

Executive Editor

Hillary E. Sussman

Associate Editor

Ahmet M. Denli

Assistant Editor

Jennifer L. DeLeon

Editors

Aravinda Chakravarti

Evan E. Eichler

Richard A. Gibbs

Eric Green

Richard M. Myers

William J. Pavan

Administrative Assistant

Dana Macciola

Director of Publication Services

Linda Sussman

Production Manager

Denise Weiss

Production Editor

Michael Henigman

Production Assistant

Tara Kulesa

Editorial Board

N. Ahituv (Univ. of California, San Francisco)

C. Alkan (Bilkent Univ.)

K.F. Au (The Ohio State Univ.)

M.A. Beer (Johns Hopkins Univ.)

C.D. Brown (Univ. of Pennsylvania)

M. Brudno (Univ. of Toronto)

P. Carninci (RIKEN Yokohama Institute)

L. Carrel (Penn State College of Medicine)

D. Conrad (OHSU)

V.G. Corces (Emory Univ.)

C. Danko (Cornell Univ.)

D. Dickel (Lawrence Berkeley National Laboratory)

A. Di Rienzo (Univ. of Chicago)

A. Dobin (Cold Spring Harbor Laboratory)

J. Ernst (Univ. of California, Los Angeles)

M. Esteller (Bellvitge Biomedical Research Institute)

S. Gabriel (Broad Institute)

J. Gertz (Univ. of Utah)

L. Gilbert (Univ. of California, San Francisco)

E. Grice (Univ. of Pennsylvania)

R.C. Hardison (The Pennsylvania State Univ.)

K. Harris (Univ. of Washington)

S. Henikoff (Fred Hutchinson Cancer Research Center)

N. Ingolia (Univ. of California, Berkeley)

S. Jones (BC Cancer Agency)

R. Knight (Univ. of California, San Diego)

S. Krishnaswamy (Yale School of Medicine)

A. Kundaje (Stanford Univ.)

J. Lee (Massachusetts General Hospital)

R. Lister (Univ. of Western Australia)

D. MacAlpine (Duke Univ. Medical Center)

K. Makova (Pennsylvania State Univ.)

A.S. McCallion (Johns Hopkins Univ. School of Medicine)

K. Mohlke (Univ. of North Carolina, Chapel Hill)

J.V. Moran (Univ. of Michigan Medical School)

N. Navin (MD Anderson Cancer Center)

J. Parkhill (Univ. of Cambridge)

A.M. Phillippy (National Human Genome Research Institute)

J.H. Postlethwait (Univ. of Oregon)

A. Quinlan (Univ. of Utah)

T.E. Reddy (Duke Univ. School of Medicine)

J. Rogers (Baylor College of Medicine)

Y. Ruan (The Jackson Laboratory)

P.C. Scacheri (Case Western Reserve Univ.)

M. Schatz (Johns Hopkins Univ.)

J.S. Schmutz (HudsonAlpha Institute for Biotechnology)

D.J. Segal (Univ. of California, Davis)

J. Shendure (Univ. of Washington)

J. Smith (Univ. of Kentucky)

O. Stegle (German Cancer Research Center [DKFZ])

D. Symer (Univ. of Texas MD Anderson Cancer Center)

O. Troyanskaya (Princeton Univ.)

T. Turner (Washington Univ. School of Medicine)

A. Visel (Lawrence Berkeley National Laboratory)

T. Wang (Washington Univ. School of Medicine)

K. Wolfe (University College, Dublin)

X. Xiao (Univ. of California, Los Angeles)

F. Yue (Northwestern Univ.)

K. Zhao (National Heart, Lung, and Blood Institute)

C. Zong (Baylor College of Medicine)

Genome Research (ISSN 1088-9051) is published monthly by Cold Spring Harbor Laboratory Press, 500 Sunnyside Blvd., Woodbury, NY 11797-2924.

Periodicals paid at Woodbury, NY and additional mailing offices. Canada Post International Publications Mail Product (Canadian distribution) Sales Agreement No. 1321846. POSTMASTER: Send address changes to Cold Spring Harbor Laboratory Press, 500 Sunnyside Boulevard, Woodbury, NY 11797-2924.

Subscriptions: Kathleen Cirone, Subscription Manager. For 2020 institutional prices, go to <https://genome.cshlp.org/site/subscriptions/cost.dtl>. Orders may be sent to Cold Spring Harbor Laboratory Press, Fulfillment Department, 500 Sunnyside Boulevard, Woodbury, New York 11797-2924. Telephone: Continental US and Canada 1-800-843-4388; all other locations 1-516-422-4100. Fax: 1-516-422-4097. Claims for missing issues must be received within four months of issue date.

Advertising: Marcie Siconolfi, Advertising Manager, Cold Spring Harbor Laboratory Press, 1 Bungtown Rd., Cold Spring Harbor, New York 11724-2203. Phone: 516-422-4010; fax: 516-422-4092.

Information for Contributors: Author instructions are available at our website, <https://www.genome.org>.

Online Manuscript Submission: <https://submit.genome.org>.

Copyright Information: Authors of articles published in *Genome Research* retain copyright of the articles (except US Government employees) but grant Cold Spring Harbor Laboratory Press exclusive right to publish the articles for a period of six months following full-issue publication. This includes the rights to publish, reproduce, distribute, display, and store the article in all formats; to translate the article into other languages; to create adaptations, summaries, extracts, or derivations of the article; and to license others to do any or all of the above. Authors can reuse their articles in their work as long as *Genome Research* is credited as the place of original publication. Six months following publication, these articles are made available under a CC-BY-NC 4.0 Creative Commons license.

Articles that carry the Open Access designation are available immediately under a CC-BY 4.0 or CC-BY-NC 4.0 Creative Commons license. Detailed copyright terms are online at <https://genome.cshlp.org/site/misc/terms.xhtml>. Permission information is online at https://genome.cshlp.org/site/misc/permissions_landing.xhtml. Copyright © 2020 by Cold Spring Harbor Laboratory Press