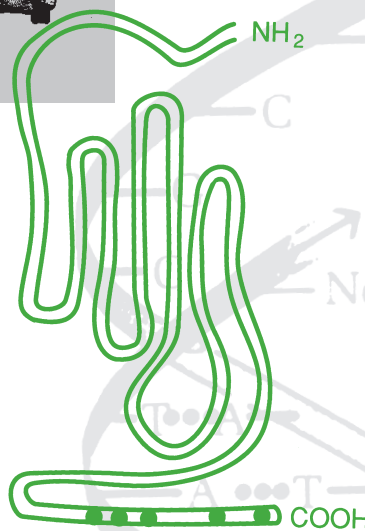
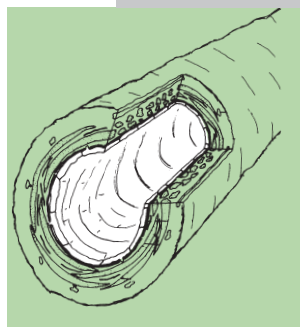


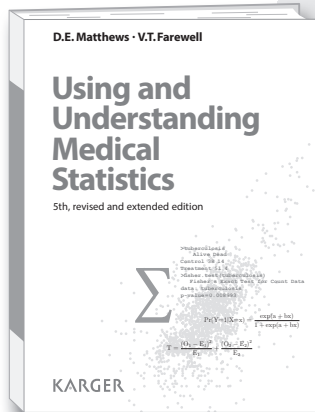
Journal of **Vascular Research**



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

KARGER

Medical Statistics has never been easier!



David E. Matthews
Vernon T. Farewell

Using and Understanding Medical Statistics

5th, revised and extended edition

Matthews, D.E. (Waterloo, Ont.);
Farewell, V.T. (Cambridge)
Using and Understanding Medical Statistics
5th, revised and extended edition
XX + 338 p., 48 fig., 103 tab., 2015
CHF 49.00 / EUR 46.00 / USD 54.00
(hard cover + online supplementary material)
Online version for institutional purchase
Prices subject to change, VAT not included
EUR price for eurozone countries, USD price for
USA and Latin America only
ISBN 978-3-318-05458-3
(hard cover + online supplementary material)
e-ISBN 978-3-318-05459-0

eBook available on:



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 fifth revised edition of this highly successful book presents the most extensive enhancement since *Using and Understanding Medical Statistics* was first published 30 years ago. Without question, the single greatest change has been the inclusion of source code, together with selected output, for the award-winning, open-source, statistical package known as R. This innovation has enabled the authors to de-emphasize formulae and calculations, and let software do all of the 'heavy lifting'.

This edition also introduces readers to several graphical statistical tools, such as Q-Q plots to check normality, residual plots for multiple regression models, funnel plots to detect publication bias in a meta-analysis and Bland-Altman plots for assessing agreement in clinical measurements. New examples that better serve the expository goals have been added to a half-dozen chapters. In addition, there are new sections describing exact confidence bands for the Kaplan-Meier estimator, as well as negative binomial and zero-inflated Poisson regression models for over-dispersed count data.

The end result is not only an excellent introduction to medical statistics, but also an invaluable reference for every discerning reader of medical research literature.

Contents

Preface to the Fifth Edition
Prefaces to the Previous Editions

- Basic Concepts
- Tests of Significance
- Fisher's Test for 2 × 2 Contingency Tables
- Approximate Significance Tests for Contingency Tables
- Some Warnings concerning 2 × 2 Tables
- Kaplan-Meier or 'Actuarial' Survival Curves
- The Log-Rank or Mantel-Haenszel Test for Comparing Survival Curves
- An Introduction to the Normal Distribution
- Analyzing Normally Distributed Data
- Linear Regression Models for Medical Data
- Binary Logistic Regression
- Regression Models for Count Data
- Proportional Hazards Regression
- The Analysis of Longitudinal Data
- Analysis of Variance
- Data Analysis
- The Question of Sample Size
- The Design of Clinical Trials
- Further Comments regarding Clinical Trials
- Meta-Analysis
- Epidemiological Applications
- Diagnostic Tests
- Agreement and Reliability

References
Subject Index

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

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

KARGER 125
LEBENS

Journal of **Vascular Research**

Founded 1964 as 'Angiologica' by M. Comèl and L. Laszt (1964–1973)
continued as 'Blood Vessels' by J.A. Bevan (1974–1991)
continued as 'Journal of Vascular Research' by M.J. Mulvany (1991–2002)

Incorporating International Journal of Microcirculation, Clinical and
Experimental, founded 1980 by the European Society for Microcirculation

