

The Journal of Reproductive Medicine®

Founded in 1968 at The Chicago Lying-in Hospital

Web site: <http://www.reproductivemedicine.com>

Official Periodical

International Society for the Study of Trophoblastic Disease • The Martin L. Stone Obstetrical and Gynecological Society of the New York Medical College • Southwest Obstetrical and Gynecological Society • The Frederick P. Zuspan Society

Editor-in-Chief

Lawrence D. Devoe, M.D.
Medical College of Georgia
Augusta, GA

Associate Editors (2020)

Ross S. Berkowitz, M.D.
Harvard Medical School
Boston, MA

William J. Ledger, M.D.
Weill Cornell Medical College
New York, NY

William F. Rayburn, M.D.
University of New Mexico School of
Medicine
Albuquerque, NM

Lee P. Shulman, M.D.
Northwestern University–Feinberg
School of Medicine
Chicago, IL

Managing Editor

Donna Kessel

Editorial Assistant

Patricia J. Ratzlaff

Editorial Advisory Board for Volume LXV

Gloria A. Bachmann, M.D., Rutgers–Robert
Wood Johnson University Hospital, New
Brunswick, NJ

Joanna M. Cain, M.D., University of
Massachusetts School of Medicine,
Worcester, MA

Libby Edwards, M.D., Wake Forest University
School of Medicine, Charlotte, NC

Mark I. Evans, M.D., Columbia University
Medical School, New York, NY

Victor Gomel, M.D., University of British
Columbia, Vancouver, BC, Canada

Angela S. Kueck, M.D., Dell Seton Medical
Center at the University of Texas, Austin, TX

Marc R. Laufer, M.D., Harvard Medical School,
Boston, MA

Gretchen M. Lentz, M.D., University of
Washington Medical Center, Seattle, WA

James H. Liu, M.D., Case Western Reserve
University, Cleveland, OH

Janet B. McGill, M.D., Washington University,
St. Louis, MO

James A. McGregor, M.D., University of
California, Los Angeles, CA

Jennifer R. Niebyl, M.D., University of
Iowa College of Medicine, Iowa City, IA

James W. Orr, Jr., M.D., University of
Miami Miller School of Medicine,
Fort Myers, FL

David A. Richardson, M.D., Wayne State
University, Detroit, MI

Eyal Schiff, M.D., Tel Aviv University,
Tel-Hashomer, Israel

Vicki Lynn Seltzer, M.D., Albert Einstein
College of Medicine, Bronx, NY

Harriet O. Smith, M.D., Albert Einstein
College of Medicine, Bronx, NY

Ronald C. Strickler, M.D., Wayne State
University School of Medicine,
Detroit, MI

Michael A. Thomas, M.D., University
of Cincinnati College of Medicine,
Cincinnati, OH

John M. G. van Vugt, M.D., Radboud
University Medical Centre, Nijmegen,
the Netherlands

With reference to privacy and confidentiality, *The Journal of Reproductive Medicine*® adheres to the principles of the International Committee of Medical Journal Editors; uniform requirements for manuscripts submitted to biomedical journals: Writing and editing for biomedical publication (<http://www.icmje.org>).

THE JOURNAL OF REPRODUCTIVE MEDICINE® (ISSN 0024-7758) (U.S.P.S.: 0104-310) is published bimonthly by *The Journal of Reproductive Medicine*®, Inc., 8342 Olive Boulevard, St. Louis, MO 63132-2814. Periodicals postage paid at Senatobia, MS, and additional mailing offices. *Subscription rates*—U.S.A. and POSSESSIONS (online only): personal, \$498.00; institutional, \$914.00. FOREIGN (online only): personal, \$498.00; institutional, \$914.00. U.S.A. and POSSESSIONS (print and online): personal, \$748.00; institutional, \$1,314.00. FOREIGN (print and online): personal, \$748.00; institutional, \$1,314.00. Single copy: \$200.00. Add \$5.00 for foreign shipping. *Institutional* (multiple-reader rate) applies to libraries, schools, hospitals, group practices and federal, commercial and private institutions and organizations. Individual subscriptions must be in the name of the individual, delivered to a home address and paid by a personal check. *Subscription and reprint orders* should be forwarded to 8342 Olive Boulevard, St. Louis, MO 63132-2814. Telephone (314) 991-4440. Please allow six weeks before date of issue for address change. Subscribers should submit claim requests within 3 months after the publication date of the issue in question. Our office can process only three claim requests per calendar year. After that, the subscriber can purchase missing issues individually. POSTMASTER: send address changes to *The Journal of Reproductive Medicine*®, 8342 Olive Boulevard, St. Louis, MO 63132-2814.

Editorial Office: 8342 Olive Boulevard, St. Louis, MO 63132-2814. Forward all manuscripts and editorial contributions to editassist@reproductivemedicine.com. Telephone (314) 991-4440. E-mail: Editor@reproductivemedicine.com. *Advertising Representative*: Richard O'Donnell, Director of Sales and Advertising, 8342 Olive Boulevard, St. Louis, MO 63132-2814. Telephone (847) 832-1512, FAX (847) 232-1432. *Advertising Office*: 8342 Olive Boulevard, St. Louis, MO 63132-2814. Telephone (314) 991-4440.

Permission to photocopy for internal or personal use or the internal or personal use of specific clients is granted by *The Journal of Reproductive Medicine*®, Inc., for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the stated fee is paid per copy directly to the CCC, 222 Rosewood Drive, Danvers, MA 01923. Telephone (508) 750-8400, Fax (508) 750-4250. Special requests should be addressed to *The Journal of Reproductive Medicine*®, 8342 Olive Boulevard, St. Louis, MO 63132-2814.

The opinions and statements in this journal are those of the authors and are not attributable to the sponsor, publisher, editor or editorial board of the *Journal of Reproductive Medicine*®. Product dosages, indications and methods of use referred to in the papers and discussions reflect the authors' clinical experience or are derived from other professional sources. Consult the complete prescribing information before administering any drug.

Copyright © 2020 Journal of Reproductive Medicine®, Inc.