

EDITORS-IN-CHIEF

Lewis C. Cantley
Luis A. Diaz

EDITORIAL STAFF

DEPUTY EDITOR

Elizabeth S. McKenna

SENIOR EDITOR

Michele M. Hartsough

ASSOCIATE EDITORS

Avital Lev

I-Mei Siu

SENIOR EDITOR, SCIENCE AND MEDICAL NEWS

Suzanne L. Rose

WRITER/REPORTER, SCIENCE AND MEDICAL NEWS

Catherine C. Caruso

SCIENCE WRITER

Nicole Haloupek

SENIOR EDITORIAL ASSOCIATE

Ingrid Lin

SENIOR PRODUCTION PROJECT EDITOR

Julie Ehlers

SCIENTIFIC EDITORS

Kari Alitalo

James P. Allison

Scott A. Armstrong

Carlos L. Arteaga

Alan Ashworth

Alberto Bardelli

René Bernards

Elizabeth H. Blackburn

Paolo Boffetta

Joan S. Brugge

John C. Byrd

Andrea Califano

Arul Chinnaiyan

Sara A. Courtneidge

Lisa Coussens

Alan D. D'Andrea

Johann S. de Bono

Hugues de Thé

Ralph J. DeBerardinis

Ronald A. DePinho

Vishva M. Dixit

Susan M. Domchek

Matthew J. Ellis

Jeffrey A. Engelman

Douglas T. Fearon

Lori Friedman

Thomas F. Gajewski

Levi A. Garraway

Jennifer R. Grandis

Nathanael S. Gray

Daniel A. Haber

William C. Hahn

Douglas Hanahan

Manuel Hidalgo

Tyler Jacks

Elizabeth M. Jaffee

William G. Kaelin

Theodore S. Lawrence

John P. Leonard

Roger S. Lo

Douglas R. Lowy

Tak W. Mak

Richard M. Marais

Joan Massagué

Frank McCormick

Ari M. Melnick

Gordon B. Mills

Paul S. Mischel

Sean J. Morrison

Benjamin G. Neel

Olufunmilayo I. Olopade

Pier Paolo Pandolfi

William Pao

David R. Piwnica-Worms

Helen M. Piwnica-Worms

Kornelia Polyak

Carol Prives

Antoni Ribas

Jeffrey M. Rosen

Mark A. Rubin

Charles L. Sawyers

David Schenkein

Alice T. Shaw

Margaret A. Shipp

Kevan M. Shokat

M. Celeste Simon

Lillian L. Siu

David B. Solit

Jean-Charles Soria

Laura Soucek

Charles Swanton

Josep Tabernero

Craig B. Thompson

Nicholas C. Turner

David A. Tuveson

Robert H. Vonderheide

Karen H. Vousden

Xiaodong Wang

Ralph Weissleder

Eileen White

EDITORIAL OFFICE: Cancer Discovery [ISSN 2159-8274 (Print); ISSN 2159-8290 (Online)] is published monthly, one volume per year, by the American Association for Cancer Research, Inc., 615 Chestnut Street, 17th Floor, Philadelphia, PA 19106-4404. Periodicals postage paid at Philadelphia, PA, and additional mailing offices. POSTMASTER: Send address changes to Cancer Discovery, AACR Member Services, 615 Chestnut Street, 17th Floor, Philadelphia, PA 19106-4404 or E-mail: membership@aacr.org. Copyright 2019 by the American Association for Cancer Research, Inc. © The paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

AACR OFFICERS

Elaine R. Mardis, President
Antoni Ribas, President-Elect
Elizabeth M. Jaffee, Past President
William N. Hait, Treasurer
Margaret Foti, Chief Executive Officer

