THE CHINESE JOURNAL OF PHYSIOLOGY

2011	Volume 54	No. 2	ISSN 0304-4920	

EXECUTIVE COMMITTEE Y. Hwa (President) M.L. Tsai (Executive Secretary) J.C. Chen P.S. Hsieh C. Hsu C.H. Kuo Y.T. Lau E.H.Y. Lee C.J. Tseng Y.H. Lee J.Y. Wang P.S. Wang S.W. Wang S.J. Tsai C.S. Tung C.T. Yen (alphabetical order)

P.S. Wang (Dept. Physiol., Natl. Yang-Ming U., Taipei, Taiwan, ROC)

ASSOCIATE EDITORS

C.Y. Huang (Inst. Basic Med. Sci., China Med. U., Taichung, Taiwan, ROC)

EDITOR-IN-CHIEF

R.M. Liao (Dept. Psychol., Natl. Cheng-Chi U., Taipei, Taiwan, ROC) L. Yu (Inst. Behav. Med., Natl. Cheng Kung U., Tainan, Taiwan, ROC)

HONORARY EDITOR S. Chien (Dept. AMES-Bioengineering, U. California, San Diego, CA, USA)

MANAGING EDITOR H.F. Pu (Dept. Physiol., Natl. Yang-Ming U., Taipei, Taiwan, ROC)

ENGLISH EDITOR K.B. Choo (Med. Res. & Edu., Taipei Veterans General Hosp., Taipei, Taiwan, ROC)

EUROPE RECEIVING EDITOR M. AG van der Heyden (Dept. Med. Physiol., Utrecht U., Netherlands)

EDITORIAL BOARD

Acad. Sci., Russia) Y.C. Chang (Inst. Life Sci., Natl. Tsing Hua U., ROC) C.T. Chien (Dept. Med. Res., Natl. Taiwan U. Hosp., ROC) W.L. Cho (Dept. Parasitol. Natl. Yang-Ming U., ROC) M.A. Geyer (Dept. Psychia., UCSD, USA) P.S. Hsieh (Inst. Physiol., Natl. Def. Med. Ctr., ROC) W.J. Huang (Dept. Surg., Taipei Vet. Gen. Hosp., ROC) Y.T. Huang (Inst. Tradition. Med., Natl. Yang-Ming U., ROC) J.C. Hwang (Dept. Life Sci., Natl. Normal U., ROC) P.H.S. Jen (Div. Biol. Sci., U. Missori, USA) K.W. Kim (Dept. Physiol. & Biophys., Seoul Natl. U., Korea) Y.R. Kou (Dept. Physiol., Natl. Yang-Ming U., ROC) C.H. Kuo (Lab. Exercise Biochem., Taipei Physical Edu. Coll., ROC)

T.G. Amstislavskaya (Inst. Cytol. & Gen., Siberian B. Russ. E.H.Y. Lee (Inst. Biomed. Sci., Acad. Sinica, ROC) S.D. Lee (Dept. Phys. Ther., China Med. U., ROC) Y.H. Lee (Dept. Physiol., Natl., Yang-Ming U., ROC) K.C. Liang (Dept. Psychol., Natl. Taiwan U., ROC) J.Y. Liu (Inst. Cancer Biol., China Med. U., ROC) X.H. Ning (Pediatr. Cardiol., U. Washington Med. Ctr., USA) T. Opthof (Heart Failure Res. Ctr., Acad. Med. Ctr., Netherlands) M.M. Poo (Dept. Mol. & Cell. Biol., U. Calif., Berkeley, USA) D.C. Tarng (Dept. Physiol., Natl. Yang-Ming U., ROC) Y.F. Tsai (Dept. Physiol., Natl. Taiwan U., ROC) C.J. Tseng (Res. Div., Kaoshiung Vet. Gen. Hosp., ROC) R.Y. Wang (Inst. Phys. Ther., Natl. Yang-Ming U., ROC) P.M. Wise (Div. Biol. Sci., U. Calif., Davis, USA) K.K. Wu (Natl. Health Res. Inst., ROC) (alphabetical order)

EDITORIAL ASSISTANT J.Y. Tien (Dept. Physiol., Natl. Yang-Ming U., Taipei, Taiwan, ROC)

April 30, 2011

CO-ISSUED BY

THE CHINESE PHYSIOLOGICAL SOCIETY AND AIRITI PRESS INC.

National Yang-Ming University, Taipei, Taiwan, Republic of China

THE CHINESE JOURNAL OF PHYSIOLOGY (ISSN 0304-4920) is the official journal of The Chinese Physiological Society and is published bimonthly per year by The Chinese Physiological Society. Second class postage paid at Taipei, Taiwan and at additional mailing offices. The annual subscription rate is NT\$9000 (US\$360 abroad). Order should be addressed to: The Editorial Office, The Chinese Journal of Physiology, Department of Physiology, National Yang-Ming University, Taipei 112, Taiwan, Republic of China. No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, without written permission from The Chinese Physiological Society. All rights are reserved. Indexed by Science Citation Index, Index Medicus, Chemical Abstracts, EMBASE, Medline, and BIOSIS. Copyright © 2011 by The Chinese Physiological Society and Airiti Press Inc. The publication of this journal is sponsored in part by the National Science Council, Executive Yuan, Taiwan, ROC. The website location for CJP is: http://www.cps.org.tw.

