

Diabetes Care[®]

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION

January 2021 Volume 44, Number 1

[T]he simple word *Care* may suffice to express [the journal's] philosophical mission. The new journal is designed to promote better patient care by serving the expanded needs of all health professionals committed to the care of patients with diabetes. As such, the American Diabetes Association views *Diabetes Care* as a reaffirmation of Francis Weld Peabody's contention that "the secret of the care of the patient is in caring for the patient."

—Norbert Freinkel, *Diabetes Care*, January-February 1978

EDITOR IN CHIEF

Matthew C. Riddle, MD

ASSOCIATE EDITORS

George Bakris, MD
Lawrence Blonde, MD, FACP
Andrew J.M. Boulton, MD
David D'Alessio, MD
Linda A. DiMeglio, MA, MD, MPH
Linda Gonder-Frederick, PhD
Korey K. Hood, PhD
Frank B. Hu, MD, MPH, PhD
Steven E. Kahn, MB, ChB
Sanjay Kaul, MD, FACC, FAHA
Lawrence A. Leiter, MD, FRCPC, FACP,
FACE, FACC, FAHA
Robert G. Moses, MD
Stephen S. Rich, PhD
Julio Rosenstock, MD
Judith Wylie-Rosett, EdD, RD

EDITORIAL BOARD

Andrew J. Ahmann, MD
Fida Bacha, MD
Linda A. Barbour, MD, MSPH
Katharine Barnard-Kelly, PhD
Ananda Basu, MD, FRCP
Roy W. Beck, MD, PhD
Gianni Bellomo, MD
Petter Bjornstad, MD
Sonia Caprio, MD
Jessica R. Castle, MD
Matthew J. Crowley, MD, MHS
Kimberly A. Driscoll, PhD
Kathleen M. Dungan, MD, MPH
Thomas W. Gardner, MD, MS
Hertzel C. Gerstein, MD, MSc, FRCOC
Jennifer Green, MD
Petr Heneberg, RNDr, PhD
Reinhard W. Holl, MD, PhD
Philip Home, DM, DPhil
Byron J. Hoogwerf, MD, FACP, FACE
Sarah S. Jaser, PhD

M. Sue Kirkman, MD
John J.V. McMurray, MD, FRCP, FESC,
FACC, FAHA, FRSE, FMedSci
Mark E. Molitch, MD
Gregory A. Nichols, PhD, MBA
Bruce A. Perkins, MD, MPH
Casey M. Rebholz, PhD, MS,
MNSP, MPH
Maria Jose Redondo, MD,
PhD, MPH
Jonathan Shaw, MD, FRCP, FRACP,
FAAHMS
Jay M. Sosenko, MD, MS
Giovanni Targher, MD
Kristina M. Utzschneider, MD
Daniel H. van Raalte, MD, PhD
Ram Weiss, MD, PhD
Vincent C. Woo, MD, FRCPC
Daisuke Yabe, MD, PhD
Sophia Zoungas, MBBS (Hons),
PhD, FRACP

AMERICAN DIABETES ASSOCIATION OFFICERS

CHAIR OF THE BOARD

John Schlosser

PRESIDENT, MEDICINE & SCIENCE

Ruth Weinstock, MD, PhD

PRESIDENT, HEALTH CARE & EDUCATION

Cynthia Muñoz, PhD, MPH

SECRETARY/TREASURER

Christopher Ralston, JD

CHAIR OF THE BOARD-ELECT

Glen Tullman

PRESIDENT-ELECT, MEDICINE & SCIENCE

Guillermo Umpierrez, MD, CDE, FACP, FACE

PRESIDENT-ELECT, HEALTH CARE & EDUCATION

Otis Kirksey, PharmD, RPh, CDE, BC-ADM

SECRETARY/TREASURER-ELECT

Marshall Case

CHIEF EXECUTIVE OFFICER

Tracey D. Brown, MBA, BChE

CHIEF SCIENTIFIC & MEDICAL OFFICER

Robert A. Gabbay, MD, PhD



The mission of the American Diabetes Association
is to prevent and cure diabetes and to improve
the lives of all people affected by diabetes.

