



# SURGERY FOR OBESITY AND RELATED DISEASES

THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY FOR METABOLIC AND BARIATRIC SURGERY and the BRAZILIAN SOCIETY FOR BARIATRIC SURGERY

## EDITOR-IN-CHIEF

Harvey J. Sugerman, M.D.  
290 Southwinds Drive  
Sanibel, FL 33957

## SECTION EDITORS

Continuing Medical Education Editor  
Samer G. Mattar, M.D.  
Oregon Health & Sciences University  
Portland, OR  
Case Report Editor  
Michel M. Murr, M.D.  
University of South Florida  
Tampa, FL  
Social Media Editor  
Richard Peterson, M.D., M.P.H., F.A.C.S.  
University of Texas Health Science Center  
San Antonio, TX

## MANAGING EDITOR

David Newcombe  
Stellar Medical Publications  
Plymouth, MA 02360

## ASSOCIATE EDITORS

David Allison, Ph.D.  
University of Alabama School of Medicine  
Birmingham, AL  
Laurent D. Biertho, M.D.  
Laval University, Quebec, Canada  
Stacy Brethauer, F.A.C.S.  
Cleveland Clinic, Cleveland, OH  
Luca Busetto, M.D.  
University of Padua School of Medicine  
Padua, Italy  
John B. Dixon, M.B.Bs., Ph.D.  
Monash University, Melbourne  
Victoria, Australia  
R. Armour Forse, M.D., F.A.C.S.  
Creighton University  
Omaha, NE  
Michel Gagner, M.D., F.A.C.S.  
Mount Sinai Hospital  
Miami, FL  
Leslie Heinberg, Ph.D.  
The Cleveland Clinic  
Cleveland, OH  
Daniel M. Herron, M.D., F.A.C.S.  
Mount Sinai Hospital  
New York, NY

Thomas Inge, M.D., F.A.C.S.  
Children's Hospital  
University of Cincinnati  
Cincinnati, OH  
Edward Lin, D.O., M.B.A.,  
F.A.C.S.  
Emory University  
Atlanta, GA  
James W. Maher, M.D.,  
F.A.C.S.  
Virginia Commonwealth  
University  
Richmond, VA  
Matthew Martin, M.D.,  
F.A.C.S.  
Madigan Army Hospital  
Tacoma, WA  
Alex Miras, M.D.  
Imperial College, London, UK

James E. Mitchell, M.D.  
University of North Dakota  
Fargo, ND  
Robert O'Rourke, M.D.,  
F.A.C.S.  
University of Michigan  
Ann Arbor, MI  
Alfons Pomp, M.D., F.A.C.S.  
Weill Medical College of  
Cornell University  
New York, NY  
David A. Provost, M.D.,  
F.A.C.S.  
Dallas, TX  
Aurora D. Pryor, M.D.,  
F.A.C.S.  
State University of New York  
Stony Brook, NY

Raul Rosenthal, M.D.,  
F.A.C.S.  
Cleveland Clinic Florida  
Weston, FL  
Kajsa Sjöholm, M.Sc., Ph.D.  
University of Gothenburg  
Gothenburg, Sweden  
Ranjan Sudan, M.D.,  
F.A.C.S.  
Duke University  
Durham, NC  
Meg Zeller, Ph.D.  
Cincinnati Children's  
Hospital Medical Center  
Cincinnati, OH

## EDITORIAL BOARD

Mohamed Ali, M.D., F.A.C.S.  
University of California  
Davis Sacramento, CA  
John C. Alverdy, M.D., F.A.C.S.  
University of Chicago, Chicago, IL  
Marc Bessler, M.D., F.A.C.S.  
Columbia University  
New York, NY  
Robin Blackstone, M.D.  
University of Arizona  
Phoenix, AZ  
Robert E. Brolin, M.D.,  
F.A.C.S.  
Princeton, NJ  
Henry Buchwald, M.D., Ph.D.,  
F.A.C.S.  
University of Minnesota  
Minneapolis, MN  
T. Karl Byrne, M.D., F.A.C.S.  
Medical University of  
South Carolina  
Charleston, SC  
Guilherme M. Campos, M.D.,  
F.A.C.S., F.A.S.M.B.S.  
Virginia Commonwealth University  
Richmond, VA  
Preston Carter, M.D.  
Madigan Army Hospital  
Lewis-McChord, WA  
Nicolas V. Christou, M.D.  
McGill University  
Montreal, Canada  
Ricardo Cohen, M.D.  
Oswaldo Cruz Hospital  
Sao Paulo, Brazil