Original papers concerned with all fields of physiology, pharmacology, anatomy, and biochemistry from laboratory and clinical research and written in English are considered for publication in the Chinese Journal of Physiology. Send the cover letter and original manuscript to the Editor-in-Chief via E-mail (cjp.editorial.office@gmail.com). The Chinese Journal of Physiology also welcomes the author to send original and two copies of each manuscript, including all illustrative materials and a CD, to:

- in lower right-hand corner.
- characters, the name of *Institute* where the work was done.
- references list should be in alphabetical order and numbered consecutively. The style of citation should be as follows: National Library of Medicine, USA), volume, inclusive pages, and year. *Examples*:

 - Circ. Res. 22: 363-370, 1968.

and pages. *Examples*:

(4). Winer, B.J. Statistical Principles in Experimental Design. New York, NY, USA: McGraw-Hill, 1971. Abstracts. An abstract properly identified (Abstract) may be cited only when it is the sole source. Examples: (5). Turkenkopf, I., Olsen, J. and Johnson, P.R. Hepatic lipogenic enzyme activity in the preobese Zucker rat (fafa)

- (Abstract). Federation Proc. 38: 547, 1979.

- Their appropriate position in the text should be indicated by a note in the margin.
- reverse side. Figure legends should be typed separately.
- expense of the authors, after this manuscript is accepted for the publication.
- reviewers.
- ing scientists on special topics.
- legends, and figures in sequence.
- authors should be charged for each additional page. Reprints may be ordered.

Instructions to Authors

Dr. Paulus S. Wang, Department of Physiology, National Yang-Ming University, Taipei 112, Taiwan, Republic of China

To facilitate editorial processing, the following points with regard to the preparation of manuscript should be noted. 1. Manuscripts must be typewritten and double-spaced with margins on one side of paper. Pages should be numbered

2. The manuscripts should be arranged in the following order: title page, abstract, key words, introduction, materials and methods, results, discussion, acknowledgments, references, tables, figure legends, and illustrations.

3. The title page should contain the complete article title, a running page headline (short title) not to exceed 50

4. References cited in the text should be by Arabic numerals in parenthesis and not by the names of the authors. The

Journal Articles. Last name of first author, followed by initials; last names of each coauthor followed by initials, title of article (first word only capitalized); name of journal (abbreviated as in Index Medicus, published by the

(1). Chen, H.I., Shih, W.J. and Chen, T.P. A scientiphotographic study of pulmonary edema and hemorrhage induced by cerebral compression and norepinephrine. Chinese J. Physiol. 22: 65-73, 1976.

(2). Childers, R.W., Merideth, J. and Moe, G.K. Supernormality in Bachmann's bundle: an *in vivo* and *in vitro* study.

Book References. Author(s) as above; tilte of book (main words capitalized); city of publication; publisher; year

(3). Parmley, W.W. and Tyberg, J.V. Determinants of myocardial oxygen demand. In: Progress in Cardiology, edited by Yu, P.N. and Goodwin, J.F. Philadelphia, PA, USA: Lea & Febiger, 1976, vol. 5, pp. 19-36.

(6). Chang, J.P., Morgan, R.O. and Catt, K.J. Inositol phosphates, diacylglycerol, and arachidonic acid in GnRH action (Abstract 48). The 1st International Congress of Neuroendocrinology, San Francisco, USA, 1986, p. 35.

5. Abbreviations and symbols for units of measurement should conform to international recommendation.

6. Tables should be typed on separate sheets, be numbered in Arabic numerals and be accompanied by adequate headings. Explanatory matter should appear in foot notes that are identified by superscript letters or asterisks.

7. Figures should be printed on glossy paper, be large enough for reproduction and be identified in pencil on the

8. If there are colored pages in a manuscript, authors must agree on printing them in colored plates, which are at the

9. To expedite the review process, authors are encouraged to submit names including E-mail address of 4-6 suggested

10. Manuscripts submitted as Short Communications should be concise and contain short technical notes, or preliminary experimental results. They should not exceed a total of five printed pages and not include more than three illustrations. The abstract for a *Short Communication* should not exceed 200 words. The editors reserve the right to decide what constitutes a Short Communication. Review Articles are published usually upon invitation to outstand-

11. Case report should contain abstract, introduction, case report, discussion, (acknowledgment), references, tables,

12. There is no page charge for a paper with 8 printed pages or less. For manuscripts that exceed 8 printed pages,