

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, which is published in each issue of the journal.

The Journal of Nutritional Biochemistry is published monthly by Elsevier Inc., 360 Park Avenue South, New York, NY 10010-1710.

Subscription Rates (2005): Institutional price: US\$916.00 for all countries except Europe and Japan; JPY 108,700 for Japan; EUR 820 for European countries. Personal price: US\$244.00 for all countries except Europe and Japan; JPY 28,900 for Japan; EUR 217 for European countries. Prices include postage and are subject to change without notice. For additional information contact Elsevier, Journals Customer Service, 6277 Sea Harbor Drive, Orlando, FL 32887-4800. USA, US Toll Free Tel.: 1-877-839-7126, Toll Free (for customers outside the US): 1-407-345-4020, Fax: 1-407-363-1354, E-mail: usjcs@elsevier.com. 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. Periodicals postage paid at New York, NY and at additional offices.

POSTMASTER: Send address changes to The Journal of Nutritional Biochemistry, Journals Customer Service, 6277 Sea Harbor Drive, Orlando, FL 32887-4800 USA.

(For Post Office use only: Volume 16 issue 2 of 12.)

Orders, claims, and journal enquiries: please contact the Customer Service Department at the Regional Sales Office nearest you: **Orlando:** Elsevier, Customer Service Department, 6277 Sea Harbor Drive, Orlando, FL 32887-4800, USA; phone: (+1) (877) 8397126 [toll free number for US customers], or (+1) (407) 3454020 [customers outside US]; fax: (+1) (407) 3631354; e-mail: usjcs@elsevier.com **Amsterdam:** Elsevier, Customer Service Department, PO Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) (20) 4853757; fax: (+31) (20) 4853432; e-mail: nlinfo@elsevier.com **Tokyo:** Elsevier, Customer Service Department, 4F Higashi-Azabu, 1-Chome Bldg, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5037; fax: (+81) (3) 5561 5047; e-mail: jp.info@elsevier.com **Singapore:** Elsevier, Customer Service Department, 3 Killiney Road, #08-01 Winsland House I, Singapore 239519; phone: (+65) 63490222; fax: (+65) 67331510; e-mail: asiainfo@elsevier.com.

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) 633-3813 Fax: (212) 633-3820 e-mail: reprints@elsevier.com.

© 2005 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.

Permissions may be sought directly from Health Science Rights Department, Elsevier Inc., 170 S. Independence Mall W 300 E, Philadelphia, PA 19106-3399, USA; Tel: (+1) 215-238-7869; Fax: (+1) 215-238-2239; e-mail: healthpermissions@elsevier.com. You may also contact Rights & Permissions directly through Elsevier's home page (<http://www.elsevier.nl>), selecting first 'Customer Support', then 'General Information', then 'Permissions Query Form'.

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.

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

The Journal of Nutritional Biochemistry

Volume 16, Number 2, February 2005

CONTENTS

REVIEWS: CURRENT TOPICS

- 65** Targets for indole-3-carbinol in cancer prevention
Young S. Kim, J.A. Milner

EMERGING ISSUES

- 74** Roles for nutrients in epigenetic events
Anna M. Oommen, Jacob B. Griffin, Gautam Sarath, Janos Zemleni

RESEARCH ARTICLES

- 78** Eicosapentaenoic acid prevents lipopolysaccharide-stimulated DNA binding of activator protein-1 and c-Jun N-terminal kinase activity
Yan Zhao, Linda H. Chen
- 85** Nutritional regulation of immunosenescence for heart health
Ronald Ross Watson, Sherma Zibadi, Randy Vazquez, Douglas Larson
- 88** Truncated deoxynivalenol-induced splenic immediate early gene response in mice consuming (n-3) polyunsaturated fatty acids
Shawn Kinser, Maixing Li, Qunshan Jia, James J. Pestka
- 96** Biotin deficiency stimulates survival pathways in human lymphoma cells exposed to antineoplastic drugs
Jacob B. Griffin, Janos Zemleni
- 104** Early postoperative substitution procedure of the antioxidant ascorbic acid
Andreas Rümelin, Ulrid Jaehde, Thomas Kerz, Walter Roth, Martin Krämer, Ulrid Fauth
- 109** Activity of olive oil phenols on lymphomonocyte cytosolic calcium
Carlo A. Palmerini, Enrico Carlini, Carla Saccardi, Maurizio Servili, Ginafrancesco Montedoro, Giuseppe Arienti
- 114** Molecular cloning of chicken hepatic histidase and the regulation of histidase mRNA expression by dietary protein
Thimmaiah P. Chendrimada, Adam J. Davis
- 121** Effects of DNA polymerase inhibitory and antitumor activities of lipase-hydrolyzed glycolipid fractions from spinach
Naoki Maeda, Takahiko Hada, Chikako Murakami-Nakai, Isoko Kuriyama, Hideki Ichikawa, Yoshinobu Fukumori, Junichi Hiratsuka, Hiromi Yoshida, Kengo Sakaguchi, Yoshiyuki Mizushima

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.