PUBLICATIONS COMMITTEE

Victor E. Velculescu, Chairperson
Dafna Bar-Sagi
Mary Helen Barcellos-Hoff
Michael E. Berens
John D. Carpten
Maura L. Gillison
Rakesh K. Jain
Pasi A. Jänne
Gerrit A. Meijer
Gordon B. Mills
Steffi Oesterreich
William Pao
Gloria M. Petersen
David R. Piwnica-Worms
Charles W.M. Roberts
Alice T. Shaw
Lillian L. Siu
Saraswati V. Sukumar
Toshikazu Ushijima

PUBLISHING STAFF

PUBLISHER

Christine B. Rullo

DIRECTOR, JOURNAL OPERATIONS AND SYSTEMS

Daniel S. Evanko

DIRECTOR, JOURNAL SALES AND MARKETING

Nicola L. Hill

DIRECTOR, DIGITAL PUBLISHING

Mark Jacobson

ASSOCIATE DIRECTOR, PRODUCTION

Charlene Squibb

ASSISTANT DIRECTOR, JOURNAL MARKETING

Joanna Arnold

ASSISTANT DIRECTOR, INSTITUTIONAL SALES & OUTREACH

Karola Rac

SCOPE

Cancer Discovery publishes high-impact, peer-reviewed articles describing major advances in research and clinical trials. As the premier cancer information resource, the Journal also presents Review Articles, Perspectives and Commentaries, News stories, and Research Watch summaries of important journal articles to its

readers to keep them informed about the latest findings in the field. Topics span the spectrum of cancer research and medicine from the laboratory to the clinic and epidemiologic studies.

Cancer Discovery is abstracted and/or indexed in Current Contents/Clinical Medicine, MEDLINE, Science Citation Index, Scopus, and Web of Science.

SUBMISSION OF MANUSCRIPTS

Manuscript submission is welcomed online at <http://cd.msubmit.net>. Before submitting a manuscript, please read the Instructions for Authors, which are available from the Journal's home page at <http://cancerdiscovery.aacrjournals.org>.

PUBLICATION CHARGES

Articles are published with the understanding that the author(s) must pay both a publication fee of \$2,500 and, if applicable, a color figure handling fee of \$450 per figure.

SUBSCRIPTION INFORMATION

Nonmember Individuals

Subscriptions include print version with online access. Contacts listed below are for nonmember individual subscriptions.

USA and Rest of World (excluding Japan)
American Association for Cancer Research, 615 Chestnut Street, Philadelphia, PA 19106; 1-855-744-4667; pubsales@aacr.org

Japan

e-support@maruzen.co.jp; journal@kinokuniya.co.jp; usaco@usaco.co.jp

International print subscriptions include cost of surface mail. Expedited mailing is available. Contact the American Association for Cancer Research for rates.

Site Licenses

For information about institutional site licenses, contact pubsales@aacr.org.

AACR Members

AACR members may opt to receive either a print subscription with online access to content or an online-only subscription. Contact membership@aacr.org or visit the membership page at www.aacr.org for more information.

Single Issue Sales

Subject to their availability, single or back issues may be purchased for \$60 (U.S.) or \$65 (outside the U.S.) each. The cost must be prepaid. Contact pubsales@aacr.org.

Claims

One-time claims for missing issues made within 120 days of the issue's publication will be honored, subject to availability. No credit or refund will be given if an issue is out of print at the time of claim.

AACR Members
membership@aacr.org

Nonmembers and Institutions
pubsales@aacr.org

ADVERTISING INFORMATION

For information about advertising in AACR journals, contact Pharmaceutical Media Inc., 30 East 33rd St., 4th Floor, New York, NY 10016; 212-904-0360; Dsimone@pminy.com.

COPYRIGHT AND PERMISSIONS

Content printed in or disseminated by *Cancer Discovery* is protected by copyright. Authors who wish to publish material in *Cancer Discovery* must formally transfer copyright to the AACR. All authors must sign copyright transfer forms before the AACR can proceed with publication.

To read the complete AACR Copyright and Permissions Policy, visit www.aacrjournals.org/content/authors/copyright-permissions-and-access