been published elsewhere. 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 'Neurodegenerative Diseases' 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.

The authors agree that their articles will be accompanied, if necessary, by a simplified version written by a scientific writer.

Manuscripts that do not comply with the ethical standards recommended by the Helsinki Declaration will not be accepted.

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/fax numbers and 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 about 200 words, and should be structured as follows: Background: What prompted the study?

Objective: What is the purpose of the study?

Methods: How was the study carried out?

Results: What are the most important findings?

Conclusion: What is the most important conclusion?

The abstract should not exceed 250 words, and any abbreviations must be explained.

Footnotes: Avoid footnotes. When essential, they should be numbered consecutively and typed at the foot of the appropriate page.

Tables and illustrations: Tables and illustrations (both numbered in Arabic numerals) should be prepared on separate sheets. Tables require a heading and figure legends should be supplied on a separate sheet. For the reproduction of illustrations, only good drawings and original photographs will 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 halftone and color illustrations must have a final resolution of 300 dpi after scaling, and line drawings one of 800–1,200 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: Identify references in the text with 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 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 their 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).

Neurodegenerative Diseases

Examples

(a) Papers published in periodicals: Desai MY, De la Peña-Almaguer E, Mannting F: Abnormal heart rate recovery after exercise: A comparison with known indicators of increased mortality. Cardiology 2001;96: 38-44

(b) Papers published only with DOI numbers:

Theoharides TC, Boucher W, Spear K: Serum interleukin-6 reflects disease severity and osteoporosis in mastocytosis patients. Int Arch Allergy Immunol DOI: 10.1159/000063858.

(c) Books: Matheis G, Moritz A, Scholz M (eds): Leukocyte Depletion in Cardiac Surgery and Cardiology. Basel, Karger, 2002.

(d) Edited books: Gladish GW, Haponik EF: Virtual Bronchoscopy; in Bolliger CT, Mathur PM (eds): Interventional Bronchoscopy. Prog Respir Res. Basel, Karger, 2000, vol 30, pp 253–266.

Papers that have been submitted but are not yet accepted should not be listed in the bibliography, but can be referred to in the text as unpublished observations. If details of methods are only available in papers that are 'in press', copies of the papers should be included with the manuscript submitted to 'Neurodegenerative Diseases' so that the editorial referees can have adequate information to judge the manuscript.

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 supports 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 editorial 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 files 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).

Drugs

Generic names should be used in text, tables, and figures. Trade names in upper case may be mentioned in parentheses in the first text reference to the drug but should not appear in titles, figures or tables. The chemical nature of new drugs must be given when known.

Abbreviations

When an abbreviation is used in the manuscript, it should be defined in the text the first time it is used. Abbreviations for commonly used substances should be those recommended by the *Journal of Biological Chemistry*. Abbreviations for drugs/chemicals may be used if properly defined with the chemical or generic name when the abbreviation is first used. Excessive use of abbreviations in the text, however, is strongly discouraged. Most abbreviations are used without punctuation, with no distinction between singular and plural forms

Author's Choice™

With this option the author can choose to make his article freely available online against a one-time fee of CHF 3000.— This fee is independent of any standard charges for supplementary pages, color images etc. which may apply. 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 (PMC) immediately upon publishing. It usually receives a PMCID within approximately a month and will appear in PMC after 12 months. For those selecting our premium Author's Choice $^{\rm TM}$ service, the usual embargo will be

overriden, accelerating the accessibility of your work. More details on NIH's Public Access Policy are 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 copyediting and design improvements as well as citation links.

Page Charges

There is no page charge for papers of 5 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 a paper is equal to approx. 14 manuscript pages (including tables, illustrations and references).

E-pub First

All articles are published electronically ahead of print with a DOI number and are supplemented later with the definite reference of the printed version. The articles become available immediately after the authors' approval to publication, with the added advantage of being citable much earlier than previously. Authors can influence the time of appearance by promptly returning the proofs.

Proofs

Unless otherwise indicated, 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 will be sent with the proofs. Orders submitted after the issue is printed are subject to considerably higher prices.

General Information

Naura_ denerative Diseases

ISSN Print Edition: 1660-2854 ISSN Online Edition: 1660-2862

Journal Homepage: www.karger.com/neurodis

Publication Data: 'Neurodegenerative Diseases' is published 8 times a year. Volumes 11 and 12, with 4 issues each, appear in 2013.

