How current biomarkers are modernizing the diagnosis of Alzheimer’s Disease

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

Editors
Harald Hampel
Maria C. Carrillo

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.

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

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 notions of a complex systems dysfunction that extends beyond prevailing ideas derived from the ‘amyloid’ or ‘tau’ hypotheses. 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.
Organ of the International Association of Gerontology and Geriatrics (IAGG)

Gerontology

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


Editor-in-Chief
G. Wick, Innsbruck

Editor Assistant
Ch. Süss, Innsbruck

Section Editors

Clinical Section
M. Lechleitner, Zirl
C.C. Sieber, Erlangen-Nuremberg

Behavioural Science Section
M.A. Luszcz, Adelaide, S.A.
M. Martin, Zurich

Experimental Section
A. Bartke, Springfield, Ill.
B. Friguet, Paris

Regenerative and Technological Section
G. Lepperdinger, Innsbruck
(Regeneration)
M. Mokhtari, Singapore (Technology)

Editorial Board

Clinical Section
M. Burtscher, Innsbruck
V.C. Emery, London
J.D. Erusalimsky, Cardiff
L. Fontana, St. Louis, Mo.
M.E. Gershwin, Davis, Calif.
J.J. Goronzy, Stanford, Calif.
U. Granacher, Potsdam
F. Kronenberg, Innsbruck
T.F. Lue, San Francisco, Calif.
J. Olshansky, Chicago, Ill.
G. Schett, Erlangen
T.M. Stulnig, Vienna
J. Tao, Guangzhou
D.C. Willcox, Ginowan

Behavioural Science Section
K.J. Anstey, Canberra, A.C.T.
L. Clare, Bangor
D. Gerstorf, Berlin
J.D. Henry, Sydney, N.S.W.
T. Hess, Raleigh, N.C.
S.M. Hofer, Victoria, B.C.
C.A. Hoppmann, Vancouver, B.C.
D.C. Park, Dallas, Tex.
J. Smith, Ann Arbor, Mich.

Experimental Section
H.M. Brown-Borg,
Grand Forks, N. Dak.
C. Franceschi, Bologna
T. Fülöp, Sherbrooke, Que.
L. Gavrilov, Chicago, Ill.
L. Haynes, Saranac Lake, N.Y.
G. Krömer, Villejuif
G.J. Lithgow, Novato, Calif.
M. Rose, Irvine, Calif.
N. Tavernarakis, Heraklion
A. Vidiik, Vienna
J. Vijg, Bronx, N.Y.

Regenerative and Technological Section
P. Anversa, Valhalla, N.Y.
B. Falkenburger, Seattle, Wash.
D. Gardiner, Irvine, Calif.
S. Helal, Gainesville, Fla.
N. Hine, Dundee
K.-S. Kang, Seoul
A. Keating, Toronto, Ont.
B. Najafi, North Chicago, Ill.
W. Zagler, Vienna

Editor for the IAGG
M. Rodriguez Perracini, São Paulo

KARGER

Printed in Switzerland
on acid-free and non-aging paper (ISO 9706) by Reinhardt Druck, Basel
Appears bimonthly:
1 volume per year
(6 issues)
Gerontology

‘Gerontology’ publishes manuscripts on all aspects of experimental, clinical, behavioural, regenerative and technological science research into the aging process. It accepts particularly high-quality, original papers in all disciplines of gerontological research.

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.

Manuscripts may be submitted in the following categories:

- Mini-Review (invited)
- Original Paper
- Debate (invited)
- Viewpoint (invited)
- Short Communication
- Images in Gerontology
- Letter to the Editor

Authors should indicate the category they wish their article to be considered for. The Editor-in-Chief reserves the right to arrange the submitted manuscripts into one of the four sections.

