CLINICAL INVESTIGATION

Carotid Arteriosclerosis in Identical Twins Discordant for Cigarette Smoking
Arto Haapanen, MD, Markku Koskenvuo, MD, Jaakko Kaprio, MD, Y. Antero Kesäniemi, MD, and Kauko Heikkinen, LicPhil

Intracoronary Thrombus and Complex Morphology in Unstable Angina: Relation to Timing of Angiography and In-Hospital Cardiac Events
Michael R. Freeman, MD, Anne E. Williams, MD, Robert J. Chisholm, MD, and Paul W. Armstrong, MD

Ambulatory Follow-up of Aortic Dissection by Transesophageal Two-Dimensional and Color-Coded Doppler Echocardiography
Susanne Mohr-Kahaly, MD, Raimund Erbel, MD, Holger Rennollet, CandMed, Norbert Wittlich, MD, Michael Drexler, MD, Helmut Oealert, MD, and Jürgen Meyer, MD

Electropharmacology of Amiodarone Therapy Initiation: Time Courses of Onset of Electrophysiologic and Antiarrhythmic Effects
L. Brent Mitchell, MD, D. George Wyse, MD, PhD, Anne M. Gillis, MD, and Henry J. Duff, MD

Electrophysiologic Spectrum of Concealed Intranodal Conduction During Atrial Rate Acceleration in a Model of 2:1 Atrioventricular Block
James McKinnie, MD, Boaz Avitall, MD, Jose Caceres, MD, Mohammad Jazayeri, MD, Patrick Tchou, and Masood Akhtar, MD

Myocardial Energetics in Patients With Dilated Cardiomyopathy: Influence of Nitroprusside and Enoximone
Gerd Hasenfuss, MD, Christian Holubarsch, MD, H. Wolfgang Heiss, MD, Thomas Meinertz, MD, Tassilo Bonzel, MD, Ulrich Wais, MD, PhD, Manfred Lehmann, MD, and Hanjörg Just, MD

Sympathoinhibitory Responses to Digitalis Glycosides in Heart Failure Patients: Direct Evidence From Sympathetic Neural Recordings
David W. Fergusson, MD, William J. Berg, MD, Jeffrey S. Sanders, MD, Paul J. Roach, MD, Joan S. Kempf, LPN, and Michael G. Kienzle, MD

Stiffness of Systemic Arteries in Patients With Myocardial Infarction: A Noninvasive Method to Predict Severity of Coronary Atherosclerosis
Tadakazu Hirai, MD, Shigetake Sasayama, MD, Takeshi Kawasaki, MD, and Shin-ichi Yagi, PhD

Exercise-Induced ST Depression in the Diagnosis of Coronary Artery Disease: A Meta-Analysis
Renato Gianrossi, MD, Robert Detrano, MD, PhD, Daniel Mulvihill, MD, Kenneth Lehmann, MD, Paul Dubach, MD, Antonio Colombo, MD, David McArthur, PhD, and Victor Froelicher, MD

Volume-Pressure Analysis of Reflex Changes in Forearm Venous Function: A Method by Mental Arithmetic Stress and Radionuclide Plethysmography
Vincent J.B. Robinson, MB, BS, Dante E. Manyari, MD, John V. Tyberg, MD, PhD, Gordon H. Fick, PhD, and Eldon R. Smith, MD

Exercise Response Before and After Termination of Atrial Tachycardia After Congenital Heart Disease Surgery
Hans U. Wessel, MD, D. Woodrow Benson Jr., MD, PhD, Elizabeth A. Braunlin, MD, Ann Dunnigan, MD, and Milton H. Paul, MD

The Coherence Spectrum: A Quantitative Discriminator of Fibrillatory and Nonfibrillatory Cardiac Rhythms
Kristina M. Ropella, MS, Alan V. Sahakian, PhD, Jeffrey M. Baerman, MD, and Steven Swiryn, MD
LABORATORY INVESTIGATION

Role of Endogenous Adenosine in Postdefibrillation Bradyarrhythmia and Hemodynamic Depression
Robert C. Wesley Jr, MD, and Luiz Belardinelli, MD ................................................................. 128

