AORTA

Official Journal of the Aortic Institute at Yale-New Haven Hospital

Editor-in-Chief

John A. Elefteriades

Yale University (New Haven, CT)

Co-Editor-in-Chief

Michael Jacobs

Maastricht University Hospital (Maastricht, Netherlands)

Executive Editor

Bulat A. Ziganshin

Yale University (New Haven, CT)

Editors

Davide Carino

Vita-Salute San Raffaele University (Milan, Italy)

Alan Dardik

Yale University (New Haven, CT)

Kim Eagle

University of Michigan (Ann Arbor, MI)

Sandip Mukherjee

Yale University (New Haven, CT)

Santi Trimarchi

Policlinico San Donato (Milan, Italy)

Editor Europe

Davide Carino

Vita-Salute San Raffaele University (Milan, Italy)

Editor Emeritus

Randall B. Griepp

Mount Sinai Medical Center (New York, NY)

Associate Editors

Anneke Damberg

Charité University Hospital Berlin (Berlin, Germany)

Emily A. Farkas

Saint Louis University (St. Louis, MO)

Bulat A. Ziganshin

Yale University (New Haven, CT)

Associate Editor for Debates and Special Events

Mohamad Bashir

Barts Heart Centre (London, UK)

Media Editor

Mohammad A. Zafar

Yale University (New Haven, CT)

Statistical Editor

Asanish Kalyanasundaram

Yale Aortic Institute (New Haven, CT)

Editorial Board

Riaz Akhtar

University of Liverpool (Liverpool UK)

Jean Bachet

Zayed Military Hospital (Abu Dhabi, United Arab Emirates)

Steven Bailey

University of Texas Health Sciences Center (San Antonio, TX)

Paul Barash

Yale University (New Haven, CT)

Roberto Di Bartolomeo

University of Bologna (Bologna, Italy)

Joseph Bavaria

University of Pennsylvania (Philadelphia, PA)

Jean-Pierre Becquemin

Henri Mondor Hospital (Creteil, France)

Michael A. Borger

Columbia University (New York, NY)

Harisios Boudoulas

Aristolelian University (Columbus, OH)

Alan C. Braverman

Washington University School of Medicine (St. Louis, MO)

Duke Cameron

John Hopkins Hospital (Baltimore, MD)

Roberto Chiesa

University di Bologna (Bologna, Italy)

Lawrence Cohen

Yale University (New Haven, CT)

Denton A. Cooley

Texas Heart Institute (Houston, TX)

Joseph Coselli

Texas Heart Institute/Baylor College of Medicine (Houston, TX)

Michael Dake

Stanford University (Stanford, CA)

George Dallas

Archimedes Analytical/Associate Yale Medical (Hickory, NC)

Tirone E. David

Toronto General Hospital (Toronto, ON)

Dimitrios Dougenis

Patras University School of Medicine (Rio, Greece)

L. (Hank) Edmunds

University of Pennsylvania (Philadelphia, PA)

Young Erben

Mayo Clinic (Jacksonville, FL)

Anthony Estrera

University of Texas-Houston Medical School (Houston, TX)

Rosella Fattori S. Orsola

University Hospital (Bologna, Italy)

Anthony Furnary

Starr-Wood Cardiac Group (OR, USA)

Valentin Fuster

Mount Sinai Medical Center (New York, NY)

Leonard Girardi,

New York Weill Cornell Medical Center (New York, NY)

Gary Grunkemeier

Providence Health System (Portland, OR)

Richard Gusberg

Yale New Haven Hospital (New Haven, CT)

Ala Sami Haddadin

Yale University (New Haven, CT)

Robert A. Hieb

Medical College of Wisconsin (Milwaukee, WI)

Jay Humphrey

Yale University (New Haven, CT)

Olga A. Iakoubova

Celera (Alameda, CA)

John S. Ikonomidis

Medical University of South Carolina (Charleston, SC)

Jeffrey Indes

University of Connecticut (Farmington, CT)

Eric Isselbacher

Massachusetts General Hospital (Boston, MA)

Ion Jovin

McGuire VA Medical Center (Richmond, VA)

Matthias Karck

University of Heidelberg (Heidelberg, Germany)

Nicholas Kouchoukos

Missouri Baptist Medical Ctr (St. Louis, MO)