Submission

Only original papers written in English are considered and should be submitted using the online submission website at:

www.karger.com/ger

or, should you experience any problems with your submission, please send your article as e-mail attachment to the Editorial Office:

gerontology@i-med.ac.at

Editorial Office 'Gerontology'
Georg Wick, MD
Laboratory of Autonomy
Innsbruck Medical University
Peter-Mayr-Strasse 4a
A-6020 Innsbruck
Austria

Tel. +43 512 9003 79060
Fax +43 512 9003 73271

A statement signed by all authors saying that they agree with the publication of the paper should accompany the manuscript.

Original Papers (max. 6,000 words and 40 references) must describe new research results, not published or under consideration in another journal. All papers should be arranged with an Introduction, Methods, Results and Discussion. Abbreviations should be explained and limited to a minimum. All terms abbreviated in the text, abstract and in the figures must, on the first occasion, be given in full, followed by the abbreviation (e.g. electrocardiogram (ECG)). Any papers dealing partly or wholly, with basic science should include a few lines of description to any concept which may not be well known to some readers who are primarily practising clinicians.

Mini-Reviews (max. 4,000 words plus approx. 20 references) and occasionally Extensive Reviews are to be submitted exclusively upon solicitation by the Section Editors or by the Editors of special issues, via the Editor-in-Chief. They are not subject to page charges.

The Debate and Viewpoint categories publish arguments, critical statements and theoretical papers reflecting the authors’ personal views on mechanisms of the aging process in all areas within the scope of ‘Gerontology’. Manuscripts are to be submitted exclusively upon solicitation by the Section Editors, via the Editor-in-Chief, and to be limited to 4,000 words and 20 references.

Short Communications (max. 2,000 words plus approx. 10 references) must contain data derived from front-edge research and be of potential interest to a large fraction of the readership.

Letters to the Editor (max. 1,000 words plus approx. 10 references) are encouraged if they directly concern articles previously published in this journal and clinical subjects related to the matters discussed. In exceptional cases, they may also address data published in another journal. The editor reserves the right to submit copies of such letters to the authors of the articles concerned prior to publication in order to permit them to respond in the same issue of the journal. Letters on general scientific or medical subjects in gerontology are also welcome.

Conditions

Only manuscripts that conform with the Guidelines for Authors will be considered.

All manuscripts are subject to editorial review. Manuscripts are accepted with the explicit understanding that they are not under simultaneous consideration by any other publication or have not already been published. Submission of an article for publication implies the transfer of the copyright from the author to the publisher upon acceptance. Accepted papers become the permanent property of ‘Gerontology’ and may not be reproduced by anyone, other than a comma to separate the authors. Preferably, initials should be given. There should be no punctuation or abbreviations in article titles.

Conflict of Interest

All forms of funding and support, including that from companies, and any potential competing financial interests should be acknowledged in the cover letter to the editor. The statement has to be listed at the end of the article.

Ethical Requirements

Appropriate proof has to be provided that all ethical prerequisites have been fulfilled. These include permission granted by responsible Ethical Committees and informed consent of participants in studies on human subjects, as well as permission obtained from Review Boards for animal experiments.

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 a 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 (no abbreviations).

Each Abstract 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 significant conclusion?

The abstract should not exceed 350 words, and any abbreviations must be explained.

Footnotes: Avoid footnotes. When essential, they are 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 pages. Tables require a heading and figure legends should be supplied on a separate page. For technical reasons, figures with a screen background should not be submitted. When possible, group several illustrations on 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. Figure files must not be embedded in a document file but submitted separately.

Color illustrations: 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 initials should be given. There should be no punctuation after 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 interleukin 6 reflects disease severity and osteoporosis in mastocytosis patients. Int Arch Allergy Immunol DOI: 10.1159/000063838.


(d) Edited books: Park BK, Sanderson JP, Naisbitt DJ: Drugs as haptns, antigens, and immunogens; in Pi...
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).

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 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 are no page charges for papers of up to 4 printed pages (i.e., 12 typewritten pages at 33 lines per page, 65 strokes per line, including tables, illustrations and references). Each additional complete or partial page is charged to the author at CHF 325.–.