Karen J. Coleman, Ph.D.  
Southern California Permanente  
Medical Group  
Pasadena, CA  
Anita P. Courcoulas, M.D.,  
M.P.H., F.A.C.S.  
University of Pittsburgh  
Pittsburgh, PA  
Peter F. Crookes, M.D., F.A.C.S.  
University of Southern California  
Los Angeles, CA  
Nestor de la Cruz-Muñoz,  
M.D., F.A.C.S.  
University of Miami School  
of Medicine  
Miami, FL  
Eric J. DeMaria, M.D.  
Bon Secours Maryview  
Medical Center  
Portsmouth, VA  
J. Christopher Eagon  
Washington University  
St. Louis, MO  
George M. Eid, M.D.  
Allegheny Health Network  
Pittsburgh, PA  
Wayne J. English, M.D., F.A.C.S.  
Vanderbilt University  
Nashville, TN  
John Gleysteen, M.D., F.A.C.S.  
University of Alabama  
Birmingham, AL  
Peter T. Hollowell, M.D.  
University of Virginia  
Charlottesville, VA  
Kelvin Higa, M.D., F.A.C.S.  
Fresno, CA

Jacques Himpens, M.D.  
St Pierre University Hospital  
Brussels, Belgium  
Fritz F. Horber, M.D.  
University of Berne  
Berne, Switzerland  
Matthew Hutter, M.D.,  
F.A.C.S.  
Massachusetts General  
Hospital Harvard University  
Boston, MA  
Sayeed Ikramuddin, M.D.,  
F.A.C.S.  
University of Minnesota  
Minneapolis, MN  
William B. Inabnet, III, M.D.,  
F.A.C.S.  
Mount Sinai Medical Center  
New York, NY  
Brian P. Jacob, M.D., F.A.C.S.  
Icahn School of Medicine at  
Mount Sinai  
New York, NY  
Daniel B. Jones, M.D., M.S.  
Harvard Medical School  
Boston, MA  
Andrei Keidar  
Beilinson Hospital, Tel Aviv  
University  
Tel Aviv, Israel  
Colleen Kennedy, M.D.  
Dallas, TX  
Shanu Kothari, M.D., F.A.C.S.  
Gundersen Lutheran  
Health System  
La Crosse, WI



# SURGERY FOR OBESITY AND RELATED DISEASES

THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY FOR METABOLIC AND BARIATRIC SURGERY and the BRAZILIAN SOCIETY FOR BARIATRIC SURGERY