Copyright: © 2013 S. Karger AG, Basel (Switzerland). All rights reserved. No part of this publication may be translated into other languages, reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, microcopying, or by any information storage and retrieval system, without permission in writing from the publisher or, in the case of photocopying, direct payment of a specified fee to the Copyright Clearance Center.

Disclaimer: The statements, opinions and data contained in this publication are solely those of the individual authors and contributors and not of the publisher and the editor(s). The appearance of advertisements in the journal is not a warranty, endorsement, or approval of the products or services advertised or of their effectiveness, quality or safety. The publisher and the editor(s) disclaim responsibility for any injury to persons or property resulting from any ideas, methods, instructions or products referred to in the content or advertisements.

Subscription Rates: Subscriptions run for a full calendar year. Prices are given per year. Personal subscription

Print or Online Print+Online combined CHF 582.-CHF 678 -EUR 469 -EUR 547 -USD 576.00 USD 672 00

postage and handling (added to print and print+online) CHF 57.60 Europe, CHF 83.20 Overseas

EUR 44.80 USD 76.80

Institutional subscription:
Print or Online

Print+Online combined CHF 1940.-CHF 2134.-EUR 1564.-EUR 1720.-USD 1920 00 USD 2112.00

postage and handling (added to print and print+online) CHF 72. – Europe, CHF 104. – Overseas

EUR 56 -USD 96.00

Airmail surcharge: CHF 70.- / USD 66.00

Back Volumes and Single Issues: Information on availability and prices of single print issues and print or electronic back volumes can be obtained from Customer Service at service@karger.ch.

Bibliographic Indices: This journal is regularly listed in bibliographic services, including Current Contents® and PubMed/MEDLINE.

Photocopying: This journal has been registered with the Copyright Clearance Center (CCC), as indicated by the code appearing on the first page of each article. For readers in the US, this code signals consent for copying of articles for personal or internal use, or for the personal or internal use of specific clients, provided that the stated fee is paid per copy directly to

Copyright Clearance Center Inc. 222 Rosewood Drive Danvers, MA 01923 (USA)

A copy of the first page of the article must accompany payment. Consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. In these cases, specific written permission must be obtained from the copyright owner,

S. Karger AG, P.O. Box CH-4009 Basel (Switzerland).

Subscription Orders:

Orders can be placed at agencies, bookstores, directly with the Publisher

S. Karger AG

Medical and Scientific Publishers Allschwilerstrasse 10 CH-4009 Basel Switzerland

t: +41 61 306 11 11 f: +41 61 306 12 34 e: karger@karger.com w: www.karger.com

(for courier services only: Allschwilerstrasse 10 CH-4055 Basel)

or further Karger offices or representatives:

Germany S. Kargér GmbH Postfach

79095 Freiburg Deutschland (Hausadresse: Wilhelmstrasse 20A, 79098 Freiburg) t: +49 761 45 20 70

f: +49 761 45 20 714 e: information@karger.de w: www.karger.de

Iapan

Karger Japan, Inc.

1-2-23 Shiba Daimon Minato-ku Tokyo 105-0012 Japan t: +81 3 6435 6242 f: +81 3 6435 6244

Shiba Daimon Asahi Bldg. 2F

e: publisher@karger.jp w: www.karger.jp

S. Karger Publishers, Inc.

26 West Avon Road PO Box 529 Unionville, CT 06085

Toll free: +1 800 828 5479 t: +1 860 675 7834 f: +1 860 675 7302 e: karger@snet.net

Enter & Read

Albertine Luginbuhl 23, rue du Départ, boite 37 75014 Paris France

t: +33 (0) 6 81 04 76 85 e: albertineluginbuhl@orange.fr South East Asia, China and Taiwan **Karger Regional Office (Malaysia)** CEO Suite Kuala Lumpur Quill 7, 27th Floor

Jalan Stesen Sentral 5 KL Sentral Kuala Lumpur 50470 Malavsia

t: +60 3 2776 6803 f: +60 3 2776 6999

e: service@karger.cn; r.chew@karger.cn

Karger China

10th Floor, Twin Towers (East) B12 Jianguomenwai Avenue Beijing 100022 China

t: +86 10 5123 5033 f: +86 10 5123 5122

e: service@karger.cn; r.chew@karger.cn

w: www.karger.cn

India, Bangladesh, Sri Lanka Medscience India

Plot No. 17, Yusuf Sarai Market B.L. Glass Building, 2nd Floor Sri Aurobindo Marg New Delhi 110 016

India t: +91 11 46029 633 f: +91 11 46029 634 c: +91 98 91052 128 e: r.kumar@karger.com

KARGER

© 2013 S. Karger AG, Basel

E-Mail karger@karger.com www.karger.com

Change of Address:Both old and new address should be sent to the subscription source.