Proofs
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.

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 in print. Authors can influence the time of appearance by promptly returning the proofs.

Reprints
Order form and price list is sent with the PDF proofs. Orders submitted after the issue is printed are subject to considerably higher prices.

AGEING and DIVERSITY CONFERENCE 2012

Thursday 13 – Saturday 15 September 2012
Waipuna Hotel & Conference Centre, Auckland

KEY DATES:
• Call for Abstracts NOW OPEN
• Abstract submission closes 25 April 2012
• Registration opens NOW OPEN

CONFERENCE THEMES:
• Older People and Cognition
• Carers, Families, Partners
• Community Approaches to Ageing
• Active Ageing and Participation
• End of Life

KEYNOTE SPEAKERS:
Amanda Barnier, Lindy Clemson, Chris Cunningham, Angela Gutches, Jolanda Jetten, Nicola Lautenschlager, Finnbar Martin and Bruce Rumbold

**Clinical Trials on Alzheimer’s Disease**

**2012**

**Montpellier '08 | Las Vegas '09 | Toulouse '10 | San Diego '11 | Monte Carlo '12**

**Forum Grimaldi - Monte Carlo**

**29-31 October 2012**

**CALL FOR ABSTRACTS**

- Deadline to submit a symposium: May 15th, 2012
- Deadline to submit oral/poster presentations: June 15th, 2012

http://www.ctad.fr

---

**ICSR 2012**

**International Conference on Sarcopenia Research**

**Thursday 6th & Friday 7th December, 2012 Orlando, FL USA**

**Sarcopenia** is an age-related condition characterized by loss of muscle mass and strength, which may, in turn, lead to loss of function. Over the last several decades, research have recognized the importance of this major feature of the aging process and have focused their efforts accordingly. The International Conference on Sarcopenia Research will focus on:

- Biology
- Animal models
- Preclinical studies
- Clinical trials
- Functional assessment
- Biomarkers and imaging
- New drug developments
- Physical activity
- Nutrition intervention
- Epidemiology

**Call for abstracts: Oral communication - Poster**

Deadline: abstracts must be received by the secretary no later than JUNE 25th, 2012

Registration • Abstract

[www.icsr-sarcopenia.com](http://www.icsr-sarcopenia.com)
Thursday 21st June, 2012

8:45am - 9:00am Welcome and presentation
Prof. Bruno VELLAS (France) & Prof. Antoni SALVA (Spain)

Course Directors
Prof. Lodovico BALDUCCI (USA), Prof. Matteo CESARI (France),
Prof. Jaime FITTEN (USA), Prof. Alan SINCLAIR (UK)

09:00am - 11:00am GERONTOLOGY Session 1
• How to teach & how to publish in Gerontology (30 minutes)
  Alan SINCLAIR (Bedfordshire, UK)
• Clinical trials in frail older adults (30 minutes)
  Matteo CESARI (Toulouse, France)
• Palliative Care (30 minutes)
  Xavier GOMEZ-BATISTE (Barcelona, Spain)
• Behavior disorders in dementia (30 minutes)
  Jaime FITTEN (California, USA)

11:00am - 11:30am Coffee break

11:30am - 12:30pm GERONTOLOGY Workshop 1
How to publish (1 hour)
Alan SINCLAIR (Bedfordshire, UK)
• Clinical case in psychogeriatrics (1 hour)
  Jaime FITTEN (California, USA)

12:30pm - 02:00pm Lunch break

02:00pm - 03:30pm GERONTOLOGY Session 2
• Nutrition and aging (30 minutes)
  Bruno VELLAS (Toulouse, France)
• Cognitive decline, dementia and gait disorders (30 minutes)
  Marco INZITARI (Barcelona, Spain)
• Use of imaging & biomarkers in the diagnosis of Alzheimer’s disease (30 minutes)
  Jacques TOUCHON (Montpellier, France)