Editor-in-Chief

U. Pohl, Munich

Associate Editors

J.G.R. de Mey, Maastricht
I. Fleming, Frankfurt/Main
A. Koller, Budapest/Valhalla, N.Y.
(Reviews)
G.A. Meininger, Columbia, Mo.
E. van Bavel, Amsterdam
J.D. Pearson, London
M. Ziche, Siena

Editorial Assistant

E. Aralikatti, Munich

Editorial Board

J.E. Brayden, Burlington, Vt.
G. Breier, Dresden
N.J. Brown, Sheffield
G. Clough, Southampton
M.J. Davis, Columbia, Mo.
J.C. Frisbee, Morgantown, W.Va.
C.J. Garland, Oxford
M. Gassmann, Zurich
T. Gloe, Mannheim
M. Gollasch, Berlin
A.M. Heagerty, Manchester
P. Hellstrand, Lund
D. Henrion, Angers
C. Hill, Canberra
M.A. Hill, Columbia, Miss.
Y. Huang, Shatin, Hong Kong
V.H. Huxley, Columbia, Mo.
J.D. Imig, Milwaukee, Wis.
W.F. Jackson, East Lansing, Mich.
I. Laher, Vancouver, B.C.
T.M. Lincoln, Mobile, Ala.
L. Lindbom, Stockholm
J. Lopez-Barneo, Sevilla
R.M. Lynch, Tucson, Ariz.
J.M. Marshall, Birmingham
S. Massberg, Boston, Mass.
J.C.I. McGrath, Glasgow
A.C. Newby, Bristol
H. Nilsson, Göteborg
M.G.A. oude Egbrink, Maastricht
A.R. Pries, Berlin
I.H. Sarelius, Rochester, N.Y.
E.L. Schiffrin, Montreal, Que.
G.W. Schmid-Schönbein,
La Jolla, Calif.
S.M. Schwartz, Seattle, Wash.
S.S. Segal, Columbia, Mo.
A.C. Shore, Exeter
U. Simonsen, Aarhus
L. Sorokin, Münster
D.W. Stepp, Augusta, Ga.
A. Tedgui, Paris
J.E. Tooke, London
V.W. van Hinsbergh, Amsterdam
E. Vicaut, Paris
U.H. von Andrian, Boston, Mass.
B.R. Wamhoff, Charlottesville, Va.
C. Webb, Augusta, Ga.
C. de Wit, Lübeck

The *Journal of Vascular Research* publishes manuscripts of scientific distinction in the vascular, microvascular and lymphatic fields, as regards biology, physiology and pathophysiology, with an emphasis on mechanisms. The scope of the journal covers a broad spectrum of research, including structure, function, hemodynamics, mechanics, pharmacology, cell signalling, intercellular communication, growth and differentiation. Papers employing cellular, biophysical, molecular and intravital microscopic as well as more classical techniques are welcome. Clinical approaches (especially in the field of microcirculation) will be readily considered only if they provide new insights into the origin or rational therapy of diseases. Manuscripts may be in the form of research papers, reviews, short communications, letters to the editor, commentaries and new methods in vascular research. In all cases, the criteria for acceptance are based on completeness, novelty and scientific excellence.

Submission

Only original papers written in English are considered. Research papers and reviews should not normally be more than 10 printed pages in length including illustrations and references (approximately 6,460 characters, spaces included per printed page). Authors wishing to submit a review should contact the Editors in advance. Short communications should not exceed 3 printed pages.

Manuscripts to the *Journal of Vascular Research* can now be submitted online! Detailed online submission instructions with a link to the submission website are at www.karger.com/jvr. Before submitting your manuscript, you are encouraged to review the detailed guidelines at www.karger.com/jvr_guidelines for specific directions as how to get a manuscript ready for submission. Should you have any problems with your submission or feel the need to submit the paper in a non-electronic form, please contact the editorial office:

Editorial Office:

Eva Aralikatti
jvr@karger.com
Tel. +49 89 2180 75388
Fax +49 89 2180 75378

Conditions

All manuscripts must be accompanied by a covering letter signed by all authors and 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 the *Journal of Vascular Research* 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.

Sections

Research Papers: Submitted manuscripts should be fully documented reports of original research. They must describe significant and original observations which can be critically evaluated and, if necessary, repeated.

Review: Reviews concerned with topics of current interest in vascular research will be welcome. Potential authors are asked to contact the editors before submitting their papers in order to avoid clashes with other

pending reviews. All reviews will be subjected to normal critical peer refereeing.

Methods in Vascular Biology: Primarily methodological papers of interest to the average reader. They should follow the normal arrangement of research papers, including an abstract not exceeding 150 words and should not be more than 3 printed pages in length (including figures, tables and references).