Exercise Training After Experimental Myocardial Infarction Increases the Ventricular Fibrillation
Threshold Before and After the Onset of Reinfarction in the Isolated Rat Heart
David Posel, MB, ChB, Tim Noakes, MD, Paul Kantor, MB, ChB, Mike Lambert, MSc, and
Lionel H. Opie, MD, PhD .............................................................................................................. 138

Time-Series Analysis of Heart Rate Variability During Submaximal Exercise: Evidence for Reduced
Cardiac Vagal Tone in Animals Susceptible to Ventricular Fibrillation
George E. Billman, PhD, and Richard S. Hoskins, DVM ..................................................................... 146

Prevention of Postschismic Cardiac Injury by the Orally Active Iron Chelator
1,2-Dimethyl-3-Hydroxy-4-Pyridone (L1) and the Antioxidant (+)-Cyanidanol-3
Antonius M.M. van der Kraaaij, MD, Henk G. van Eijk, PhD, and Johan F. Koster, PhD ................. 158

Distribution of Extracellular Potassium and Electrophysiologic Changes During Two-Stage
Coronary Ligation in the Isolated, Perfused Canine Heart
Ruben Coronel, MD, Jan W.T. Fiolet, PhD, Francien J.G. Wilms-Schopman, Tobias Opthof, PhD,
Alexander F.M. Schaapherder, MD, and Michiel J. Janse, MD ................................................................ 165

Effects of Volume Loading During Experimental Acute Pulmonary Embolism
Israel Belenkie, MD, Rosa Dani, MD, Eldon R. Smith, MD, and John V. Tyberg, MD, PhD ................. 178

Pulsed Ultraviolet Laser Irradiation Produces Endothelium-Independent Relaxation of Vascular
Smooth Muscle
P. Gabriel Steg, MD, Anthony J. Rongione, BA, Dow Gal, DVM, Stephen T. DeJesus, BA,
Richard H. Clarke, PhD, and Jeffrey M. Isner, MD .............................................................................. 189

Point of View

Specific Platelet Mediators and Unstable Coronary Artery Lesions: Experimental Evidence and
Potential Clinical Implications
James T. Willerson, MD, Paolo Golino, MD, John Eidt, MD, William B. Campbell, PhD,
and L. Maximilian Buja, MD ............................................................................................................ 198

Special Article

Background of the Prevention of Cardiovascular Disease: II. Arteriosclerosis, Hypertension, and
Selected Risk Factors
Oglesby Paul, MD .................................................................................................................................. 206

Editorial Comment

Transesophageal Echocardiography: New Window to the Heart
Philip J. Currie, MBBS .................................................................................................................. 215

Letters to the Editor

Arterial Baroreflex Abnormalities in Heart Failure: Reversal After Orthotopic Cardiac
Transplantation
Alberto Malliani, MD .................................................................................................................. 218

Reply
Marc D. Thames, MD, Kenneth A. Ellenbogen, MD, Pramod K. Mohanty, MD, and
Szabolcs Szentpetery, MD ........................................................................................................ 218

INSTRUCTIONS TO AUTHORS ................................................................. A11
ANNOTATED TABLE OF CONTENTS ................................................................. A15
An Overview of Randomized Trials of Rehabilitation With Exercise After Myocardial Infarction
Gerald T. O’Connor, PhD, DSc, Julie E. Buring, DSc, Salim Yusuf, MRCP, DPhil, Samuel Z. Goldhaber, MD, Elaine M. Olmstead, BA, Ralph S. Paffenbarger Jr., MD, DrPH, and Charles H. Hennekens, MD, DrPH

Prognostic Implications and Predictors of Enhanced Regional Wall Motion of the Noninfarct Zone After Thrombolysis and Angioplasty Therapy of Acute Myocardial Infarction
Cindy L. Grines, MD, Eric J. Topol, MD, Robert M. Califf, MD, Richard S. Stack, MD, Barry S. George, MD, Dean Kereiakes, MD, Jane M. Boswick, MPH, Eva Kline, RN, William W. O’Neill, MD, and the TAMI Study Group

Relative Impact of Targeted Versus Populationwide Cholesterol Interventions on the Incidence of Coronary Heart Disease: Projections of the Coronary Heart Disease Policy Model
Lee Goldman, MD, MPH, Milton C. Weinstein, PhD, and Lawrence W. Williams, MS