The Journal Home Page is available at: www.karger.com/neurodis

Contents

See the journal website for contents



JOINT CONGRESS ISTANBUL 2014

ISTANBUL, TURKEY, 31 MAY - 3 JUNE 2014

EUROPEAN FEDERATION OF NEUROLOGICAL SOCIETIES

EUROPEAN NEUROLOGICAL SOCIETY

We look forward to welcoming you to Istanbul and this unique Congress!

Abstract submission deadline: 8 January 2014









F13687



29th CINP WORLD CONGRESS OF NEUROPSYCHOPHARMACOLOGY

CINP – The International College of Neuropsychopharmacology



▶ 5 February 2014

www.cinp2014.com

www.cinp.ord

Deadline for poster abstract submissions and early bird registrations

13th International Geneva/Springfield Symposium on Advances in Alzheimer Therapy

A Quarter Century of Excellence
Where Science and Clinical Knowledge Meet



Geneva, Switzerland March 26 - 29, 2014

- The very latest on Alzheimer therapy
- The very top leaders in the world
- The very best opportunity to learn and interact in a welcoming scientific environment

For more information, visit www.ad-springfield.com

³sychiatry; Neurology; Neurobiology, Cell Biology, Microbiolo Molecular Biology. Physiology

How current biomakers are modernizing the diagnosis of Alzheimer's Disease



Alzheimer's Disease – Modernizing Concept, Biological Diagnosis and Therapy

Editors Harald Hampel Maria C. Carrillo

Expanding knowledge on genetic and epigenetic risk factors is rapidly enhancing our understanding of the complex molecular interactions and systems involved in the pathogenesis of Alzheimer's disease. In this publication, leading experts discuss emerging novel conceptual models of the disease along with advances in the development of surrogate markers that will not only improve the accuracy of diagnostic technologies but also improve the prospects of developing disease-modifying interventions. The novel framework of the disease presented here highlights research on biological markers as well as efforts to validate technologies for early and accurate detection. It also introduces notion of a complex systems dysfunction that extends beyond prevailing ideas derived from the 'amyloid' or 'tau' hypoth-

This outstanding publication provides researchers, clinicians, students and other professionals interested in neurodegenerative disorders with a comprehensive update on current trends and future directions in therapy development, with special focus on advances in clinical trial designs.

Contents

The Global Impact of Alzheimer's Disease: Carrillo, M.C.: Thies, W.: Bain, L.J.

The Genetics of Alzheimer's Disease: Schu, M.C.; Sherva, R.; Farrer, L.A.; Green, R.C.

Current Conceptual View of Alzheimer's Disease: *Herrup, K.*

Neuropathological Basis of Alzheimer's Disease and Alzheimer's Disease Diagnosis: Schneider, J.A.; Montine, T.J.; Sperling, R.A.; Bennett, D.A..

Diagnostic Tools: Fluid Biomarkers for Alzheimer's Disease: Zetterberg, H.; Hampel, H.; Blennow, K MRI- and PET-Based Imaging Markers for the Diagnosis of Alzheimer's Disease: *Teipel, S.; Sperling, R.A.; Skudlarski, P.; Jack, C.; Hampel, H.; Fellgiebel, A.; Herholz, K.*

Changing Diagnostic Concepts of Alzheimer's Disease: McKhann, G.M.; Albert, M.S.; Sperling, R.A.

Pharmacological Treatment of Alzheimer's Disease: **Schneider**, **L.S.**

Regulatory Requirements on Clinical Trials in Alzheimer's Disease: **Broich, K.; Schlosser-Weber, G.; Weiergräber, M.; Hampel, H.**

Perspectives on Alzheimer's Disease: Past, Present and Future: *Khachaturian*, *Z.S.*

(Switzerland)