Rapid Communication: Manuscripts intended as rapid communications must present new and exciting results of sufficient importance to justify their accelerated acceptance. They should follow the normal arrangement of research papers, including an abstract not exceeding 150 words. Rapid communications should not be more than 3 printed pages in length (including figures, tables and references). Rapid communications can only be accepted as they are or with minor modifications. Rejected manuscripts can only be reconsidered as regular papers. Review will be rapid, and, once accepted, the paper will be included in the next planned issue.

Commentary: Comments concerning current topics of interest in vascular science will be considered for publication by the Editors. They should not be more than one printed page in length (approx. 6,460 characters, spaces included).

Letter to the Editor: Letters to the Editor concerning articles published in *Journal of Vascular Research* may be submitted for publication. If accepted, the authors of the articles concerned will be given the opportunity to reply.

Arrangement

Manuscript organization: Manuscripts should include, in sequence and on separate pages: title and authors, address, running title and acknowledgment of support; abstract and key words; introduction; methods; results; discussion; acknowledgments; references; tables; figures.

The normal maximum length is 10 printed pages (including tables, illustrations and references), one printed page containing approximately 6,460 characters, spaces included.

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 an e-mail address.

Key words: For indexing purposes, a list of 3–10 key words in English is essential. Consult previous numbers of *Journal of Vascular Research* for suitable entries.

Abstract: Each paper needs an abstract of up to 200 words.

Footnotes: Acknowledgment of support is printed as a footnote to the title. Other footnotes should be avoided.

Style: All measurements should normally be in SI units. Blood pressure may be given in mm Hg. Use generic names of drugs. Avoid jargon, euphemisms and abbreviations.

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. 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. Each illustration must be labelled with its number and the first author's name. b/w half-tone and color illustrations must have a final resolution of 300 dpi after scaling (final size), line drawings one of 800–1,200 dpi. Figure files must not be embedded in a document file but submitted separately (see detailed instructions at www.karger.com/jvr_guidelines).

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

(a) *Papers published in periodicals:* Robinson CM, O'Dee D, Hamilton T, Nau GJ: Cytokines involved in interferon- γ production by human macrophages. *J Innate Immunol* 2010;2:56–65.

(b) *Papers published only with DOI numbers:* Konstantinou GN, Bousquet PJ, Zuberbier T, Papadopoulos NG: The longest wheel diameter is the optimal measurement for the evaluation of skin prick tests. *Int Arch Allergy Immunol* DOI: 10.1159/000250443.

(c) *Monographs:* Matthews DE, Farewell VT: *Using and Understanding Medical Statistics*, ed 4, revised. Basel, Karger, 2007.

(d) *Chapters published in edited books:* Li L, Boussioutis V: Control and regulation of peripheral tolerance in allergic inflammatory disease: therapeutic consequences; in Blaser K (ed): *T Cell Regulation in Allergy, Asthma and Atopic Skin Diseases*. Chem Immunol. Basel, Karger, 2009, vol 94, pp 178–188.

Reference Management Software: Use of EndNote® is recommended for easy management and formatting of citations and reference lists (format setting: *Inter-virology*).

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

Multimedia files and other supplementary files, directly relevant but not essential to the conclusions of a paper, enhance the online version of a publication and increase its visibility on the web. These files will undergo editorial review. The Editors reserve the right to limit the scope and length of the supplementary material. Multimedia and supplementary material should meet production quality standards for publication without the need for any modification or editing. Files should not exceed 10 Mb in size. Figures and tables need to have titles and legends, and all files should be supplied separately and labeled clearly. All supplementary material should be referred to in the main text. A DOI

number will be assigned to supplementary material and it will be hosted online at <https://karger.figshare.com> under a CC BY license. Authors will be charged a processing fee of CHF 250.00 for supplementary material.

Video Files

Video files for the *Journal of Vascular Research* enhance the online versions. The printed journal remains the archival version. Since it does not contain video files, the latter can only be supplements which improve the reader's understanding of the paper. In the printed version they should be replaced by a "typical" figure. For further information, please refer to www.karger.com/jvr_guidelines.

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 960.00 per page.

Page Charges

Authors are charged CHF 130.00 per printed page. 1 printed page is equal to approximately 2 manuscript pages (approx. 6,460 characters, spaces included).

Self-Archiving/Green Open Access

Karger permits authors to archive their pre-prints (i.e. pre-peer review) or post-prints (i.e. accepted manuscript after peer review but before production) on their personal or their institution's internal website. In addition, authors may post their accepted manuscripts in public Open Access repositories and scientific networks (e.g. ResearchGate or Mendeley) no earlier than 12 months following publication of the final version of their article. For all self-archiving, the posted manuscripts must:

- Be used for noncommercial purposes only
- Be linked to the final version on www.karger.com
- Include the following statement:

"This is the peer-reviewed but unedited manuscript version of the following article: [insert full citation, e.g. Cytogenet Genome Res 2014;142:227–238 (DOI: 10.1159/000361001)]. The final, published version is

available at [http://www.karger.com/?doi=\[insert DOI number\]](http://www.karger.com/?doi=[insert DOI number])".