Marked Decline of Coronary Heart Disease Mortality in 35–44-Year-Old White Men in Allegheny County, Pennsylvania
Lewis H. Kuller, MD, DrPH, Neal D. Traven, PhD, Gale H. Rutan, MD, MPH, Joshua A. Perper, MD, LLB, MSc, and Diane G. Ives, MPH

Differing Circadian Patterns of Symptom Onset in Subgroups of Patients With Acute Myocardial Infarction
Ake Hjalmarson, MD, Elizabeth A. Gilpin, MS, Pascal Nicod, MD, Howard Dittrich, MD, Hartmut Henning, MD, Robert Engler, MD, A. Robert Blacky, MD, Sidney C. Smith Jr., MD, Francois Ricou, MD, and John Ross Jr.

Determinants of Prolonged Length of Hospital Stay After Coronary Bypass Surgery
William S. Weintraub, MD, Ellis L. Jones, MD, Joseph Craver, MD, Robert Guyton, MD, and Caryn Cohen, RN

Nifedipine Potentiates Cardiopulmonary Baroreflex Control of Sympathetic Nerve Activity in Healthy Humans: Direct Evidence From Microneurographic Studies
David W. Ferguson, MD, and David W. Hayes, MD

Congestive Heart Failure
Edema of Cardiac Origin: Studies of Body Water and Sodium, Renal Function, Hemodynamic Indexes, and Plasma Hormones in Untreated Congestive Cardiac Failure
Inderjit S. Anand, MD, DPhil, Roberto Ferrari, MD, Gurcharan S. Kalra, MD, Parshotam L. Wahi, MD, Philip A. Poole-Wilson, MD, and Peter C. Harris, MD, PhD

Dynamic Mitral Regurgitation: An Important Determinant of the Hemodynamic Response to Load Alterations and Inotropic Therapy in Severe Heart Failure
Gad Keren, MD, Stuart Katz, MD, Joel Strom, MD, Edmund H. Sonnenblick, MD, and Thierry H. LeJemtel

Impaired Chronotropic Response to Exercise in Patients With Congestive Heart Failure: Role of Postsynaptic β-Adrenergic Desensitization
Wilson S. Colucci, MD, Jorge P. Ribeiro, MD, Michael B. Rocca, MD, Rebecca J. Quigg, MD, Mark A. Creager, MD, James D. Marsh, MD, Diane F. Gauthier, RN, and L. Howard Hartley, MD

The Excitable Gap in Atrioventricular Nodal Reentrant Tachycardia: Characterization With Ventricular Extrastimuli and Pharmacologic Intervention
Claudio D. Schuger, MD, Russell T. Steinman, MD, and Michael H. Lehmann, MD
### LABORATORY INVESTIGATION

**Cell Calcium in the Pathophysiology of Ventricular Fibrillation and in the Pathogenesis of Postarrhythmic Contractile Dysfunction**
Yukihiro Koretsune, MD, PhD, and Eduardo Marban, MD, PhD
----------------------
369

**Frequency-Dependent Effects of Diltiazem on the Atriopulmonary Node During Experimental Atrial Fibrillation**
Mario Talajic, MD, Mohsen Nayebpour, PharmD, Wuhua Jing, MD, and Stanley Nattel, MD
----------------------
380

**Regulation of Ventricular Atrial Natriuretic Peptide Release in Hypertrophied Rat Myocardium: Effects of Exercise**
Heikki Ruskoaho, MD, Paivi Kinnunen, MB, Tarja Taskinen, MSc, Olli Vuolteenaho, MD, Juhan Leppaluuho, MD, and Timo E.S. Takala, MD
----------------------
390

**Endothelium-Dependent Relaxation in Response to Aggregating Platelets in Porcine Femoral Veins and Its Modulation by Diet**
Kimihiro Komori, MD, Hiroaki Shimokawa, MD, and Paul M. Vanhoutte, MD
----------------------
401

---

**Point of View**

**Unstable Angina: A Classification**
Eugene Braunwald, MD
----------------------
410

---

**Editorial Comments**

**The Research Advances Series: Focus on Molecular Biology**
John Ross Jr., MD, Editor
----------------------
415

**Does Cardiac Rehabilitation Increase Long-term Survival After Myocardial Infarction?**
Albert Oberman, MD
----------------------
416

