American Journal of Perinatology

Editors in Chief
Rosemary D. Higgins, MD
College of Health and Human Services
George Mason University
Fairfax, Virginia

George R. Saade, MD
Division of Maternal-Fetal Medicine
The University of Texas Medical Branch
Galveston, Texas

Joanne C. Vasami
joanne.vasami@gmail.com

Kara Calkins, MD
David Geffen School of Medicine
Los Angeles, California

Maged Costantine, MD
The Ohio State University
Columbus, Ohio

Catalin Buhimschi, MD
The Ohio State University
Wexner Medical Center
Columbus, Ohio

Martin Keszler, MD
Brown University, Women and Infants
Hospital of Rhode Island
Providence, Rhode Island

Abhik Das, PhD
RTI International
Rockville, Maryland

Anup Katheria, MD, FAAP
University Hospitals Rainbow Babies & Children’s Hospital
Cleveland, Ohio

Emmanuel Bujold, MD, MSc
Université Laval, Quebec, Canada

Kousiki Patra, MD
Division of Neonatology
Rush University Children’s Hospital
Chicago, Illinois

Rosemary D. Higgins, MD
Children’s Hospital of Michigan
Detroit, Michigan

Satyan Lakshminrusimha, MD
UC Davis Children’s Hospital
Sacramento, California

Anna Palatnik, MD
Medical College of Wisconsin
Milwaukee, Wisconsin

Aloka L. Patel, MD
Rush University Children’s Hospital
Chicago, Illinois

Ravi M. Patel, MD, MSc
Emory University School of Medicine
Atlanta, Georgia

Beena Sood, MD
Children’s Hospital of Michigan
Detroit, Michigan

Kousiki Patra, MD
Division of Neonatology
Rush University Children’s Hospital
Chicago, Illinois

Erik F. Werner, MD, MS
Alpert Medical School of Brown University
Providence, Rhode Island

SMFM Associate Editor

Alfred Abuhamad, MD
Eastern Virginia Medical School
Norfolk, Virginia

Jacob Aranda, MD, PhD, FRCPC
SUNY Downstate
New York, New York

Emmanuel Bujiold, MD, MSc
Université Laval, Quebec, Canada

Gus Dekker, MD, PhD
Adelaide University, Adelaide, Australia

Tak Yeung Leung, MD
The Chinese University of Hong Kong
Hong Kong

Paolo Monzoni, MD
S. Anna Hospital, Torino, Italy

Shigetaka Matsunaga, MD, PhD
Saitama Medical University
Saitama, Japan

Krisa P. Van Meurs, MD
Stanford University School of Medicine
Palo Alto, California

Renato Procianoy, MD
Universidade Federal do Rio Grande do Sul/Hospital de Clínicas de Porto Alegre
Porto Alegre, Brazil

Baha Sibai, MD
McGovern Medical School at the University of Texas Health Science Center at Houston (UTHealth)
Houston, Texas

Barbara Stoll, MD
McGovern Medical School at the University of Texas Health Science Center at Houston (UTHealth)
Houston, Texas

Steve Thornton, MD
Barts and the London School of Medicine and Dentistry Queen Mary University of London
London, United Kingdom

Alan T. N. Tita, MD, PhD
University of Alabama
Birmingham, Alabama

Namasiyam Ambalavanar, MD
University of Alabama at Birmingham
Birmingham, Alabama

Sean C. Blackwell, MD
McGovern Medical School at the University of Texas Health Science Center at Houston (UTHealth)
Houston, Texas

Praveen Chandrasekharan
University at Buffalo
Buffalo, New York

William Goodnight, MD, MSCR
University of North Carolina School of Medicine
Chapel Hill, North Carolina

Christopher Robinson, MD, MSCR
Charleston Maternal Fetal Medicine
Roper St. Francis Healthcare
Charleston, South Carolina

Web Editors

Krisa P. Van Meurs, MD
Kousiki Patra, MD

© 2021 by Thieme Medical Publishers, Inc. American Journal of Perinatology is published monthly, except semi-monthly in January and July, by Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001. Subscription and pricing information in €, US$, and Indian Rupees can be found online at www.thieme.com/ajp/subscribe.

Periodicals postage is paid at New York, NY and additional mailing offices. POSTMASTER: send changes of address to American Journal of Perinatology, Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001.

Copies not received will be replaced upon written notification to the Publisher. Notification must be received within three months of issue date for U.S. subscribers, and within four months of issue date outside the United States.

Editorial comments should be sent to journals@thieme.com. Articles may be submitted to this journal on an open-access basis. For further information, please send an e-mail to openaccess@thieme.com. The content of this journal is available online at www.thieme-connect.com/products. Visit our Web site at www.thieme.com and the direct link to this journal at www.thieme.com/ajp.

American Journal of Perinatology is listed in Biological Abstracts, BIOSIS, CINAHL, Current Contents/Clinical Medicine, EMBASE, Excerpta Medica, Index Medicus, ISI/BIBOMED, MEDLINE, Reference Update, Research Alert, Science Citation Index, Scopus, and Scielo. Thieme Medical Publishers is a member of the CrossRef initiative.

Advertisers in North and South America contact: Cunningham Associates, 180 Old Tappan Road, Old Tappan, NJ 07675. Advertisers outside the Americas contact: Pharmedia, Anzeigen und Verlagsservice GmbH, Postfach 30 08 80, D-70448 Stuttgart, Germany.