It is the author's responsibility to fulfill these requirements.

For papers published online first with a DOI number only, full citation details must be added as soon as the paper is published in its final version. This is important to ensure that citations can be credited to the article. Manuscripts to be archived in PubMed Central due to funding requirements will be submitted by Karger on the author's behalf [see Funding Organizations (NIH etc.)].

For self-archiving Author's Choice™ (Gold Open Access) articles, see Author's Choice™.

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 3,000.00, which is a permissible cost in grant allocation. More information can be found at www.karger.com/authors_choice.

The final, published version of the article may be posted at any time and in any repository or on other websites, in accordance with the relevant Creative Commons license. Reposted Open Access articles must:

- Follow the terms of the relevant Creative Commons license
- Be linked to the final version on www.karger.com
- Include the following statement:

"The final, published version of this article is available at [http://www.karger.com/?doi=\[insert DOI number\]](http://www.karger.com/?doi=[insert DOI number])".

It is the author's responsibility to fulfill these requirements.

For papers published online first with a DOI number only, full citation details must be added as soon as the paper is published in its final version. This is important to ensure that citations can be credited to the article.

Funding Organizations (NIH etc.)

The U.S. National Institutes of Health (NIH) Public Access Policy mandates that accepted, peer-reviewed manuscripts are archived in its digital database, PubMed Central (PMC), within 12 months of the official publication date. As a service to authors, Karger submits NIH-funded articles to PMC on behalf of the authors immediately upon publication. The NIH assigns a PMCID within approximately 1 month and the manuscript will appear in PMC after a 12-month embargo. For authors making their paper Open Access through Author's Choice™, the embargo will be overridden, thereby accelerating the accessibility of the article. Karger also complies with other funders' requirements (including Wellcome Trust and RCUK) for submission to PMC. Authors should include information on their grants in the Acknowledgements section of their papers.

Copy Editing

All manuscripts accepted for publication by Karger are subject to copy editing. Changes introduced by the copy editor and/or questions will be marked in the manuscript so please be sure to check the galleys against the manuscript. The copy edited manuscript will be returned along with the proofs.

Proofs

Unless indicated otherwise, proofs are sent to the corresponding author and should be returned with the least possible delay. Alterations made in proofs, other than the correction of printer's errors, are charged to the author. No page proofs are supplied.

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.

ISSN Print Edition: 1018-1172
ISSN Online Edition: 1423-0135

Journal Homepage: www.karger.com/jvr

Publication Data: *Journal of Vascular Research* is published 6 times a year. Volume 54 with 6 issues appears in 2017.

Copyright: © 2017 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.

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 94.00	CHF 144.00
EUR 85.00	EUR 125.00
USD 102.00	USD 156.00
postage and handling (added to print and print+online)	
CHF 48.00 Europe, CHF 69.60 Overseas	
EUR 43.20	
USD 67.20	

Institutional subscription:

Print or Online	Print+Online combined
CHF 2135.00	CHF 2455.00
EUR 1923.00	EUR 2211.00
USD 2321.00	USD 2669.00
postage and handling (added to print and print+online)	
CHF 60.00 Europe, CHF 87.00 Overseas	
EUR 58.00	
USD 84.00	

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.com.

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

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. Karger 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

Japan
Karger Japan, Inc.
Shiba Daimon Asahi Bldg. 2F
1-2-23 Shiba Daimon
Minato-ku
Tokyo 105-0012
Japan
t: +81 3 6435 6242
f: +81 3 6435 6244
e: publisher@karger.jp
w: www.karger.jp

USA
S. Karger Publishers, Inc.
26 West Avon Road
P.O. Box 529
Unionville, CT 06085
USA
Toll free: +1 800 828 5479
t: +1 860 675 7834
f: +1 860 675 7302
e: kargerusa@karger.com

France
Enter & Read
Albertine Luginbuhl
23, rue du Départ, boîte 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)
Level 28-03-03A, PJ Exchange
No. 16A, Persiaran Barat
46050 Petaling Jaya
Selangor Darul Ehsan
Malaysia
t: +60 3 7962 0158
f: +60 3 7962 0001
e: service@karger.cn; r.chew@karger.cn

Karger China

51F Raffles City Centre
268 Xi Zang Middle Road
Huang Pu District
Shanghai 200001
P.R. China
t: +86 21 2312 7673
f: +86 21 2312 7777
e: service@karger.cn
r.chew@karger.cn
w: www.karger.com

India, Bangladesh, Sri Lanka

Karger 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@kargerindia.com
w: www.karger.com

Change of Address:

Both old and new address should be sent
to the subscription source.