---

**Letters to the Editor**

**Left Ventricular Ejection Times**
David H. Spodick, MD, DSc
----------------------
419

**Reply**
Christopher Appleton, MD
----------------------
419

**Serum Immunoglobulin E After Myocardial Infarction**
Andrew Szczeklik, MD
----------------------
419

---

**INSTRUCTIONS TO AUTHORS**
----------------------
A9

**ANNOTATED TABLE OF CONTENTS**
----------------------
A15

**ABSTRACT FILE CARDS**
----------------------
A41

**NEWS FROM THE AMERICAN HEART ASSOCIATION**
----------------------
A75
One-Year Follow-up Results of the 1985–1986 National Heart, Lung, and Blood Institute’s Percutaneous Transluminal Coronary Angioplasty Registry
Katherine Detre, MD, DrPH, Richard Holubkov, MS, Sheryl Kelsey, PhD, Martial Bourassa, MD, David Williams, MD, David Holmes Jr., MD, Gerald Dorros, MD, David Faxon, MD, Richard Myler, MD, Kenneth Kent, MD, Michael Cowley, MD, Richard Cannon, MD, Thomas Robertson, MD, and co-investigators of the National Heart, Lung, and Blood Institute’s Percutaneous Transluminal Coronary Angioplasty Registry ................................. 421

Natural History of Aortoarteritis (Takayasu’s Disease)
Raghavan Subramanyan, MD, DM, Joseph Joy, MD, DM, and K.G. Balakrishnan, MD, DM .......................... 429

The N-Terminus and a 4,000-MW Peptide From the Midportion of the N-Terminus of the Atrial Natriuretic Factor Prohormone Each Circulate in Humans and Increase in Congestive Heart Failure
Chris J. Winters, MD, Alan L. Sallman, MD, Bonnie J. Baker, MD, Jane Meadows, PhD, David M. Rico, DO, and David L. Vesely, MD, PhD ....................................................... 438

Prognostic Importance of Dipyridamole-Echocardiography Test in Coronary Artery Disease
Eugenio Picano, MD, Silva Severi, MD, Claudia Michelassi, Fabio Lattanzi, MD, Michele Masini, MD, Enrico Orsini, MD, Alessandro Distante, MD, and Antonio L’Abbate, MD ....... 450

Coronary Vasodilation
Atherosclerosis Impairs Flow-Mediated Dilation of Coronary Arteries in Humans
David A. Cox, MD, Joseph A. Vita, MD, Charles B. Treasure, MD, R. David Fish, MD, R. Wayne Alexander, MD, PhD, Peter Ganz, MD, and Andrew P. Selwyn, MD ....................... 458

Flow-Dependent Coronary Artery Dilation in Humans
Helmut Drexler, MD, Andreas M. Zeiher, MD, Helmut Wollschläger, MD, Thomas Meinertz, MD, Hanjörg Just, MD, and Tassilo Bonzel, MD .................................................. 466

Substance P Dilates Epicardial Coronary Arteries and Increases Coronary Blood Flow in Humans
David C. Crossman, MB, MRCP, Simon W. Larkin, BSc, Richard W. Fuller, MB, MRCP, Graham J. Davies, MB, MRCP, and Attilio Maseri, MD, FACC .................................................... 475

Persistence of Sympathetic-Mediated Forearm Vasconstriction After a-Blockade in Hypertensive Patients
Stefano Taddei, MD, Antonio Salvetti, MD, and Roberto Pedrinelli, MD .................................................. 485

Ultrasonic Tissue Characterization With Integrated Backscatter: Acute Myocardial Ischemia, Reperfusion, and Stunned Myocardium in Patients
Mark R. Milunski, MD, Gregory A. Mohr, PhD, Julio E. Pérez, MD, Zvi Vered, MD, Keith A. Wear, PhD, Carl J. Gessler, MD, Burton E. Sobel, MD, James G. Miller, PhD, and Samuel A. Wickline, MD .................................................. 491