In cooperation with the

alzheimer's \bigcap association

Signature:

www.karger.com/adbip

KARGER

	Advances in Biological Psychiatry, Vol. 28	► Please send: copy/ies	Fax: +41 61 306 12 34
 - -	Series Editors: Ebmeier, K.P. (Oxford); Gattaz, W.F. (Sāo Paulo); Kaschka, W.P. (Ulm/Ravensburg) ISSN 0378–7354 / e-ISSN 1662–2774	Postage and handling free with prepayment	S. Karger AG, P.O. Box, CH–4009 Basel (Switz E-Mail orders@karger.ch, www.karger.com
 - -	Alzheimer's Disease – Modernizing Concept, Biological Diagnosis and Therapy Editors: Hampel, H. (Frankfurt a.M.); Carrillo, M. (Chicago, III.)	Payment: Please charge to my credit card American Express Diners Eurocard W MasterCard Visa	Name/Address:
	VI + 194 p., 9 fig., 1 in color, 14 tab., hard cover, 2012 CHF 67.– / EUR 56.– / USD 79.00 Prices subject to change	Card No.:	
ļ	EUR price for Germany, USD price for USA only ISBN 978-3-8055-9802-6 / e-ISBN 978-3-8055-9803-	Exp. date:	
 	回線游戲回	O CVV/CVC (3 digits in the signature field on the back of Visa and MasterCard)	
1	ALCO SERVICE SERVICE	Chack anclosed Diagraphill ma	

distributor.

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



Comprehensive coverage of gerontological research

Gerontolosy International Journal of Experimental, Clinical,

International Journal of Experimental, Clinical, Behavioural, Regenerative and Technological Gerontology

Editor-in-Chief

G. Wick, Innsbruck

Section Editors

Clinical Section

E. Gershwin, Davis, Calif. **M. Lechleitner,** Zirl

G. Schett, Erlangen

Experimental Section

A. Bartke, Springfield, III.

B. Friguet, Paris

Behavioural Science Section

D. Gerstorf, Berlin **M. Martin**, Zurich

Regenerative and Technological Section

G. Lepperdinger, Innsbruck (Regeneration)

B. Najafi, Tucson, Ariz.

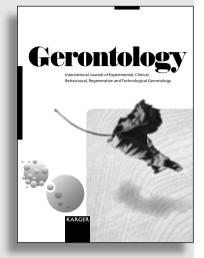
Editor for the IAGG

M. Rodriguez Perracini,

São Paulo

Organ of the International Association of Gerontology and Geriatrics (IAGG)





More information at

www.karger.com/ger

- Pay-per-View and Subscriber Access to Full Text
- Full Table of Contents
- Full Editorial Board
- Free Abstracts and Selected Articles
- Online Sample Issue
- Submission/Guidelines for Authors
- Subscription Details
- Free Alert Service
- Online Library Recommendation



Gerontology

2014: Volume 60 6 issues per volume Language: English ISSN 0304–324X (print) ISSN 1423–0003 (online)

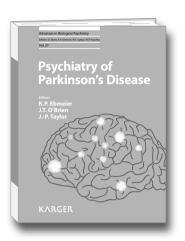
Listed in bibliographic services, including Current Contents *VLife Sciences, Pubmed/MEDLINE, Biological Abstracts, PsycINFO

Selected contributions

- Measuring Genome Instability in Aging A Mini-Review: **Li, W.; Vijg, J.** (Bronx, N.Y.)
- Marked Heterogeneity in Growth Characteristics of Myoblast Clonal Cultures and Myoblast Mixed Cultures Obtained from the Same Individual: Maier, A.B.; Cohen, R.; Blom, J.; van Heemst, D.; Westendorp, R.G.J. (Leiden)
- Apoptosis in Skeletal Myocytes: A Potential Target for Interventions against Sarcopenia and Physical Frailty — A Mini-Review: Marzetti, E.; Calvani, R.; Bernabei, R. (Rome); Leeuwenburgh, C. (Gainesville, Fla.)
- Recent Advances in the Study of Age-Related Hearing Loss: A Mini-Review: Kidd III, A.R.; Bao, J. (St. Louis, Mo.)
- White Matter Hyperintensities Are an Independent Predictor of Physical Decline in Community–Dwelling Older People: Zheng, J.J.J.; Delbaere, K.; Close, J.C.T.; Sachdev, P.; Wen, W.; Brodaty, H.; Lord, S.R. (Sydney, N.S.W.)
- The Impact of Health and Financial Literacy on Decision Making in Community-Based Older Adults: James, B.D.; Boyle, P.A.; Bennett, J.S.; Bennett, D.A. (Chicago, III.)
- Changing Views on Intergenerational Ties: Fingerman, K.L. (Austin, Tex.);
 Sechrist, J. (Edinburg, Tex.);
 Birditt, K. (Ann Arbor, Mich.)
- Stress Resistance in the Naked Mole-Rat: The Bare Essentials A Mini-Review: **Lewis, K.N.; Mele, J.; Hornsby, P.J.; Buffenstein, R.** (San Antonio, Tex.)
- Myths About Older People's Use of Information and Communication Technology: Wandke, H.; Sengpiel, M.; Sönksen, M. (Berlin)
- Economic Crises and the Elderly: **Backes-Gellner**, **U.**; **Schneider**, **M.R.** (Zurich/Paderborn)