Contents

[See the journal website for contents](#)

Return this Form to:

Prof. Dr. Angela C. Shore, *Treasurer ESM*
Director of Biomedical & Clinical Science
Professor of Vascular Physiology
Institute of Biomedical and Clinical Science
Peninsula Medical School
Barrack Road, Exeter, Devon, EX2 5AX, UK

EUROPEAN SOCIETY FOR MICROCIRCULATION
Integrating
Vascular Biology & Medicine



Application/Renewal of Individual Membership

Application for Membership **Renewal of Membership**

Last Name: _____ First Name(s): _____ Title (Prof./Dr.): _____

Present Position: _____

Address: _____

Tel: _____ Fax: _____ E-mail (please write/print clearly): _____

Main Research Interests (Keywords): _____

I agree to have my name, address and research interests published on the web site of the ESM: YES NO
(If you don't tick here, we assume your agreement)

Date: _____ Signature: _____

First applications must be sponsored by two members of the European Society for Microcirculation, please *either* enter the names of your sponsors below *or* send your CV with your application.

Sponsored by Name 1: _____ Sponsored by Name 2: _____

Signature of Sponsor 1: _____ Signature of Sponsor 2: _____

Membership will be activated upon receipt of your payment

Payment Methods: (Please tick appropriate payment option)

I will pay by (See below for Payment Methods):

Direct Debit Bank Transfer Internet Banking Cheque (Please quote your surname for all transfers)

Direct Debit (GBP £ Sterling)

- Full member £14.00 per annum
- I will set up a direct debit from my account
Account No: 00150472
Sort Code: 83-49-40
Swiftcode: RBOS GB 2L

Direct Debit (Euro €)

- Full member € 20.00 per annum
- I will set up a direct debit from my account
Account No: EUSOMICI-EURC
IBAN: GB20 RBOS 8375 7010 0288 74
BIC: RBOS GB 2L

Bank Transfer (GBP £ Sterling)

- Full member £ 28.00 for 2 years + £ 1.00 cost of transfer
Account No: 00150472
Sort Code: 83-49-40

Bank Transfer (Euro €)

- Full member € 40.00 for 2 years + € 1.55 cost of transfer
Account No: EUSOMICI-EURC
IBAN: GB20 RBOS 8375 7010 0288 74
BIC: RBOS GB 2L

Internet Banking (GBP £ Sterling)

- Full member £ 28.00 for 2 years
Transfer to Account No: 00150472
Sort Code 83-49-40

Internet Banking (Euro €)

- Full member € 40.00 for 2 years
Transfer to Account No: EUSOMICI-EURC
IBAN: GB20 RBOS 8375 7010 0288 74
BIC: RBOS GB 2L

Cheque/Bank Draft in GBP £ Sterling or Euro € payable to
'European Society for Microcirculation'

- Full member £ 28.00/€ 40.00 for 2 years + £ 1.00/ € 1.55 cost of transfer

Bank Address:

European Society for Microcirculation, The Royal Bank of Scotland,
Aberdeen Central Branch, 12 Golden Square, AB9 8DU



ESM-EVBO 2017

2nd Joint Meeting

of the European Society for Microcirculation (ESM)
and European Vascular Biology Organisation (EVBO)
29 May to 1 June 2017, Geneva, Switzerland

INVITATION TO THE ESM-EVBO JOINT MEETING 2017 May 29-June 1st 2017, Geneva, Switzerland

Most diseases are related to the function of the microvasculature, and 'vessels' are involved in more than half of human deaths in western countries. Indeed, vessels are tightly linked to numerous pathologies, including atherosclerosis and related cardiovascular diseases (e.g., myocardial infarct, stroke), hypertension, diabetes, obesity, cancer progression, metastasis, and inflammatory diseases such as rheumatoid arthritis and psoriasis. Blood vessels are also at the base of tissue regeneration and wound healing and thus, represent a key element after surgical intervention.

Geneva has a long tradition as a venue for major meetings and is a host city to many international organizations. It has been a cultural center for many centuries and is home to many creative spirits in the fields of science and art. The University of Geneva is one of seven Swiss centers conducting research in all vascular biology fields of clinical and basic sciences. Geneva amalgamates all the advantages of a small town with the facilities and services usually only found in much larger cities! It provides a unique environment to meet with colleagues in a relaxing atmosphere. On behalf of the Organizing Committee, we look forward to introducing you to the smallest of the big capitals. We are sure it will offer the ideal environment to discuss cutting edge in vascular biology, as well as to explore new scientific frontiers that are relevant to the various societal challenges facing the 21st century.