Continuous Wave Doppler Echocardiographic Measurement of Prosthetic Valve Gradients: A Simultaneous Doppler-Catheter Correlative Study
Darryl J. Burstow, MB, BS, FRACP, Rick A. Nishimura, MD, Kent R. Bailey, PhD, Gay S. Reeder, MD, David R. Holmes Jr., MD, James B. Seward, MD, and A. Jamil Tajik, MD .......................... 504

Influence of Mitral Valve Morphology on Double-Balloon Catheter Balloon Valvuloplasty in Patients With Mitral Stenosis: Analysis of Factors Predicting Immediate and 3-Month Results
Cheryl L. Reid, MD, P. Anthony N. Chandraratna, MD, David T. Kawanishi, MD, Adam Kotelewski, MD, and Shahbuddin H. Rahimtoola, MB, FRCP .................................................. 515

Abnormal Exercise Hemodynamics in Cardiac Allograft Recipients 1 Year After Cardiac Transplantation: Relation to Preload Reserve
Jeffrey D. Hosenpud, MD, Mark J. Morton, MD, Richard A. Wilson, MD, George A. Pantely, MD, Douglas J. Norman, MD, M. Adnan Cobanoglu, MD, and Albert Starr, MD ......................... 525

Recovery-Phase Patterns of ST Segment Depression in the Heart Rate Domain: Identification of Coronary Artery Disease by the Rate-Recovery Loop
Peter M. Okin, MD, Olivier Ameisen, MD, and Paul Kligfield, MD .................................................. 533
Diagnostic Value of QRST Isointegral Maps in Detecting Myocardial Infarction Complicated by Bundle Branch Block
Hiroshi Hayashi, MD, Shinji Watabe, MD, Seitaro Yabe, MD, Kazuhide Takami, MD, Shigeki Ohsugi, MD, Makoto Hirai, MD, Makiko Mizutani, MT, Hidehiko Saito, MD .......................... 542

Long-term β-Blockade in Dilated Cardiomyopathy: Effects of Short- and Long-term Metoprolol Treatment Followed by Withdrawal and Readministration of Metoprolol
Finn Waagstein, MD, PhD, Kenneth Caidahl, MD, PhD, Ingemar Wallentin, MD, PhD, Claes-Håkan Bergh, MD, PhD, and Åke Hjalmarson, MD, PhD .................................................. 551

Epidemiology of Idiopathic Dilated and Hypertrophic Cardiomyopathy: A Population-Based Study in Olmsted County, Minnesota, 1975–1984
Mary B. Codd, MB, BCCh, Declan D. Sugrue, MD, Bernard J. Gersh, MB, ChB, DPhil, and L. Joseph Melton III, MD ................................................................. 564

Magnesium Content of Serum, Circulating Mononuclear Cells, Skeletal Muscle, and Myocardium in Congestive Heart Failure
Michael A. Ralston, MD, Michael R. Murnane, MD, Robert E. Kelley, MS, Ruth A. Altschuld, PhD, Donald V. Unverferth, MD, and Carl V. Leier, MD ........................................ 573

Correlation Between Template Bleeding Times and Spontaneous Bleeding During Treatment of Acute Myocardial Infarction With Recombinant Tissue-Type Plasminogen Activator
Lawrence W. Gimple, MD, Herman K. Gold, MD, Robert C. Leinbach, MD, Barry S. Coller, MD, Wendy Werner, RN, Tsunehiro Yasuda, MD, Jennifer A. Johns, MD, Andrew A. Ziskind, MD, Dianne Finkelstein, PhD, and Desire Collen, MD, PhD ........................................ 581

Three-Dimensional Echocardiographic Reconstruction of the Mitral Valve, With Implications for the Diagnosis of Mitral Valve Prolapse
Robert A. Levine, MD, Mark D. Handschumacher, BS, Anthony J. Sanfilippo, MD, Albert A. Hagege, MD, Pamela Harrigan, RDMS, Jane E. Marshall, BS, and Arthur E. Weyman, MD .................................................. 589

Time-Dependent Risk of and Predictors for Cardiac Arrest Recurrence in Survivors of Out-of-Hospital Cardiac Arrest With Chronic Coronary Artery Disease
Tetsushi Furukawa, MD, John J. Rozanski, MD, Akihiko Nogami, MD, Kazuo Moroe, MD, Arthur J. Gosselin, MD, and John W. Lister, MD .................................................. 599