03:30pm - 04:00pm Coffee break

04:00pm - 05:00pm GERONTOLOGY Workshop 2
How to submit a grant on clinical research and aging (1 hour)
Sandrine ANDRIEU (Toulouse, France)
• Dementia, frailty & nutrition (1 hour)
  Antoni SALVA (Barcelona, Spain)
  Laura COLL (Barcelona, Spain)

Friday 22nd June, 2012

9:00am - 10:30am CANCER Session 3
• Biology interactions of cancer and age (20 minutes)
  Vladimir ANISIMOV (St Petersburg, Russia)
• Epidemiology of cancer in older patients (20 minutes)
  Pascale GROSCLAUDE (Toulouse, France)
• Hematological malignancies (20 minutes)
  Mariano PROVENCIO (Madrid, Spain)
• Cancer prevention in the elderly (20 minutes)
  Lodovico BALDUCCI (Tampa, USA)

10:30am - 11:00am Coffee break

11:00am - 12:00am CANCER Workshop 3
Case presentations (1 hour)
Enrique LERMA (Barcelona, Spain)
Carmen ALONSO (Barcelona, Spain)
• Clinical manifestations of cancer in the elderly (1 hour)
  Matteo CESARI (Toulouse, France)
  Lodovico BALDUCCI (Tampa, USA)

12:00pm - 02:00pm Lunch break

02:00pm - 03:30pm CANCER Session 4
• Who should be treated? Life expectancy and treatment tolerance (20 minutes)
  Lodovico BALDUCCI (Tampa, USA)
• Hematologic complications of cancer treatment for elderly & anemia (20 minutes)
  Agustí BARNADAS (Barcelona, Spain)
• Breast cancer in older subjects (20 minutes)
  Laura BIGANZOLI (Prato, Italy)
• Prostate cancer (20 minutes)
  Jean-Pierre DROZ (Lyon, France)

03:30pm - 04:00pm Coffee break

04:30pm - 05:00pm CANCER Workshop 4
Systemic treatment of cancer in the elderly (1 hour)
Rafael ROSELL (Barcelona, Spain)
Lodovico BALDUCCI (Tampa, USA)
• Cancer and frailty (1 hour)
  Matteo CESARI (Toulouse, France)

Meeting Place: Hospital de la Santa Creu i Sant Pau
Office & Contact: tel: + 33 (0) 5.61.14.56.39 • fax: + 33 (0) 5.61.14.56.40 • seynes@cict.fr • www.iagg.info
Registration : www.ic-ageing.com
**Selected Contents**

**Applied Technologies in Mechanical Ventilation**
- Proportional Assist Ventilation and Neuromechanical Adjusted Ventilatory Assist: Beck, J.; Sinderby, C.

**Weaning Mechanical Ventilation**
- Corticosteroids to Prevent Post-Exubation Upper Airway Obstruction: Epstein, S.K.
- FLEX: A New Weaning and Decision Support System: Tehrani, F.T.

**Applied Technologies in Specific Clinical Situations**
- Applied Technologies in Mechanical Ventilation
- Cardiopulmonary Resuscitation with the Boussignac System: Has the Time Come to Unwire the 'Wired' Subjects?: Boussignac, G.
- Respiratory Function Monitoring during Simulation-Based Mannequin Teaching: Schmölzer, G.M.; Morley, C.J.
- Thermal Infrared Imaging during Polysomnography: Murthy, J.N.; Pavlidis, I.
- Cardiopulmonary Resuscitation with the Boussignac System: Has the Time Come to Unwire the 'Wired' Subjects?: Boussignac, G.
- Respiratory Function Monitoring during Simulation-Based Mannequin Teaching: Schmölzer, G.M.; Morley, C.J.
- Diabetes Treatment by Inhalation of Insulin – shrine and Decline of a Novel Type of Therapy: Siekmeyer, R.; Scheuch, G.

