



ARGENTINE JOURNAL OF CARDIOLOGY

SCIENTIFIC ORGAN OF THE ARGENTINE SOCIETY OF CARDIOLOGY

EDITORIAL BOARD

Director

HERNÁN C. DOVAL
Hospital Italiano de Buenos Aires

Deputy Director

RAÚL BORRACCI
Universidad Austral

Consultant Editor

CARLOS D. TAJER
Hospital El Cruce

Associated Directors

JORGE LOWENSTEIN
Cardiodiagnóstico Investigaciones
Médicas de Buenos Aires
HORACIO POMÉS IPARRAGUIRRE
IMECC / Clínica Independencia
LUCIANO LUCAS
Hospital Italiano de Buenos Aires
JORGE TRAININI
Hospital Presidente Perón
JORGE THERER
CEMIC

SAC Representative

SILVIA MAKHOUL
Hospital Británico

Basic Sciences' Editor

BRUNO BUCHHOLZ
Universidad de Buenos Aires

Board Members

ANÍBAL ARIAS
Hospital Italiano de Buenos Aires
DARIO DI TORO
Hospital Gral de Agudos
Dr. Cosme Argerich
MÓNICA DÍAZ
Hospital Pirovano
ALBERTO FERNÁNDEZ
Sanatorio Modelo de Quilmes
RICARDO LEVIN
Universidad de Vanderbilt / Universidad
Abierta Interamericana
JULIO MANUEL LEWKOWICZ
Sanatorio Güemes
RICARDO SARMIENTO
Htal. Gral de Agudos Dr. Cosme Argerich

STATISTICAL CONSULTANT

JAVIER MARIANI
Hospital El Cruce

EDITORIAL COORDINATION

PATRICIA LÓPEZ DOWLING
MARIELA ROMANO

HONORARY BOARD

MARCELO V. ELIZARI (ARG)
GUILLERMO KREUTZER (ARG)

JOSÉ NAVIA (ARG)

INTERNATIONAL EDITORIAL BOARD

AMBROSIO, GIUSEPPE (ITA)
University of Perugia School of Medicine,
Perugia
ANTZELEVITCH, CHARLES (USA)
Masonic Medical Research Laboratory
BADIMON, JUAN JOSÉ (USA)
Cardiovascular Institute, The Mount Sinai
School of Medicine
BARANCHUK, ADRIÁN (CAN)
Queen's University, Kingston
BAZÁN, MANUEL (CUB)
INCOR, La Habana
BRUGADA, RAMÓN (ESP)
Cardiology Department, The Thorax Institute,
Hospital Clinic, University of Barcelona,
Barcelona
CAMM, JOHN (GBR)
British Heart Foundation, St. George's
University of London
CHACHQUES, JUAN CARLOS (FRA)
Pompidou Hospital, University of Paris
Descartes, Paris
DEMARIA, ANTHONY N. (USA)
UCSD Medical Center, San Diego, California
DI CARLI, MARCELO (USA)
Harvard Medical School, Boston, MA
EZEKOWITZ, MICHAEL (USA)
Lankenau Medical Center, Medical Science
Building, Wynnewood, PA
FEIGENBAUM, HARVEY (USA)
Indiana University School of Medicine,
Indianapolis
FERRARI, ROBERTO (CAN)
University of Alberta, Edmonton, Alberta
FERRARIO, CARLOS (USA)
Wake Forest University School of Medicine,
Winston-Salem
FLATHER, MARCUS (GBR)
Royal Brompton and Harefield NHS
Foundation Trust and Imperial College
London
FUSTER, VALENTIN (EE.UU)
The Mount Sinai Medical Center, New York
HERREROS, JESÚS (ESP)
Department of Cardiovascular Surgery,
Valdecilla University Hospital, Santander
JUFFÉ STEIN, ALBERTO (ESP)
Department of Cardiology, A Coruña
University Hospital, La Coruña
KASKI, JUAN CARLOS (GBR)
St George's University of London,
Cardiovascular Sciences Research Centre,
Cranmer Terrace, London
KHANDERIA, BUOY (USA)
Aurora Cardiovascular Services
KRUCOFF, MITCHELL W. (USA)
Duke University Medical Center, Durham
LÓPEZ SENDÓN, JOSÉ LUIS (ESP)
Hospital Universitario La Paz, Instituto de
Investigación La Paz, Madrid