Dietary Alcohol, Calcium, and Potassium: Independent and Combined Effects on Blood Pressure
Michael H. Criqui, MD, MPH, Robert D. Langer, MD, and Dwayne M. Reed, MD, PhD .................................................. 609

Detection of Coronary Artery Stenosis in Children With Kawasaki Disease: Usefulness of Pharmacologic Stress 201TI Myocardial Tomography
Chisato Kondo, MD, Michiaki Hiroe, MD, Toshio Nakanishi, MD, and Atsuyoshi Takao, MD ........ 615

LABORATORY INVESTIGATION

Assessment of Severity of Coronary Stenoses Using a Doppler Catheter: Validation of a Method Based on the Continuity Equation
Eric L. Johnson, MD, Paul G. Yock, MD, Victor K. Hargrave, BS, James P. Srebro, MD, Sergio M. Munabens, MD, Walter Seitz, PhD, and Thomas A. Ports, MD ......................... 625

Details of Coronary Stenosis Morphology Influence Its Hemodynamic Severity and Distal Flow Reserve
Frank A. Fedele, MD, Barry Sharaf, MD, Albert S. Most, MD, and Henry Gewirtz, MD .................... 636

Endothelium-Dependent Inhibition of Ergonovine-Induced Contraction Is Impaired in Porcine Coronary Arteries With Regenerated Endothelium
Hiroaki Shimokawa, MD, Nicholas A. Flavahan, PhD, John T. Shepherd, MD, DSc, and Paul M. Vanhoutte, MD, PhD .................................................................................. 643

Failure of Atrial Natriuretic Factor to Increase With Volume Expansion in Acute and Chronic Congestive Heart Failure in the Dog
Margaret M. Redfield, MD, Brooks S. Edwards, MD, Michael D. McGoon, MD, Denise M. Heublein, Lawrence L. Aarhus, and John C. Burnett Jr., MD ........................................... 651

Isoproterenol-Induced Alterations in Myocardial Blood Flow, Systolic and Diastolic Function in Conscious Dogs With Heart Failure
Luc Hittinger, MD, Richard P. Shannon, MD, Suzanne Kohin, BA, Alan S. Lader, MSBME, W. Thomas Manders, BA, Thomas A. Patrick, BSEE, Patricia Kelly, MD, and Stephen F. Vatner, MD .............................................................................................. 658

Regulation of Cardiac β-Adrenergic Receptors by Captopril: Implications for Congestive Heart Failure
Alan S. Maisel, Chris Phillips, Martin C. Michel, Michael G. Ziegler, and Steve M. Carter ............. 669
Kinetics of Myoglobin Release and Prediction of Myocardial Myoglobin Depletion After Coronary Artery Reperfusion
Avery K. Ellis, MD, PhD, and Bruce R. Saran, MD 676

Myocardial Acidosis Associated With CO₂ Production During Cardiac Arrest and Resuscitation
Martin von Planta, MD, Max Harry Weil, MD, PhD, Raul J. Gazmuri, MD, Joe Bisera, MSEE, and Eric C. Rackow, MD 684

Point of View
The Pharmacologic Treatment of Chronic Congestive Heart Failure
Shahbudin H. Rahimtoola, MB, FRCP 693

Editorial Comments
The “Second Generation” NHLBI Percutaneous Transluminal Coronary Angioplasty Registry: Have We Established the Role for PTCA in Treating Coronary Artery Disease?
Michael B. Mock, MD, Hugh C. Smith, MD, and Charles J. Mullany, MD 700

From Isolated Vessels to the Catheterization Laboratory: Studies of Endothelial Function in the Coronary Circulation of Humans
David G. Harrison 703

Assessment of Prosthetic Heart Valve Function by Doppler Echocardiography: A Decade of Experience
Arthur J. Labovitz, MD 707

Mitral Valve Prolapse: Evolution and Refinement of Diagnostic Techniques
Joseph K. Perloff, MD, FACC, and John S. Child, MD, FACC 710