**Technology in Diagnosis and Pulmonary Problems**
- Endobronchial Ultrasound: Anantham, D.; Siyue, M.K.
- Critical Care Outcome of Lung Cancer Patients: Adam, A.K.; Soubani, A.O.
- Prognosis and Readmission Readmission to the Intensive Care Unit for Patients with Lung Edema or Atelectasis: Matsuoka, Y. et al.
- Pulmonary Rehabilitation and Technology Early Mobilization in the Intensive Care Unit: Safety, Feasibility, and Benefits: Koropoulou, R. et al.
- Evidence-Based Guidelines in Pulmonary Rehabilitation: Ries, A.L.

**Technology in Anesthesiology**
- Minimally Invasive Thoracic Surgery for Pulmonary Resections: Salati, M.; Rocco, G.

**Technology in Transplants**
- Preservation of Organs from Brain-Dead Donors with Hyperbaric Oxygen: Bayrakci, B.
- Teleassistance in Chronic Respiratory Failure Patients: Vitaccia, M.
- Capnography: Gradient PACO2 and PETCO2: Donnellan, M.E.

**Technology and Equipment in Transport**
- Problems of Air Travel for Patients with Lung Disease: Robson, A.G.

**Respiratory Technology in Abdominal Syndromes**
- Intra-Abdominal Hypertension and Abdominal Compartment Syndrome: Measuring Techniques and the Effects on Lung Mechanics: De Keulenaer, B.L.

**Critical Care Problems**
- Pleural Effusions in Critically Ill Patients: Papaioannou, V.; Pneumatikos, I.

**Technology in Pediatrics and Neonatology Critical Care**
- Exogenous Surfactant in Respiratory Distress Syndrome: Calkovska, A.; Herting, E.
- Hypercapnia and Hypocapnia in Neonates: Tao, L.; Zhou, W.

**Respiratory Health Problems and Environment**
- Air Pollution and Health: Carvalho-Oliveira, R. et al.
- Air Pollution and Non-Invasive Respiratory Assessments: Nakagawa, N.K. et al.

**Organization in Pulmonary Medicine**
- Mechanical Ventilation in Disaster Management: Braanson, R. et al.

Please send: copy/ies

Postage and handling free with prepaid

**Payment:**
- Please charge to my credit card
- 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)

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

**Please bill me**

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

**Karger**
Stroke is a leading cause of death and the major cause of long-term, physical, psychological and social disability in the elderly around the world. Knowing and treating the most common risk factors for stroke such as hypertension, diabetes mellitus, dyslipidemia, atrial fibrillation, and obesity may reduce the occurrence of stroke substantially. In the last decades, there has been tremendous progress in the development of non-invasive diagnostic techniques like ultrasound MRI, CT angiography, CT perfusion, as well as new effective therapeutic strategies for acute ischemic stroke which established vascular neurology as one of the most progressive fields in medicine. This publication provides the reader with the most recent updated advanced knowledge on the practical clinical approach to stroke medicine. It covers essential and practical information on the pathophysiology and epidemiology of stroke, new diagnostic techniques which allow for better diagnosis and identification of various subtypes of stroke, and new therapeutic strategies for acute stroke and transient ischemic attack.

Contents

List of Contributors
Preface: Bornstein, N.M.
Introduction
Anatomy and Pathophysiology of Stroke: Auriel, E.
Burden of Stroke
Burden of Stroke and Risk Factors: Gorelick, P.B.
Pathophysiology of Ischemia
Implications of Stroke Pathophysiology and the Ischemic Penumbra: Fisher, M.; Kumar, R.
Neuroplasticity and Neurorecovery
Neuroplasticity and Neurorecovery: Muresanu, D.F.
Classification of Stroke Subtypes
Classification of Stroke Subtypes: Norrving, B.
Imaging in Stroke-Diagnosis and Prevention
Neuroimaging: von Kummer, R.
Use of Ultrasound in Acute Ischemic Stroke: Celba, L.