LUSCHER, THOMAS (CHE)
European Heart Journal, Zurich Heart House,
Zürich, Switzerland
MARZILLI, MARIO (ITA)
Cardiothoracic Department, Division of
Cardiology, University Hospital of Pisa
MAURER, GERALD (AUT)
Univ.-Klinik für Psychiatrie und
Psychotherapie I, Christian-Doppler-Klinik,
Salzburg
MOHR, FRIEDRICH (GER)
Herzzentrum Universität Leipzig, Leipzig
MOSS, ARTHUR (USA)
University of Rochester Medical Center,
New York
NANDA, NAVIN (USA)
University of Alabama at Birmingham,
Birmingham
NILSEN, DENNIS (NOR)
Department of Cardiology, Stavanger
University Hospital, Stavanger
NOVITZKY, DIMITRI (USA)
James A Haley Veterans Hospital and the
University of South Florida, Tampa, Florida
PALACIOS, IGOR (USA)
Massachusetts General Hospital
PANZA, JULIO (USA)
MedStar Washington Hospital Center,
Washington, DC
PICANO, EUGENIO (ITA)
Institute of Clinical Physiology, CNR, Pisa
PINSKI, SERGIO (USA)
Cleveland Clinic Florida
RASTAN, ARDAWAN (GER)
Universitäts-Herzzentrum Freiburg-Bad
Krozingen
SICOURI, SERGE (USA)
Masonic Medical Research Laboratory, Utica
STOLF, NOEDIR (BRA)
Discipline of Cardiovascular Surgery at
Faculty of Medicine of University of São
Paulo
THEROUX, PIERRE (CAN)
University of Toronto, Ontario
TOGNONI, GIANNI (ITA)
Consorzio Mario Negri Sud, Santa Maria
Imbaro, Chieti
VENTURA, HÉCTOR (USA)
Ochsner Clinical School-The University
of Queensland School of Medicine, New
Orleans
WIELGOSZ, ANDREAS (CAN)
University of Calgary, Calgary, Alberta
ZIPES, DOUGLAS (USA)
Indiana University School of Medicine,
Indianapolis

ARGENTINE SOCIETY OF CARDIOLOGY

BOARD OF DIRECTORS

President

ANA M. SALVATI

1st Vicepresident

JOSÉ L. NAVARRO ESTRADA

2nd Vicepresident

CÉSAR D. BERENSTEIN

Secretary

SERGIO J. BARATTA

Treasurer

MARIANO L. FALCONI

Prosecretary

MIRTA DIEZ

Protreasurer

JUAN J. FUSELLI

Regular Board Members

SILVIA S. MAKHOUL
JORGE L. BOCIÁN
FEDERICO M. CINTORA
GUILLERMO O. MIGLIARO

Deputy Board Members

CRISTIAN C. CANIGGIA
SUSANA B. LAPRESA
MARIO O. CORTE
RODRIGO A. DE LA FABA

Past President

RICARDO A. MIGLIORE

Argentine Journal of Cardiology is property of the Sociedad Argentina de Cardiología.

ISSN 2314-2278 ISSN electronic version 2314-2286 - Trademark registry N° 5198451

Indexed en SciELO, Scopus, Embase, LILACS, Latindex, Redalyc, Dialnet y DOAJ. Included in the U.S. National Library of Medicine (NLM)

VOL 87 N° 4 AUGUST 2019

Scientific and administrative address

Azcuénaga 980 - (1115) Buenos Aires - Argentina / Tel.: +54-11-4961-6027/8/9 / Fax: +54-11-4961-6020 / e-mail: revista@sac.org.ar

web site: www.sac.org.ar / http://ppct.caicyt.gov.ar/index.php/rac

Web - digital edition

CF Brand Design & Communication - Av. Perón 2425 - (1644) Victoria - Bs. As. - Argentina - e-mail: editorial@cfdisenografico.com.ar / www.cfdisenografico.com.ar