

# Diabetes Care<sup>®</sup>

WWW.DIABETES.ORG/DIABETES CARE

JANUARY 2016

SUPPLEMENT  
**1**

AMERICAN DIABETES ASSOCIATION

## STANDARDS OF MEDICAL CARE IN DIABETES—2016



ISSN 0149-5992

American Diabetes Association

**Standards of  
Medical Care in  
Diabetes—2016**





# Diabetes Care<sup>®</sup>

THE JOURNAL OF CLINICAL AND APPLIED RESEARCH AND EDUCATION

January 2016 Volume 39, Supplement 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

William T. Cefalu, MD

---

## ASSOCIATE EDITORS

George Bakris, MD  
Lawrence Blonde, MD, FACP  
Andrew J.M. Boulton, MD  
David D'Alessio, MD  
Sherita Hill Golden, MD, MHS, FAHA  
Mary de Groot, PhD  
Eddie L. Greene, MD  
Frank B. Hu, MD, MPH, PhD  
Derek LeRoith, MD, PhD  
Robert G. Moses, MD  
Stephen Rich, PhD  
Matthew C. Riddle, MD  
Julio Rosenstock, MD  
William V. Tamborlane, MD  
Katie Weinger, EdD, RN  
Judith Wylie-Rosett, EdD, RD

## EDITORIAL BOARD

Nicola Abate, MD  
Silva Arslanian, MD  
Angelo Avogaro, MD, PhD  
Ananda Basu, MD, FRCP  
John B. Buse, MD, PhD  
Sonia Caprio, MD  
Robert Chilton, DO  
Kenneth Cusi, MD, FACP, FACE  
Pareesh Dandona, MD, PhD  
Stefano Del Prato, MD  
Dariush Elahi, PhD  
Franco Folli, MD, PhD  
Robert G. Frykberg, DPM, MPH  
W. Timothy Garvey, MD  
Ronald B. Goldberg, MD  
Margaret Grey, DrPH, RN, FAAN  
Richard Hellman, MD

Rita Rastogi Kalyani, MD, MHS, FACP  
Rory J. McCrimmon, MBChB, MD, FRCP  
Harold David McIntyre, MD, FRACP  
Gianluca Perseghin, MD  
Anne L. Peters, MD  
Jonathan Q. Purnell, MD  
Peter Reaven, MD  
Helena Wachslicht Rodbard, MD  
David J. Schneider, MD  
Elizabeth R. Seaquist, MD  
Norbert Stefan, MD  
Jeff Unger, MD  
Ram Weiss, MD, PhD  
Deborah J. Wexler, MD, MSc  
Joseph Wolfsdorf, MD, BCh  
Tien Yin Wong, MBBS, FRCP, FRANZCO, MPH, PhD

---

## AMERICAN DIABETES ASSOCIATION OFFICERS

CHAIR OF THE BOARD  
Robin J. Richardson

PRESIDENT, MEDICINE & SCIENCE  
Desmond Schatz, MD

PRESIDENT, HEALTH CARE & EDUCATION  
Margaret A. Powers, PhD, RD, CDE

SECRETARY/TREASURER  
Lorrie Welker Liang

CHAIR OF THE BOARD-ELECT  
David A. DeMarco, PhD

PRESIDENT-ELECT, MEDICINE & SCIENCE  
Alvin C. Powers, MD

PRESIDENT-ELECT, HEALTH CARE & EDUCATION

Brenda Montgomery, RN, MSHS, CDE

SECRETARY/TREASURER-ELECT  
Umesh Verma

CHIEF EXECUTIVE OFFICER  
Kevin L. Hagan

CHIEF SCIENTIFIC & MEDICAL OFFICER  
Robert E. Ratner, MD, FACP, FACE



*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<sup>®</sup>

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](http://care.diabetesjournals.org).

Copyright © 2016 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](http://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](mailto: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](http://care.diabetesjournals.org). Please call the numbers listed above, e-mail [membership@diabetes.org](mailto: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.

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

---

## AMERICAN DIABETES ASSOCIATION PERSONNEL AND CONTACTS

EDITORIAL OFFICE DIRECTOR  
Lyn Reynolds

PEER REVIEW MANAGER  
Shannon Potts

EDITORIAL OFFICE SECRETARIES  
Raquel Castillo  
Joan Garrett

MANAGING DIRECTOR, SCHOLARLY  
JOURNAL PUBLISHING  
Christian S. Kohler

DIRECTOR, SCHOLARLY JOURNAL PUBLISHING  
Heather Norton Blackburn

EDITORIAL MANAGERS  
Valentina Such  
Nancy C. Baldino

PRODUCTION MANAGER  
Amy S. Gavin

TECHNICAL EDITOR  
Oedipa Rice

MANAGING DIRECTOR, MEDIA SALES  
Clare Liberis  
[cliberis@diabetes.org](mailto:cliberis@diabetes.org)  
(212) 725-4925, ext. 3448

ADVERTISING MANAGER  
Julie DeVoss Graff  
[jdevoss@diabetes.org](mailto:jdevoss@diabetes.org)  
(703) 299-5511

ASSOCIATE DIRECTOR, BILLING & COLLECTIONS  
Laurie Ann Hall

DIRECTOR, MEMBERSHIP/SUBSCRIPTION  
SERVICES  
Donald Crowl

PHARMACEUTICAL DIGITAL ADVERTISING  
e-Healthcare Solutions  
John Burke  
Chief Revenue Officer  
[sales@ehsmail.com](mailto:sales@ehsmail.com)  
(609) 882-8887, ext. 149

PHARMACEUTICAL PRINT ADVERTISING  
The Jackson-Gaeta Group, Inc.  
B. Joseph Jackson  
[joejackson@jacksongaeta.com](mailto:joejackson@jacksongaeta.com)  
Paul Nalbandian  
[paulnalbandian@jacksongaeta.com](mailto:paulnalbandian@jacksongaeta.com)  
Tina Auletta  
[tinaauletta@jacksongaeta.com](mailto:tinaauletta@jacksongaeta.com)  
(973) 403-7677

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.