How to Organize Stroke Care?
Stroke Units: Brainin, M.; Tatschl, C.; Teuschl, Y.

Management of Acute Stroke
Management of Acute Ischemic Stroke – The HYPER-Link-Hypertension, Hyperglycemia and Hyperthermia: Auriel, E.; Bornstein, N.M.
Management of Acute Stroke: Thrombolytic Therapy: Wahlgren, N.
Management of Acute Stroke: Neuroprotection: Muresanu, D.F.

Post-Stroke Complications
Late Post Stroke Complications: Auriel, E.; Bornstein, N.M.

Secondary Stroke Prevention
Surgical and Endovascular Interventions for the Secondary Prevention of Stroke: Rothwell, P.M.

Intracranial Hemorrhage
Intracerebral Hemorrhage: Chemmanam, T.; Davis, S.

Author Index
Subject Index

www.karger.com/Stroke-Practical-Guide
Contents

See the journal website for contents
Venue
The British Society for Research on Ageing 'Ageing mechanisms and mitigants' will take place at Aston University, Birmingham, United Kingdom. Accommodation for the first 70 registrants will be on site.

Confirmed speakers include:
Gro Amdam, USA ▶ Ageing models
Werner Zwerschke, Austria ▶ Adipose tissue and IGF
Osborne Almeida, Germany ▶ Epigenetics
Nektarios Tavernarakis, Greece ▶ Autophagy
Robert Phillips, Purdue ▶ Alpha synuclein aggregates
Khalil Bitar ▶ Bioengineering
Valery Krizhanovsky, Israel ▶ Role of p53 in ageing
Janet Lord, UK ▶ Immunosenesence
Colin Selman, UK ▶ mTOR
Richard Faragher, UK ▶ Preventing Senescence
Gordon Lithgow, USA ▶ Extending Lifespan or Preventing Age-dependent Disease?

Registration and Abstract submission for oral or a poster presentation is now open at: www.aston.ac.uk/bsra
Early Bird deadline is 1st April 2012
Alzheimer’s Association
International Conference 2012

July 14–19
Vancouver, British Columbia

At AAIC, expect more.

Register for AAIC 2012 to join the world’s leading scientists in a unique forum where you can expect more. More opportunities to learn. More opportunities to share. And more opportunities to advance dementia research.

alzheimer's association

alz.org/AAIC
Invitation from the IAGG Africa Region

The first IAGG Africa Region Conference ‘Ageing Africa: Beyond Madrid + 10’ will mark ten years since the Second United Nations World Assembly on Ageing was held in Madrid, Spain in 2002, and the Madrid International Plan of Action on Ageing (MIPAA) and the African Union Policy Framework and Plan of Action on Ageing (AU Plan) were adopted by the governments of African countries. The event will bring together researchers, policy makers, geriatric medicine and care practitioners, civil society role players, and other relevant stakeholders from across Africa and further abroad, 1) to assess progress in implementation of MIPAA and the AU Plan implementation in Africa, and 2) to forge directions for advancing African gerontology, geriatrics and policy action on ageing in the coming decade.

The Conference programme will:
• Appraise existing policies on ageing in African countries
• Consolidate knowledge on ageing in Africa and pinpoint key evidence gaps
• Identify approaches for advancing Geriatric Medicine and old age care services in Africa
• Establish frameworks for developing gerontological and geriatric training and research in Africa
• Foster North-South and South-South comparisons and exchange
• Connect stakeholders working on ageing in Africa and other world regions

Key outcomes of the Conference deliberations will be incorporated in a framework of strategic directions for African research, training, policy and practice on ageing in the coming years.

On behalf of the IAGG Africa Region, we warmly invite you to participate in the Conference and to contribute to the Ageing endeavour in the continent.