As the ratio of people over sixty-five continues to rise, understanding the basic mechanisms of aging and age-related diseases has become a matter of urgent necessity. Gerontology responds to this need by drawing topical contributions from diverse medical, biological, behavioural, regenerative and technological disciplines. Recent research on the clinical problems of aging and the translation of basic scientific results into practice are also included to support the fundamental goals of extending active life and enhancing its quality. Informative Mini-Reviews, Viewpoints as well as a critical Debate Section for stimulating, speculative articles carry strong reader approval. The Experimental Section contains contributions from basic gerontological research. Papers submitted for the Clinical Section discuss aetiology, pathogenesis, prevention and treatment of diseases in old age from a gerontological rather than a geriatric viewpoint. Papers dealing with behavioural development and related topics are published in the Behavioural Science Section. An extra Section covers research exploring basic aspects of regeneration in biological systems and regenerative medical approaches and deals with technological devices for the elderly.

Providing a primary source of high-quality papers covering all aspects of aging in humans and animals, *Gerontology* serves as an ideal information tool for all readers interested in the topic of aging from a broad perspective.



Psychiatry of Parkinson's Disease

Editors Klaus Ebmeier John T. O'Brien John-Paul Taylor

Psychiatric symptoms are common in the neurological and geriatric care of patients with Parkinson's disease. This book assembles short reviews from experts in the field to chart the various psychiatric syndromes known in Parkinson's disease, their presentation, etiology and management. Presented are special topics on epidemiology of psychiatric symptoms, affective disorders and apathy, early cognitive impairment through to dementia, visuoperceptual dysfunction, psychotic disorders, sleep disturbances, impulse disorders and sexual problems. Further, rarely discussed issues, such as the relationship between somatoform disorders and parkinsonism are reviewed.

This publication is essential reading for old age psychiatrists, gerontologists and neurologists who work with patients suffering from Parkinson's disease. In addition, health practitioners who deal with senior patients, as well as scientists who need a quick update on the progress in this important clinical field will find this volume a helpful reference.

Contents

Preface

Epidemiology of Psychiatric Symptoms in Parkinson's Disease: *Leentjens, A.F.G.* Depression, Apathy and Anxiety Disorders: *Brockman, S.; Jayawardena, B.; Starkstein, S.E.* Apathy in Parkinson's Disease: *Leroi, I.; David, R.; Robert, P.*

Disorders of Visual Perception in Parkinson's Disease and Other Lewy Body Disorders: Collerton, D.; Mosimann, U.P.; Archibald, N. Psychosis and Parkinson's Disease: Jakel, R.J.; Stacv, M.A.

Sleep in Parkinson's Disease and Dementia with Lewy Bodies: Ferman, T.J.; Boeve, B.F Sexual Problems in Parkinson's Disease: Sakakibara, R.; Uchiyama, T.; Yamamoto, T.; Kishi, M.; Ogawa, E.; Tateno, F. An Update on Impulse Control Disorders in Parkinson's Disease: Voon, V.; Mehta, A.R.

Neuropsychological Features of Early Cognitive Impairment in Parkinson's Disease: *Williams-Gray, C.H.; Mason, S.L.* Parkinson's Disease with Dementia:

Taylor, J.-P.: O'Brien, J.T.

Somatoform Disorders in Parkinson's Disease and Dementia with Lewy: Bodies Evidence Underlying Psychotic Traits: Onofrj, M.; Thomas, A.; Bonanni, L.; di Giannantonio, M.; Gambi, F.; Sepede, G.