Beat A. Imhof
Chairperson

EUROPEAN SOCIETY FOR
Integrating
Vascular Biology & Medicine



TOPICS OF SESSIONS

- 1 Novel mechanisms of cellular trafficking via the vasculature
- 2 Imaging the microvasculature (basic research)
- 3 Functional assessment and imaging of microvasculature in clinical practice (clinical research)
- 4 Lymphatics in Health and Disease
- 5 Management of Lymphatic disorders (clinics)
- 6 Vascular development and progenitors
- 7 Regulation of vascular permeability
- 8 Molecular mechanisms underlying tissue specific vascular phenotypes
- 9 Inflammation and immunity in atherosclerosis
- 10 Tumor angiogenesis and resistance to anti-angiogenic therapy
- 11 Novel angiogenic pathways and tissue regeneration
- 12 Metabolic diseases and vasculature
- 13 Vascular ageing
- 14 Vascular progenitors
- 15 Biomechanics of vascular disease
- 16 Epigenetics and non-coding RNA in microvascular biology (A)
- 17 Oxidative reactions, signaling and stress
- 18 Epigenetics and non-coding RNA in vascular biology (B)
- 19 Platelets and Microvasculature
- 20 Functional and morphological effects in hypertension
- 21 Emerging technologies in vascular biology

VENUE

The meeting will be held at the International Conference Center of Geneva (CICG). It is conveniently located near the International Airport and major highways, the railway station, the international organizations, Lake Geneva and the historic old town.

ACCOMMODATION

Geneva and its vicinity have over 10,000 rooms in more than 130 hotels. Many hotel rooms at different levels have been already blocked in order to secure the best rates available. Lodging in student hostels is possible.

PLENARY SPEAKERS

Kari Alitalo - Helsinki, Finland
Carlo Patrono - Rome, Italy
Peter F Davies - Philadelphia, USA
Christer Bertsholtz - Uppsala, Sweden
Zoltan Ungvari - Oklahoma City, USA
Elisabetta Dejana - Milan, Italy
Mark Hanson - Southampton, UK

INFO AND REGISTRATION

www.esm-evbo2017.org

September 16-20
Copenhagen, Denmark
CIRSE 2017

featuring

IDEAS

Interdisciplinary
Endovascular
Aortic Symposium

**Early
Bird Fees
Available**

Europe's largest endovascular event,
offering 4.5 days of targeted education
and science.

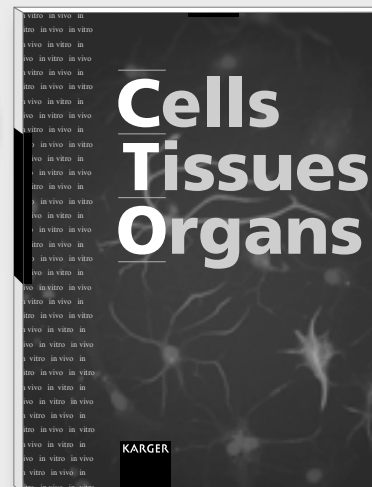
www.cirse.org

Cardiovascular and Interventional Radiological Society of Europe

Journal of cell and developmental biology, stem cell research, tissue engineering, in vitro systems and regenerative biology

Cells Tissues Organs

in vivo, in vitro



Editors-in-Chief

H.-W. Denker, Essen
A.W. English, Atlanta, Ga.

Associate Editors

Developmental Biology
D. Newgreen, Melbourne, Vic.
C. Viebahn, Göttingen

Tumor Cell Plasticity

E. Thompson,
Kelvin Grove, Qld.

Stem Cells and Tissue
Engineering

L. de Bartolo, Rende

G.J. Christ,
Charlottesville, VA

A.J. Engler, La Jolla, Calif.

U. Just, Kiel

W.L. Murphy, Madison, Wisc.

A. Ratcliffe, San Diego, Calif.

H. Sauer, Giessen

Neurosciences

M. Frotscher, Hamburg

R.J. Gilbert, Troy, N.Y.

P.J. Kingham, Umeå

K.G. Marra, Pittsburgh, Pa.

W.L. Neuhuber, Erlangen

Functional Anatomy and
Biomechanics

F. Eckstein, Salzburg

Cells Tissues Organs aims at bridging the gap between cell biology and developmental biology and the emerging fields of regenerative medicine (stem cell biology, tissue engineering, artificial organs, in vitro systems and transplantation biology). *CTO* offers a rapid and fair peer-review and exquisite reproduction quality. Special topic issues, entire issues of the journal devoted to a single research topic within the range of interests of the journal, are published at irregular intervals.