Dr. Isabella Aboderin
IAGG Regional Chair and Conference Convenor

Dr. Sebastiana Kalula
Convenor of the Local Organising Committee

For further information please contact:
UCT Conference Management Centre
Deidre Raubenheimer
Tel. +27 21 406 6167
Fax +27 21 448 6263
E-mail deidre.raubenheimer@uct.ac.za
Contents

Introductions
Harnessing the Energy of the Asia Pacific: Chan-Palay, V.
The Unparalleled Challenge of Aging Populations: Ng, T.-P.

Original Research Articles
Apolipoprotein E Polymorphism and Dementia: A Hospital-Based Study from Southern India: Bharath, S.; Purushottam, M.; Mukherjee, O.; Bagepally, B.S.; Prakash, O.; Kota, L.; Krishnappa, S.B.; Sivakumar, P.T.; Jain, S.; Varghese, M.
IL-6–174 G/C and ApoE Gene Polymorphisms in Alzheimer’s and Vascular Dementia Patients Attending the Cognitive Disorder Clinic of the All India Institute of Medical Sciences, New Delhi: Mansoori, N.; Tripathi, M.; Alam, R.; Luthra, K.; Parveen, S.; Mukhopadhyay, A.K.
Family Caregiving in Dementia: The Asian Perspective of a Global Problem: Chan, S.W.-C.

Apolipoprotein E Polymorphism and Age at Onset of Alzheimer’s Disease in a Quadriethnic Sample: Kwon, O.D.; Khaleeq, A.; Chan, W.; Pavlick, V.K.; Doody, R.S.

Interethnic Differences in Dementia Epidemiology: Global and Asia-Pacific Perspectives: Venkataeswaran, N.; Sahadevan, S.; Kuo, E.H.; Chen, C.P.; Ng, T.-P.

Recognition, Attitudes and Causal Beliefs regarding Dementia in Italian, Greek and Chinese Australians: Low, L.-F.; Anstey, K.J.; Lackersteon, S.M.; Camit, M.; Harrison, F.; Draper, B.; Brodaty, H.

Why Family Caregivers Choose to Institutionalize a Loved One with Dementia: A Singapore Perspective: Tew, C.W.; Tan, L.F.; Luo, N.; Ng, W.Y.; Yap, P.

Association between Body Mass Index and Cognitive Function among Chinese Nonagenarians/Centenarians: Niti, M.; Yap, P.; Yeo, D.; Ng, T.-P.


Sociodemographic Risk Factors and Correlates of Dementia in Older Malaysians: Hamid, T.A.; Krishnaswamy, S.; Abdullah, S.S.; Montaz, Y.A.

A Controlled Naturalistic Study on a Weekly Music Therapy and Activity Program on Disruptive and Depressive Behaviors in Dementia: Han, P.; Kwan, M.; Chen, D.; Yusoff, S.Z.; Chiong, H.L.; Goh, J.; Yap, P.


The Asia-Pacific Experience with Dementia and Cognitive Disorders

Dementia: The Asia-Pacific Perspectives

Editor
Tze-Pin Ng
Pathobiology offers a valuable platform for the publication of high-quality original research into the mechanisms underlying human disease. Aiming to serve as a bridge between basic biomedical research and clinical medicine, the journal welcomes articles from scientific areas such as pathology, oncology, anatomy, virology, internal medicine, surgery, cell and molecular biology, and immunology. Published bimonthly, Pathobiology features original research papers and reviews on translational research. The journal offers the possibility to publish proceedings of meetings dedicated to one particular topic.