Diabetes Care[®]

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION

Diabetes Care is a journal for the health care practitioner that is intended to increase knowledge, stimulate research, and promote better management of people with diabetes. To achieve these goals, the journal publishes original research on human studies in the following categories: Clinical Care/Education/Nutrition/ Psychosocial Research, Epidemiology/Health Services Research, Emerging Technologies and Therapeutics, Pathophysiology/Complications, and Cardiovascular and Metabolic Risk. The journal also publishes ADA statements, consensus reports, clinically relevant review articles, letters to the editor, and health/medical news or points of view. Topics covered are of interest to clinically oriented physicians, researchers, epidemiologists, psychologists, diabetes educators, and other health professionals. More information about the journal can be found online at care.diabetesjournals.org.

Copyright © 2020 by the American Diabetes Association, Inc. All rights reserved. Printed in the USA. Requests for permission to reuse content should be sent to Copyright Clearance Center at www.copyright.com or 222 Rosewood Dr., Danvers, MA 01923; phone: (978) 750-8400; fax: (978) 646-8600. Requests for permission to translate should be sent to Permissions Editor, American Diabetes Association, at permissions@diabetes.org.

The American Diabetes Association reserves the right to reject any advertisement for any reason, which need not be disclosed to the party submitting the advertisement.

Commercial reprint orders should be directed to Sheridan Content Services, (800) 635-7181, ext. 8065.

Single issues of *Diabetes Care* can be ordered by calling toll-free (800) 232-3472, 8:30 A.M. to 5:00 P.M. EST, Monday through Friday. Outside the United States, call (703) 549-1500. Rates: \$75 in the United States, \$95 in Canada and Mexico, and \$125 for all other countries.

Diabetes Care is available online at care.diabetesjournals.org. Please call the numbers listed above, e-mail membership@diabetes.org, or visit the online journal for more information about submitting manuscripts, publication charges, ordering reprints, subscribing to the journal, becoming an ADA member, advertising, permission to reuse content, and the journal's publication policies.

Periodicals postage paid at Arlington, VA, and additional mailing offices.

PRINT ISSN 0149-5992
ONLINE ISSN 1935-5548
PRINTED IN THE USA

AMERICAN DIABETES ASSOCIATION PERSONNEL AND CONTACTS

ASSOCIATE PUBLISHER,
SCHOLARLY JOURNALS
Christian S. Kohler

EDITORIAL OFFICE DIRECTOR
Lyn Reynolds

PEER REVIEW MANAGER
Shannon Potts

ASSOCIATE MANAGER, PEER REVIEW
Larissa M. Pouch

DIRECTOR, SCHOLARLY JOURNALS
Heather Norton Blackburn

ASSOCIATE DIRECTOR, SCHOLARLY JOURNALS
Keang Hok

EDITORIAL CONTENT MANAGER
Donna J. Reynolds

TECHNICAL EDITOR
Theresa M. Cooper

PRODUCTION COORDINATOR
Saleha Malik

DIRECTOR, MEMBERSHIP/SUBSCRIPTION
SERVICES
Donald Crowl

SENIOR ADVERTISING MANAGER
Julie DeVoss Graff
jgraff@diabetes.org
(703) 299-5511

ADVERTISING REPRESENTATIVES

AMERICAN DIABETES ASSOCIATION
Paul Nalbandian
Associate Publisher, Advertising &
Sponsorships
pnalbandian@diabetes.org
(703) 549-1500, ext. 4806

PHARMACEUTICAL/DEVICE DIGITAL ADVERTISING
eHealthcare Solutions
R.J. Lewis
President and CEO
rlewis@ehsmaail.com
(609) 882-8887, ext. 101