Cells Tissues Organ

Founded: 1945

Category: Basic Research

Field of Interest: Cell Biology

Listed in bibliographic services, including:

*PubMed/MEDLINE, Web of Science,
Google Scholar, Scopus, Embase*

2017: Volumes 203, 204

6 issues per volume

Language: English

ISSN 1422-6405

e-ISSN 1422-6421

Impact Factor: 1.228

Selected contributions

- Impact of Arachidonic Acid and the Leukotriene Signaling Pathway on Vasculogenesis of Mouse Embryonic Stem Cells: **Huang, Y.-H.; Sharifpanah, F.** (Giessen); **Becker, S.** (Bad Nauheim); **Wartenberg, M.** (Jena); **Sauer, H.** (Giessen)
- Neurovascular Interface in Porcine Small Intestine: Specific for Nitroergic rather than Nonnitroergic Neurons: **Jabari, S.; Neuhuber, W.; Brehmer, A.** (Erlangen)
- Myosin Heavy Chain Expression Can Vary over the Length of Jaw and Leg Muscles: **Korfage, J.A.M.; Kwee, K.E.; Everts, V.; Langenbach, G.E.J.** (Amsterdam)
- Effects of FGFR Signaling on Cell Proliferation and Differentiation of Apert Dental Cells: **Lu, C.; Huguley, S.; Cui, C.; Cabaniss, L.B.; Waite, P.D.; Sarver, D.M.; Mamaeva, O.A.; MacDougall, M.** (Birmingham, Ala.)
- Arterial Decellularized Scaffolds Produced Using an Innovative Automatic System: **Pellegata, A.F.** (Milan); **Dominioni, T.** (Pavia); **Ballo, F.; Maestroni, S.; Asnaghi, M.A.; Zerbini, G.** (Milan); **Zonta, S.** (Pavia); **Mantero, S.** (Milan)
- Cell Surface Glycan Changes in the Spontaneous Epithelial Mesenchymal Transition of Equine Amniotic Multipotent Progenitor Cells: **Lange-Consiglio, A.** (Lodi); **Accogli, G.** (Valenzano); **Cremonesi, F.** (Lodi/Milano); **Desantis, S.** (Valenzano)
- Fas-Associated Protein with Death Domain Regulates Notch Signaling during Muscle Regeneration: **Zhang, R.; Wang, L.; He, L.; Yang, B.; Yao, C.; Du, P.; Xu, Q.; Cheng, W.** (Nanjing); **Hua, Z.-C.** (Nanjing/Changzhou)
- Multiscale Characterization of Impact of Infarct Size on Myocardial Remodeling in an Ovine Infarct Model: **Zhang, P.; Li, T.; Griffith, B.P.; Wu, Z.J.** (Baltimore, Md.)

More information at www.karger.com/cto

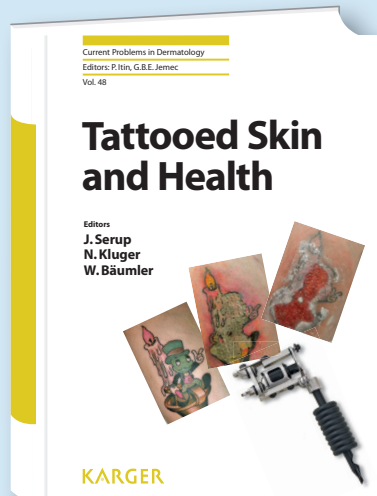
KARGER

Three BMA awards for Karger Publishers

We are delighted to announce that three Karger titles received 'Highly Commended' awards by the British Medical Association in their prestigious 2016 Medical Book Competition:

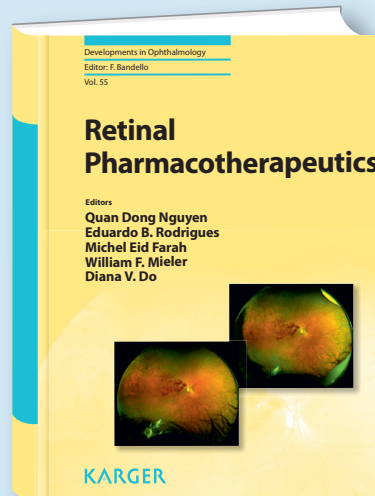


In the category 'Internal Medicine'



Tattooed Skin and Health

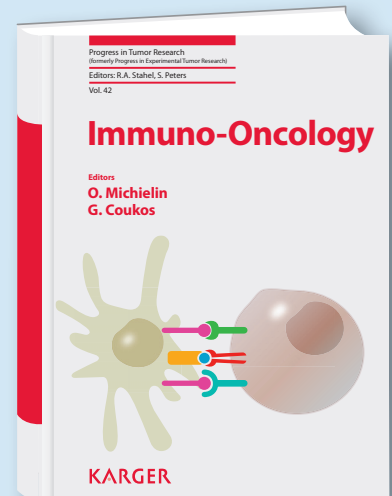
Editors: Serup, J. (Copenhagen); Kluger, N. (Helsinki); Bäumlner, W. (Regensburg)
X + 258 p., 110 fig., 85 in color, 25 tab., hard cover, 2015
ISBN 978-3-318-02776-1
e-ISBN 978-3-318-02777-8
www.karger.com/cupde