Selected contributions

- Erythropoietin: A Hormone with Multiple Functions: Lombardero, M. (Lugo); Kovacs, K. (Toronto, Ont.); Scheithauer, B. W. (Rochester, Minn.)
- Differential Diagnoses of Systemic Mastocytosis in Routinely Processed Bone Marrow Biopsy Specimens: A Review: Horny, H.-P. (Ambach); Setlar, K. (Munich); Valent, P. (Vienna)
- Inter- and Intra-Biobank Networks: Classification of Biobanks: Shickle, D.; Griffin, M.; El-Arifi, K. (Leeds)
- Cystic Fibrosis Transmembrane Conductance Regulator Can Export Hyaluronan: Schulz, T. (Münster); Schumacher, U. (Hamburg); Prante, C. (Bad Oeynhausen); Sextro, W. (Hamburg); Prehm, P. (Münster)
- Mutations of Lysophosphatidic Acid Receptor Genes in Human Osteosarcoma Cells: Okabe, K.; Hayashi, M.; Fujii, M. (Higashiosaka); Honoki, K.; Mori, T. (Kashihara); Fukushima, N.; Tsujiuchi, T. (Higashiosaka)

More information at www.karger.com/pat
- 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

Pathobiology 2012: Volume 79
6 issues per volume
Language: English
ISSN 1015–2008 (print)
ISSN 1423–0291 (online)
Listed in bibliographic services, including Current Contents®/Life Sciences, MEDLINE, Biological Abstracts, EMBASE/Excerpta Medica
Clinical Section

Original Papers

197 Effects of Strength Training versus Power Training on Physical Performance in Prefrail Community-Dwelling Older Adults
Drey, M. (Nuremberg); Zech, A. (Hamburg); Freiberger, E.; Bertsch, T.; Uter, W.; Sieber, C.C.; Pfeifer, K. (Nuremberg); Bauer, J.M. (Oldenburg)

205 Relationship between Hyposalivation and Acute Respiratory Infection in Dental Outpatients
Iwabuchi, H.; Fujibayashi, T. (Utsunomiya); Yamane, G. (Ichikawa); Imai, H.; Nakao, H. (Wako)

Short Communications

212 The Dowager’s Hump: An Early Start?
Weale, R.; Weale, M. (London)

216 Electrocardiographic Changes in Centenarians: A Study on 42 Subjects and Comparison with the Literature
Basile, G.; Cucinotta, M.D.; Figliomeni, P.; Lo Balbo, C.; Maltese, G.; Lasco, A. (Messina)

Debates

221 Comments on Dietary Restriction, Okinawa Diet and Longevity
Gavrilova, N.S.; Gavrilov, L.A. (Chicago, Ill.)

224 Dietary Restriction in Humans: A Response to Drs. Gavrilova and Gavrilov
Le Bourg, E. (Toulouse)

Experimental Section

Mini-Review

227 Molecular Basis of Arterial Stiffening: Role of Glycation – A Mini-Review
Sell, D.R.; Monnier, V.M. (Cleveland, Ohio)

Original Paper

238 BMD Values and GSTM3 Gene Polymorphisms in Combination with GSTT1/GSTM1 Genes: A Genetic Association Study in Slovenian Elderly
Jurkovic Mlakar, S.; Prezelj, J.; Osredkar, J.; Marc, J. (Ljubljana)

Behavioural Science Section

Original Papers

249 Multidimensional Predictors of Fatigue among Octogenarians and Centenarians
Cho, J. (College Station, Tex.); Martin, P.; Margrett, J. (Ames, Iowa); MacDonald, M. (Manhattan, Kans.); Johnson, M.A.; Poon, L.W. (Athens, Ga.) for the Georgia Centenarian Study

258 Prevalence of Self-Neglect across Gender, Race, and Socioeconomic Status: Findings from the Chicago Health and Aging Project
Dong, X.; Simon, M.A.; Evans, D.A. (Chicago, Ill.)

Regenerative and Technological Section

Original Paper

269 Participatory and Persuasive Telehealth

Viewpoint

282 The Eldercare Factory
Sharkey, N.; Sharkey, A. (Sheffield)

Cover Illustration
Schematic representation of programmed cell death or apoptosis (from Greek = falling of leaves).