

American Journal of Physiology: Renal, Fluid and Electrolyte Physiology

Editor: K. A. HRUSKA

Associate Editors:

R. J. ALPERN
W. J. ARENDSHORST
R. C. BLANTZ

J. V. BONVENTRE
L. L. HAMM III
M. R. HAMMERMAN

A. R. MORRISON
R. G. O'NEIL
B. A. STANTON

Editorial Board:

K. F. BADR
B. J. BALLERMANN
L. BANKIR
M. G. BAUM
R. BELIVEAU
P. D. BELL
T. BERL
B. BIAGI
J. E. BOURDEAU
P. C. BRAZY
M. D. BREYER
J. C. BURNETT, JR.
J. Y. CHEUNG
P. CHURCHILL
R. M. CULPEPPER
T. D. DuBOSE, JR.
P. A. FRIEDMAN
D. GOOD
J. P. GRANGER

W. B. GUGGINO
S. GULLANS
J. W. HANRAHAN
R. C. HARRIS
S. R. HAYS
T. H. HOSTETTER
D. HUMES
M. IMAI
J. INGELFINGER
P. A. INSEL
L. KARNISKI
P. E. KLOTMAN
M. KNEPPER
B. M. KOEPPEN
J. I. KREISBERG
R. KUMAR
J.-Y. LAPOINTE
M. LEVI
D. J. MARSH

K. MARTIN
B. MOLITORIS
N. G. MOSS
J. M. MULLIN
H. MURER
M. S. PALLER
R. ROMAN
J. C. ROMERO
S. SANSOM
D. SCHLONDORFF
A. SCHOOLWERTH
V. L. SCHUSTER
G. SCHWARTZ
J. A. SHAYMAN
P. SILVA
J. STOKES
R. L. TANNEN
J. WEINBERG

Publications Committee

C. M. TIPTON, *Chair*
D. L. KUNZE
L. B. ROWELL
J. A. SCHAFFER

Ex officio

B. B. RAUNER
*Publications Manager
and Executive Editor*
N. C. STAUB, *President*
M. FRANK, *Executive Dir.*

Editorial Staff

L. CHAMBERS
Production Manager
M. L. GOODWIN
C. GRIFFIN
Copy Editors

The *American Journal of Physiology: Renal, Fluid and Electrolyte Physiology* (ISSN-0363-6127) is published monthly (two volumes a year) by the American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991. *Subscription Prices (postpaid)*. Institutional: \$236.00, US; \$280.00, Canada and Mexico; \$303.00, elsewhere. Non-member individual: \$190.00, US; \$225.00, Canada and Mexico; \$247.00, elsewhere. APS Member, \$95.00. Subscriptions from outside the United States are payable in US currency or full equivalent. Japanese yen price is available from our agent: USACO Corporation, 13-12 Shimbashi 1-Chome, Minato-Ku, Tokyo 105, Ja-

pan. Subscriptions are accepted on a calendar-year basis only. *Single Copies and Back Issues*: When available, \$30.00 each postpaid. Second-class postage paid at Bethesda, MD and at additional mailing offices. POSTMASTER: send address changes to the American Journal of Physiology: Renal, Fluid and Electrolyte Physiology, 9650 Rockville Pike, Bethesda, MD 20814-3991.

Copyright © 1992 by the American Physiological Society. Printed in the United States of America. The code at the bottom of the first page of an article indicates the copyright owner's consent that copies of that article may be made beyond that permitted by sections 107 and 108

of the US Copyright Law—unless the copies are for general distribution, for advertising, for creating new works, or for resale—provided the per-copy fee is paid through the Copyright Clearance Center, Inc., 27 Congress St., Salem, MA 01970.0363-6127/92 \$2.00.

Change of Address: The Journal must be advised of a change of address at least 6 weeks prior to date of issue, with both the subscriber's old and new address given. Undelivered copies resulting from address change will not be replaced.

Editorial and Business Correspondence: AJP: Renal, Fluid and Electrolyte Physiology, 9650 Rockville Pike, Bethesda, MD 20814-3991.