

The Journal of Nutritional Biochemistry (JNB) is an international journal devoted to advancements in nutrition science. Its major focus is on investigations about nutrients that overlap with the areas of biochemistry molecular biology, neurochemistry, toxicology, and pharmacology. For details concerning the preparation of manuscripts see Information for Authors on the journal's website at [www.jnutbio.com](http://www.jnutbio.com).

JNB: *Journal of Nutritional Biochemistry* (ISSN: 0955-2863) is published monthly by Elsevier, 360 Park Avenue South, New York, NY 10010-1710. Business Office: 1600 John F. Kennedy Blvd., Suite 1800, Philadelphia, PA 19103-2899. Editorial Office: 360 Park Avenue South, New York, NY 10010-1710. Accounting and Circulation Offices: 3251 Riverport Lane, Maryland Heights, MO 63043. Periodicals postage paid at New York, NY and additional mailing offices.

**POSTMASTER:** Send address changes to JNB: *Journal of Nutritional Biochemistry*, Elsevier Health Sciences Division, Subscription Customer Service, 3251 Riverport Lane, Maryland Heights, MO 63043.

Subscription Rates (2010): Institutional price: US\$1,822.00; Personal price: US\$339.00; Prices include postage and are subject to change without notice. Claims for missing issues can be honored only up to three months for domestic addresses, six months for foreign addresses. Duplicate copies will not be sent to replace one undelivered through failure to notify Elsevier of change of address. Single copy and back volume information available upon request.

**Customer service (orders, claims, online, change of address):** Elsevier Health Sciences Division, Subscription Customer Service, 3251 Riverport Lane, Maryland Heights, MO 63043. Tel: (800) 654-2452 (U.S. and Canada); (314) 447-8871 (outside U.S. and Canada). Fax: (314) 447-8029. E-mail: [JournalsCustomerService-usa@elsevier.com](mailto:JournalsCustomerService-usa@elsevier.com) (for print support); [JournalsOnlineSupport-usa@elsevier.com](mailto:JournalsOnlineSupport-usa@elsevier.com) (for online support).

Reprints: For copies of 100 or more of articles in this publication, please contact the Commercial Reprints Department, Elsevier Inc., 360 Park Avenue South, New York, NY 10010-1710. Tel: (212) 633-3812; Fax: (212) 462-1935 e-mail: [reprints@elsevier.com](mailto:reprints@elsevier.com) or visit [www.elsevierreprints.com](http://www.elsevierreprints.com).

© 2010 Elsevier Inc. All rights reserved.

This journal and the individual contributions contained in it are protected under copyright by Elsevier Inc. and the following terms and conditions apply to their use:

Photocopying: Single photocopies of single articles may be made for personal use as allowed by national copyright laws. Permission of the publisher and payment of a fee is required for all other photocopying, including multiple or systematic copying, copying for advertising or promotional purposes, resale, and all forms of document delivery. Special rates are available for educational institutions that wish to make photocopies for non-profit educational classroom use.

Permission may be sought directly from Elsevier's Global Rights Department in Oxford, UK; phone: 215-239-3804 or +44 (0) 1865 843830, fax: +44 (0) 1865 853333, e-mail: [healthpermissions@elsevier.com](mailto:healthpermissions@elsevier.com). Requests may also be completed online via the Elsevier homepage (<http://www.elsevier.com/permissions>).

In the USA, users may clear permissions and make payments through the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA; Tel: (978) 750 8400, Fax: (978) 750-4744, and in the UK through the Copyright Licensing Agency Rapid Clearance Service (CLARCS), 90 Tottenham Court Road, London W1P 0LP, UK; Tel: (+44) 171 436 5931; Fax: (+44) 171 436 3986. Other countries may have a local reprographic rights agency for payments.

Derivative Works: Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the publisher is required for resale or distribution outside the institution.

Permission of the publisher is required for all other derivative works, including compilations and translations.

Electronic Storage or Usage: Permission of the publisher is required to store or use electronically any material contained in this journal, including any article or part of an article. Contact the publisher at the address indicated.

Except as outlined above, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the publisher.

Address permissions requests to: Elsevier Inc. Rights & Permissions Department, at the mail, fax and e-mail addresses noted above.

Notice: No responsibility is assumed by the Publisher for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made.

Although all advertising material is expected to conform to ethical (medical) standards, inclusion in this publication does not constitute a guarantee or endorsement of the quality or value of such product or of the claims made of it by its manufacturer.

©<sup>TM</sup> This paper meets the requirements of ANSI Standard Z39.48-1992 (Permanence of Paper).