## EDITORIAL BOARD (CONTINUED)

Wei-Jei Lee, M.D. Min-Sheng General Hospital <i>Taoyuan, Taiwan</i>	Ninh T. Nguyen, M.D., F.A.C.S. University of California, Irvine <i>Orange, CA</i>	David B. Sarwer, Ph.D. University of Pennsylvania <i>Philadelphia, PA</i>	Rudolf Weiner, M.D. Krankenhaus Sachsenhausen <i>Frankfurt am Main, Germany</i>
Carel W. le Roux, M.D., Ph.D. Imperial College London <i>London, United Kingdom</i>	Paul O'Brien, M.D. Monash University, Melbourne <i>Victoria, Australia</i>	Bruce Schirmer, M.D., F.A.C.S. University of Virginia <i>Charlottesville, VA</i>	Noel Williams, M.D., F.A.C.S. University of Pennsylvania <i>Philadelphia, PA</i>
Corrigan L. McBride, M.D., F.A.C.S. University of Nebraska <i>Omaha, NE</i>	Jaime Ponce, M.D., F.A.C.S. <i>Dalton, GA</i>	Michael A. Schweitzer, M.D., F.A.C.S. Johns Hopkins University <i>Baltimore, MD</i>	Alan C. Wittgrove, M.D., F.A.C.S. <i>San Diego, CA</i>
John Melissas, M.D. <i>Athens, Greece</i>	Walter J. Pories, M.D., F.A.C.S. East Carolina University <i>Greenville, NC</i>	Scott Shikora, M.D., F.A.C.S. Brigham and Woman's Hospital Harvard University <i>Boston, MA</i>	Bruce M. Wolfe, M.D., F.A.C.S. University of Oregon <i>Portland, OR</i>
Karl Miller, M.D. Hallein Clinic <i>Hallein, Austria</i>	Gerhard Prager, M.D. University of Vienna Medical Center <i>Vienna, Austria</i>	Sasha Stiles, M.D. New York University <i>New York, NY</i>	Natan Zundel, M.D., F.A.C.S. <i>Miami, FL</i>
Geltrude Mingrone, M.D. Catholic University of Rome <i>Rome, Italy</i>	Christine J. Ren-Fielding, M.D., F.A.C.S. New York University <i>New York, NY</i>	David Tichansky, M.D., F.A.C.S. Thomas Jefferson University <i>Philadelphia, PA</i>	Karen J. Coleman, PhD Southern California Permanente Medical Group <i>Pasadena, CA</i>
John M. Morton, M.D., F.A.C.S. Stanford University <i>Stanford, CA</i>	Mitchell Roslin, M.D., F.A.C.S. Lennox Hill Medical Center <i>New York, NY</i>	Philippe Topart, M.D. Societe de chirurgie viscerale, Clinique de l'Anjou <i>Angers, France</i>	S. Scott Davis, Jr., M.D., F.A.C.S. Emory Bariatrics Center <i>Atlanta, GA</i>
Erik Naslund, M.D. Karolinska Institute <i>Stockholm, Sweden</i>	Francesco Rubino, M.D. King's College <i>London, UK</i>		Sivamainthan Vithiananthan, M.D., F.A.C.S., F.A.S.M.B.S. Warren Alpert Medical School of Brown University <i>Providence, RI</i>

## ASSOCIATE EDITORS FOR INTEGRATED HEALTH

Dale S. Bond, Ph.D. Brown University Medical Center <i>Providence, Rhode Island</i>	William F. Gourash, M.S.N., C.R.N.P. University of Pittsburgh Medical Center <i>Pittsburgh, Pennsylvania</i>	Rachel J. Pohle-Krauzza, Ph.D., R.D.N., L.D. Youngstown State University <i>Youngstown, Ohio</i>
---	--	--

## INTEGRATED HEALTH EDITORIAL BOARD

Cynthia K. Buffington, Ph.D. <i>Celebration, Florida</i>	Tracy Martinez, R.N., B.S.N. <i>La Jolla, California</i>
Laura L. Frank, Ph.D., M.P.H., R.D., C.D. <i>Spokane, Washington</i>	Jill G. Meador, R.N. Virginia Commonwealth University <i>Richmond, Virginia</i>
Margaret Furtado, M.S., R.D., L.D.N., R.Y.T. Johns Hopkins Bayview Medical Center <i>Baltimore, Maryland</i>	Julie M. Parrott, M.S., R.D., A.C.E.-C.P.T. <i>Private Practice, Central, New Jersey</i>
Wendy King, Ph.D. University of Pittsburgh <i>Pittsburgh, Pennsylvania</i>	Bobbie Lou Price, R.N., B.S.N. Physicians East <i>Greenville, North Carolina</i>
Faina Linkov, Ph.D. University of Pittsburgh <i>Pittsburgh, PA</i>	Maureen T. Quigley, A.P.R.N., F.N.P. Dartmouth-Hitchcock Medical Center <i>Hanover, New Hampshire</i>