Retinal Pharmacotherapeutics

Editors: Nguyen, Q.D. (Omaha, Nebr.); Rodrigues, E.B. (São Paulo); Farah, M.E. (São Paulo); Mieler, W.F. (Chicago, Ill.); Do, D.V. (Omaha, Nebr.)
XVI + 408 p., 83 fig., 71 in color, 33 tab., hard cover, 2016
ISBN 978-3-318-05564-1
e-ISBN 978-3-318-05565-8
www.karger.com/deoph

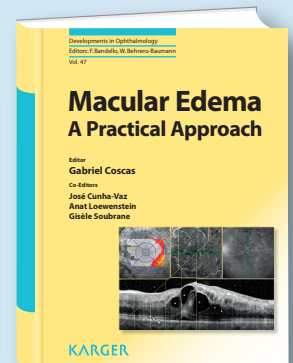
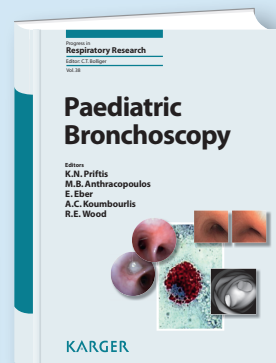
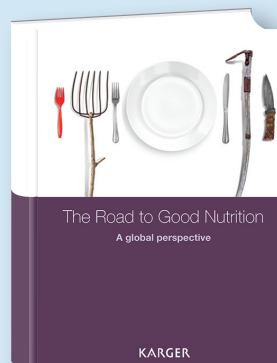
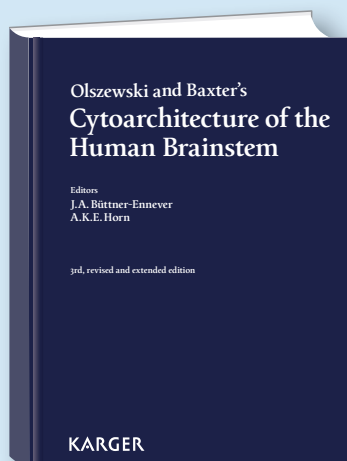
In the category 'Oncology'



Immuno-Oncology

Editors: Michielin, O.; Coukos, G. (Lausanne)
VI + 140 p., 8 fig., 5 in color, 11 tab., hard cover, 2015
ISBN 978-3-318-05589-4
e-ISBN 978-3-318-05590-0
www.karger.com/pritr

Karger titles which received awards in previous BMA Medical Book Competitions



KARGER
www.karger.com

Research Papers

- 59 In vivo Imaging of the Cerebral Endothelial Glycocalyx in Mice**
Yoon, J.-H.; Lee, E.-S.; Jeong, Y. (Daejeon)
- 68 Changes in IP3 Receptor Expression and Function in Aortic Smooth Muscle of Atherosclerotic Mice**
Ewart, M.-A. (Glasgow); Ugusman, A. (Glasgow/Kuala Lumpur); Vishwanath, A.; Almbrouk, T.A.M.; Alganga, H.; Katwan, O.J.; Hubanova, P.; Currie, S.; Kennedy, S. (Glasgow)
- 79 The Role of O-GlcNAcylation in Perivascular Adipose Tissue Dysfunction of Offspring of High-Fat Diet-Fed Rats**
Zaborska, K.E.; Edwards, G. (Manchester); Austin, C. (Ormskirk); Wareing, M. (Manchester)
- 100 Exogenous miRNA-146a Enhances the Therapeutic Efficacy of Human Mesenchymal Stem Cells by Increasing Vascular Endothelial Growth Factor Secretion in the Ischemia/Reperfusion-Injured Heart**
Seo, H.-H.; Lee, S.-Y.; Lee, C.Y. (Seoul); Kim, R.; Kim, P. (Busan); Oh, S. (Stanford, CA); Lee, H. (New Haven, CT); Lee, M.Y. (Daegu); Kim, J.; Kim, L.K. (Seoul); Hwang, K.-C. (Gangneung-si/Incheon); Chang, W. (Busan)
- 109 Effect of Topical Iloprost and Nitroglycerin on Gastric Microcirculation and Barrier Function during Hemorrhagic Shock in Dogs**
Truse, R.; Hinterberg, J.; Schulz, J.; Herminghaus, A.; Weber, A.; Mettler-Altmann, T.; Bauer, I.; Picker, O.; Vollmer, C. (Düsseldorf)

Review

- 92 Molecular Mechanisms Leading to Splanchnic Vasodilation in Liver Cirrhosis**
Di Pascoli, M.; Sacerdoti, D.; Pontisso, P.; Angeli, P.; Bolognesi, M. (Padua)

- 122 Conference Calendar**
after **122 Membership of the ESM**