American Journal of Physiology—Heart and Circulatory Physiology®

Deputy Editor: Merry Lindsey

Editor: Irving H. Zucker

Associate Editors:
Leon J. De Windt
Christine Des Rosiers
Debra I. Diz
Igor R. Efimov
Steven P. Jones
Nancy L. Kanagy
Masafumi Kitakaze
Ronglih Liao
Gary D. Lopaschuk
Kaushik P. Patel
Fabio A. Recchia
Junichi Sadoshima
Ajay M. Shah
Zoltan Ungvari
Withrow G. Wier

Consulting Editors:
Ivor J. Benjamin
Mordecai P. Blaustein
Mario Delmar
David Guterman
Robert L. Hester
David A. Kass
Yulin Liao
Michael S. Wolin

Editorial Board:
Christian Aalkjaer
Ellen Aasum
Tetsu-aro Aso
Fadi G. Akar
Barbara T. Alexander
John A. Auschampach
Peter H. Backx
Zsolt Bagi
Christopher P. Baines
Yuasako K. Bando
Susan M. Barman
Far Baranes
Daniel A. Beard
Luc Bertrand
Burns C. Blaxall
Penelope A. Boyden
Ralf Peter Brandes
Joseph E. Brayden
Paul S. Brooks
Virginia L. Brooks
Yan Burelle
David W. Busija
Candido Caba
Raju C. Cai
John W. Calvert
John M. Canty, Jr.
Nisha Charkoudian
John C. Chatham
Heiping Cheng
Nipunam Chauhan
William Chillian
George J. Crystal
Anna Cuizir
Paula Da Costa Martins
Deborah H. Damon
Roger A. Dampney
Sandra T. Daveidge
Buddhabhup Dawn
Peter P. de Tombe
Lea M. Delfbrige
Kevin C. Delsperger
Thom E. Dick
Sergey I. Dikalov
Anne M. Dorrance
Bradley J. Duncker
Walter N. Durán

Editorial and Business Correspondence:
Rita Scheman
Executive Director
Martin Frank
Director of Publications
Kara Hansell Keehan
Editorial Manager
Eric Pesaneli
Executive Editor
Michelle Gaffney
Editorial Consultant

Editor:
Irving H. Zucker

American Journal of Physiology—Heart and Circulatory Physiology® (ISSN-0363-6135) is published twice monthly online at www.ajpheart.org (ISSN-1522-1539) (two volumes a year) by the American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991. Subscription Prices (postpaid): For institutional print and online pricing, please see http://www.the-aps.org/publications/subs/. Nonmember individual (online only): $780.00. APS members: online is free. Print back issues when available, through December 2011: Subscriber, $65 each; nonsubscriber, $120 each. Subscriptions from outside the United States are payable in US currency or full equivalent. Subscriptions are accepted on a calendar-year basis. Periodicals postage paid at Bethesda, MD, and at additional mailing offices.

The American Journal of Physiology—Heart and Circulatory Physiology® is a registered trademark of the American Physiological Society.

Copyright © 2015 by the American Physiological Society. Printed in the United States of America by Cadmus Communications—Lancaster Division, Lancaster, PA 17601. 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 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., 22 Rosewood Dr., Danvers, MA 01923.

Disclaimer: The statements and opinions contained in the articles of the American Journal of Physiology—Heart and Circulatory Physiology® are solely those of the individual authors and contributors and not of the American Physiological Society. The appearance of advertisements in the journal is not a warranty, endorsement, or approval of the products or their safety. The American Physiological Society disclaims responsibility for any injury to persons or property resulting from any ideas or products referred to in any article or advertisement.