Drug-Induced Parkinsonism and Abnormal Involuntary Movements: *Ritchie, C.W.*

S. Karger AG, P.O. Box, CH–4009 Basel (Switzerland) E-Mail orders@karger.ch, www.karger.com

KARGER

www.karger.com/adbip

Please send: ____ copy/ies

Advances in Biological Psychiatry, Vol. 27 — Series Editors: Ebmeier, K.P. (Oxford); Gattaz, W.F. (São Paulo); Kaschka, W.P. (Ulm/Ravensburg) ISSN 0378-7354 / e-ISSN 1662-2774

Psychiatry of Parkinson's Disease

Editors: Ebmeier, K.P. (Oxford); O'Brien, J.T.; Taylor, J.-P. (Newcastle upon Tyne) X + 148 p., 5 fig., 12 tab., hard cover, 2012 CHF 74. – / EUR 62. – / USD 87.00 Prices subject to change EUR price for Germany, USD price for USA only ISBN 978-3-8055-9800-2 e-ISBN 978-3-8055-9801-9



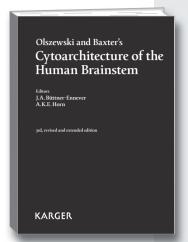
	Postage and handling free with prepayment		
Form	Payment: Please charge to my credit card American Express Diners Eurocard MasterCard Visa		
Г	Card No.:		
σ	Exp. date:		
-			
0	<u>CVV/CVC</u>		
	(3 digits in the signature field on the back of Visa and MasterCard)		
	☐ Check enclosed ☐ Please bill me		

agency, directly with the publisher or through a Karger

Name/Address:

Date:
Signature:

A new comprehensive edition of a standard work, detailing and illustrating the organization, structure, function and connectivity of all individual brainstem nuclei



Olszewski and Baxter's Cytoarchitecture of the **Human Brainstem**

3rd, revised and extended edition

Jean A. Büttner-Ennever Anja K.E. Horn

Olszweski and Baxter's Cytoarchitecture of the Human Brainstem

3rd, revised and extended edition Editors: Büttner-Ennever, J.A.; Horn, A.K.E. (Munich)

XII + 290 p., 604 fig., 1 tab., 2014 CHF 350.- / EUR 292.- / USD 412.00 (hard cover) Online version for institutional purchase Prices subject to change EUR price for Germany, USD price for USA only

ISBN 978-3-318-02367-1



Dear Librarian

I have reviewed this publication and would like to recommend it for our library.

Recommended by:

Department:

Date:

Signature:

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

The new revised and extended edition of this standard work retains all the original and unique lowpower and high-power photographs which document the organization of the human brainstem and the individual character of the neurons of each nucleus. Many structural differences are described in neuronal groups, which indicate that functional differences must be present but not yet recognized. Further it features unique details of the neuronal organization and cytoarchitecture, which themselves can provide clues to the functional properties of the cell groups, and stimulate research projects.

Nomenclature and nuclear borders have been updated, and compared to the previous edition new sections have been added describing the function and connectivity of each nucleus.

For neuroscientists and neurologists this atlas provides an invaluable and complete source of reference for their scientific research and everyday clinical practice. It combines low-power imaging of the brainstem with cytological, physiological and neuroanatomical data, which is highly relevant for neuropathologists, neuroradiologists, neuropsychologists, neurosurgeons, physiologists and physicians. Further research workers in all disciplines will find an opportunity to discover new correlations between structure and function, and to outline new functional regions in the brainstem.

Main Contents

- Introduction
- Materials and Methods
- · Alphabetical List of Nuclei, Abbreviations and Original Names

Plates of Serial Sections through the **Human Brainstem**

Chapters of Individual Nuclei

Sensory Systems

- · Somatosensory Nuclei
- Trigeminal Complex
- · Vestibular Nuclei
- · Auditory Nuclei
- · Visual Nuclei
- · Viscerosensory Nuclei

Motor Systems

- Somatomotor Nuclei
- · Oculomotor Complex
- Visceromotor Nucleus

Reticular Formation

Neuromodulatory Systems

- · Serotonergic Nuclei
- · Noradrenergic Nuclei
- · Cholinergic Nuclei
- · Dopaminergic Nuclei

Limbic Nuclei

Precerebellar Nuclei

Nuclei of Unknown Function

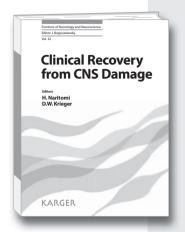
Subject Index

The easiest way to order: www.karger.com/cytoarchitecture-human-brainstem

Karger - Medical and Scientific Publishers -4009 Basel, Switzerland orders@karger.com, f: +41 61 306 12 34 www.karger.com