George Koullias

Stony Brook University (Stony Brook, NY)

Johannes Lammer

Medical University (Vienna, Austria)

Frank A. Lederle VA Medical Center (Minneapolis, MN)

Scott LeMaire

Baylor College of Medicine (Houston, TX)

George Letsou

University of Texas-Houston Medical School (Houston, TX) Jes

S. Lindholt

University Hospital of Odense (Odense, Denmark)

Bart Loeys

Ghent University Hospital (Belgium)

Wei-Guo Ma

Anzhen Cardiovascular Surgery (Beijing, China)

Jillian Madine

University of Liverpool (Liverpool UK)

Jorge Mascaro

Queen Elizabeth Medical Centre (Birmingham, United Kingdom)

George Matalanis

Austin Hospital (Heidelberg, Australia)

Dianna Milewicz

University of Texas Medical School (Houston, TX)

Raj K. Modak

Yale New Haven Hospital (New Haven, CT)

Hamid Mojibian

Yale University School of Medicine (New Haven, CT)

Frans Moll

University Medical Center Utrecht (Netherlands)

Naiem Nassiri

Yale University (New Haven, CT)

Christoph Nienaber

University Hospital Rostock (Rostock, Germany)

Dimitris Nikas

Athens Medical Center (Athens, Greece)

Takao Ohki

Jikei University School of Medicine (Tokyo, Japan)

Aung Oc

Liverpool Heart and Chest Hospital (Liverpool, United Kingdom)

Kristine Orion

Ohio State University (Columbus, OH)

John Pepper

Imperial College

(London, United Kingdom)

John A. Rizzo

Stony Brook University (Stony Brook, NY)

Flavio Rocha

Virginia Mason Medical Center (Seattle, WA)

Chris K. Rokkas

Medical College of Wisconsin (Milwaukee, WI)

Natzi Sakalihasan

University of Liege (Liege, Belgium)

Timur Sarac

Ohio State University College of Medicine (Columbus, OH) Hans-

Joachim Schaefers

University of Saarlandes (Homburg, Germany) Marc

Schepens

AZ St. Jan (Brugge, Belgium)

Oz Shapira

Hebrew University (Jerusalem, Israel)

Sotiris C. Stamou

University of Iowa Hospitals and Clinics (Iowa City, IA)

Bauer Sumpio

Yale New Haven Hospital (New Haven, CT)

Li-Zhong Sun

Capital Medical University (Beijing, China)

Wei Sun

Georgia Institute of Technology (Atlanta, GA)

Lars Svensson

Cleveland Clinic (Cleveland, OH)

Robert Thompson

Washington University School of Medicine (St. Louis, MO)

M. David Tilson III

Columbia University (New York, NY)

Britt H. Tonnessen

Rooper Heart and Vascular Center (Charleston, SC)

Ramesh K. Tripathi

Narayana Institute of Vascular Sciences (Bangalore, India)

Marko Turina

University Hospital (Zurich, Switzerland)

Yuichi Ueda

Tenri Hospital (Nari, Japan)

Gilbert R. Upchurch Jr.

University of Virginia Medical Center (Charlottesville, VA) Paul

Urbanski

Herz and Gefaess Clinic (Neustadt, Germany)

Hence Verhagen

Erasmus University Medical Center (Rotterdam, Netherlands)

Stephen Westaby

The John Radcliffe Hospital (Oxford, United Kingdom) Christopher White,

Ochsner

Medical Center (New Orleans, LA)

Simona Zannetti

Medtronic CardioVascular (Santa Rosa, CA)

© 2023. Thieme. All rights reserved. AORTA is published six times a year in February, April, June, August, October, and December by Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001.

Editorial comments should be sent to aorta@thieme.com. This journal is published under the Creative Commons license CC BY (Attribution), as well as CC BY-NC-ND. 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 website at www.thieme.com and the direct link to this journal at www.thieme.com/AORTA.

AORTA is listed in PubMed Central, and abstracted in EBSCO and ProQuest. Thieme Medical Publishers is a member of the CrossRef initiative.

Advertisers contact: Kathryn Chaloux, Executive Editor, Thieme Medical Publishers, Inc., 333 Seventh Avenue, New York, NY 10001.