# The Journal of Nutritional Biochemistry

Volume 21, Number 8, August 2010

## CONTENTS

### REVIEWS: CURRENT TOPICS

- 665** mRNA transcripts as molecular biomarkers in medicine and nutrition  
*Roger A. Sunde*

### RESEARCH ARTICLES

- 671** Suppression of iNOS expression by fucoidan is mediated by regulation of p38 MAPK, JAK/STAT, AP-1 and IRF-1, and depends on up-regulation of scavenger receptor B1 expression in TNF- $\alpha$ - and IFN- $\gamma$ -stimulated C6 glioma cells  
*Hang Do, Suhkneung Pyo, Eun-Hwa Sohn*
- 680** Cocoa polyphenols attenuate hydrogen peroxide-induced inhibition of gap-junction intercellular communication by blocking phosphorylation of connexin 43 via the MEK/ERK signaling pathway  
*Dong Eun Lee, Nam Joo Kang, Kyung Mi Lee, Bo Kyung Lee, Jong Hun Kim, Ki Won Lee, Hyong Joo Lee*
- 687** Differential response to zinc-induced apoptosis in benign prostate hyperplasia and prostate cancer cells  
*Michelle Yan, Karin Hardin, Emily Ho*
- 695**  $\beta$ -Glucan extracts inhibit the *in vitro* intestinal uptake of long-chain fatty acids and cholesterol and down-regulate genes involved in lipogenesis and lipid transport in rats  
*Laurie A. Drozdowski, Raylene A. Reimer, Feral Temelli, Rhonda C. Bell, Thava Vasanthan, Alan B.R. Thomson*
- 702** Sulforaphane suppresses ultraviolet B-induced inflammation in HaCaT keratinocytes and HR-1 hairless mice  
*Akira Shibata, Kiyotaka Nakagawa, Hiroko Yamanoi, Tsuyoshi Tsuduki, Phumon Sookwong, Ohki Higuchi, Fumiko Kimura, Teruo Miyazawa*
- 710** Suppression of retinoic acid receptors may contribute to embryonic skeleton hypoplasia in maternal rats with chronic vitamin A deficiency  
*Na Li, Shanshan Sun, Di Wang, Ping Yao, Xuefeng Yang, Hong Yan, Yukai Du, Chengjiang Ying, Liegang Liu*
- 717** Anti-inflammatory properties of a pomegranate extract and its metabolite urolithin-A in a colitis rat model and the effect of colon inflammation on phenolic metabolism  
*Mar Larrosa, Antonio González-Sarrías, María J. Yáñez-Gascón, María V. Selma, María Azorín-Ortuño, Simona Toti, Francisco Tomás-Barberán, Piero Dolara, Juan Carlos Espín*
- 726** Oleuropein aglycon prevents cytotoxic amyloid aggregation of human amylin  
*Stefania Rigacci, Valentina Guidotti, Monica Bucciantini, Matteo Parri, Chiara Nediani, Elisabetta Cerbai, Massimo Stefani, Andrea Berti*
- 736** Plant sterol and stanol substrate specificity of pancreatic cholesterol esterase  
*Andrew W. Brown, Jiliang Hang, Patrick H. Dussault, Timothy P. Carr*
- 741** Green tea polyphenols inhibit cognitive impairment induced by chronic cerebral hypoperfusion via modulating oxidative stress  
*Yan Xu, Jun-jian Zhang, Li Xiong, Lei Zhang, Dong Sun, Hui Liu*
- 749** Expression of the peptide hormone hepcidin increases in cardiomyocytes under myocarditis and myocardial infarction  
*Manabu Isoda, Haruo Hanawa, Ritsuo Watanabe, Tsuyoshi Yoshida, Ken Toba, Kaori Yoshida, Mayuko Kojima, Keita Otaki, Kazuhisa Hao, Limin Ding, Komei Tanaka, Tsugumi Takayama, Kiminori Kato, Yuji Okura, Makoto Kodama, Yoshimi Ota, Junichi Hayashi, Yoshifusa Aizawa*
- 757** The role of epoxidation and electrophile-responsive element-regulated gene transcription in the potentially beneficial and harmful effects of the coffee components cafestol and kahweol  
*Saskia T.J. van Cruchten, Laura H.J. de Haan, Patrick P.J. Mulder, Cindy Kunne, Mark V. Boekschoten, Martijn B. Katan, Jac M.M.J.G. Aarts, Renger F. Witkamp*
- 764** Conjugated nonadecadienoic acid is more potent than conjugated linoleic acid on body fat reduction  
*Yooheon Park, Yeonhwa Park*
- 774** Involvement of serum vascular endothelial growth factor family members in the development of obesity in mice and humans  
*Javier Gómez-Ambrosi, Victoria Catalán, Amaia Rodríguez, Beatriz Ramírez, Camilo Silva, María J. Gil, Javier Salvador, Gema Frühbeck*

This journal is indexed in BIOSIS; *Current Awareness in Biological Sciences*; Scisearch; *Science Citation Index*; *Research Alert*; EMBASE/Excerpta Medica; Medline; PubMed; and Current Contents.