A compilation of innovative findings and new directions in neurological recovery



Clinical Recovery from CNS Damage

Editors Hiroaki Naritomi Derk W. Krieger

Clinical Recovery from CNS Damage

Editors: Naritomi, H. (Osaka); Krieger, D.W. (Copenhagen) VIII + 152 p., 13 fig., 6 tab., 2013 CHF 198.– / EUR 165.– / USD 233.00 (hard cover) CHF 238.– / EUR 198.– / USD 280.00 (online) Online version for institutional purchase Prices subject to change EUR price for Germany, USD price for USA only ISBN 978-3-318-02308-4 (hard cover) e-ISBN 978-3-318-02309-1

Frontiers of Neurology and Neuroscience, Vol. 32

Series Editor: Bogousslavsky, J. (Montreux) Listed in MEDLINE/Pubmed



prevent recurrence of acute CNS injuries, the emphasis has finally shifted towards repairing such devastating events and rehabilitation. This development has been made possible by substantial progress in understanding the scientific underpinnings of recovery as well as by novel diagnostic tools, and most importantly, by emerging therapies awaiting clinical trials. In this publication, several international experts introduce novel areas of neurological reorganization and repair following CNS damage. Principles and methods to monitor and augment neuroplasticity are explored in depth and supplemented by a critical appraisal of neurological repair mechanisms and possibilities to curtail disability using computer or robotic interfaces. Rather than providing a textbook approach of CNS restoration, the editors selected topics where progress is most imminent in this labyrinthine domain of medicine. Moreover, the varied background and origins of the contributors lend this book a truly global perspective on the current state of affairs in neurological recovery.

After decades of focusing on how to alleviate and

Contents

Preface: Naritomi, H; Krieger, D.W.

- Mechanisms of Functional Recovery after Stroke: Ko, S.-B.; Yoon, B.-W.
- Diagnostic Approach to Functional Recovery: Functional Magnetic Resonance Imaging in Stroke: Havsteen, I.; Madsen, K.H.; Christensen, H.; Christensen, A.; Siebner, H.R.
- Diagnostic Approach to Functional Recovery: Diffusion-Weighted Imaging and Tractography: Raffin, E.; Dyrby, T.B.
- Compensatory Contribution of the Contralateral Pyramidal Tract after Experimental Cerebral Ischemia: Takatsuru, Y.; Nakamura, K.; Nabekura, J.

- Compensatory Contribution of the Contralateral Pyramidal Tract after Stroke: Otsuka, N.; Miyashita, K.; Krieger, D.W.; Naritomi, H.
- Regeneration of Neuronal Cells following Cerebral Injury: Dailey, T.; Tajiri, N.; Kaneko, Y.; Borlongan, C.V.
- Translational Challenge for Bone Marrow Stroma Cell Therapy after Stroke: Kuroda, S.; Houkin, K.
 - Experimental Evidence and Early Translational Steps Using Bone Marrow Derived Stem Cells after Human Stroke: Kasahara, Y.; Ihara, M.; Taguchi, A.
- Therapeutic Drug Approach to Stimulate Clinical Recovery after Brain Injury: **Krieger, D.W.**
- · Rehabilitation and Plasticity: Luft, A.R.
- A Brain-Computer Interface to Support Functional Recovery: **Kjaer, T.W.; Sørensen, H.B.**
- Novel Methods to Study Aphasia Recovery after Stroke: Hartwigsen, G.; Siebner, H.R.
- Role of Repetitive Transcranial Magnetic Stimulation in Stroke Rehabilitation:
 Pinter, M.M.; Brainin, M.
- Influence of Therapeutic Hypothermia on Regeneration after Cerebral Ischemia: Yenari, M.A.; Han, H.S.
- High Voltage Electric Potentials to Enhance Brain Derived Neurotrophic Factor Levels in the Brain: Yanamoto, H.; Nakajo, Y.; Kataoka, H.; Iihara, K.
- Prevention of Post-Stroke Disuse Muscle Atrophy with a Free Radical Scavenger: Naritomi, H.; Moriwaki, H.

Dear Librarian

I have reviewed this publication and would like to recommend it for our library.

Recommended by:

Department:

Date:

Signature:

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

The easiest way to order: www.karger.com/fnene

Karger – Medical and Scientific Publishers CH–4009 Basel, Switzerland orders@karger.com, f: +41 61 306 12 34 www.karger.com