Letters to the Editor
β-Adrenergic Receptors on MNL
Antonio De Blasi, MD 712

Reply
Kai E. Laustiola, MD, and Riitta Lassila, MD 712

GSH and Reperfusion Injury
Roy D. Goldfarb, PhD, and Amarnauth Singh, MD 712

Reply
Mervyn B. Forman, MD, Jeffrey K. Beckman, PhD, and Harry L. Greene, MD 713

State-of-the-Art Review
AHA Conference Report on Cholesterol
Antonio M. Goto Jr., MD, DPhil, Conference Chairman 715

Workshop I: Lipoproteins and the Pathogenesis of Atherosclerosis
Participants: Daniel Steinberg, MD, PhD, Chairman; Thomas E. Carew, PhD; Christopher Fielding, PhD; Alan M. Fogelman, MD; Robert W. Mahley, MD; Alan D. Sniderman, MD; and Donald B. Zilversmit, PhD 719

Workshop II: Genetic Susceptibility to Atherosclerosis
Participants: Jan L. Breslow, MD, Chairman; Samir Deeb, PhD; J. M. Lalouel, MD; Renee Le Boeuf, PhD; Ernst J. Schaefer, MD; H. Alfred Tyrold, MD; Peter Wilson, MD; and Stephen Young, MD 724

Workshop III: Basis for Dietary Treatment
Participants: Scott M. Grundy, MD, PhD, Chairman; W. Virgil Brown, MD; John M. Dietschy, MD; Henry Ginsberg, MD; Scott Goodnight, MD; Barbara Howard, PhD; John C. La Rosa, MD; and Henry C. McGill, MD 729

Workshop IV: Diagnosis, Evaluation, and Treatment: Current Status and Issues
Participants: DeWitt S. Goodman, MD, Chairman; Reagan H. Bradford, MD, PhD; H. Bryan Brewer Jr., MD; John D. Brunzell, MD; James I. Cleeman, MD, Philip Greenland, MD; Stephen B. Hulley, MD; Herbert K. Naito, PhD; Basil Rifkind, MD, FRACP; Evan Stein, MD; and Yechetzkiel Stein, MD 735

Workshop V: Intervention Studies
Participants: Robert I. Levy, MD, Chairman; David Blankenhorn, MD; C. Edward Davis, PhD; David J. Gordon, MD, PhD; Curt Furberg, MD; Jussi Huttunen, MD; Robert J. Levine, MD; Eugene Passamani, MD; and Salim Yusuf, MD 739
Workshop VI: Drug Therapy
Participants: Richard J. Havel, MD, Chairman; Jean Davignon, MD; Carlos A. Dujovne, MD; Richard Gregg, MD; Donald B. Hunninghake, MD; Tatu Miettinen, MD; Urs Steinbrecher, MD; and Jonathan A. Tobert, MD, PhD

INSTRUCTIONS TO AUTHORS .................................................... A11
ANNOTATED TABLE OF CONTENTS ............................................ A15
ABSTRACT FILE CARDS ............................................................. A38
NEWS FROM THE AMERICAN HEART ASSOCIATION ......................... A68
MEETINGS CALENDAR
Domestic ........................................................................... A78
Abroad ............................................................................... A88
CIRCULATION RESEARCH TABLE OF CONTENTS ...................... A116
HYPERTENSION TABLE OF CONTENTS ...................................... A121
INDEX TO ADVERTISERS ........................................................... A122
Clinical Progress Series

Aspirin and Other Antiplatelet Agents in the Secondary and Primary Prevention of Cardiovascular Disease
Charles H. Hennekens, MD, Julie E. Buring, ScD, Peter Sandercock, DM, MRCP, Rory Collins, MBBS, and Richard Peto, FRS .......................................................... 749

CLINICAL INVESTIGATION

Percutaneous Catheter Modification of the Atrioventricular Node: A Potential Cure for Atrioventricular Nodal Reentrant Tachycardia
Laurence M. Epstein, MD, Melvin M. Scheinman, MD, Jonathan J. Langberg, MD, Donald Chilson, MD, Harold R. Goldberg, MD, and Jerry C. Griffin, MD .................................................. 757

Relation Between Central and Peripheral Hemodynamics During Exercise in Patients With Chronic Heart Failure: Muscle Blood Flow Is Reduced With Maintenance of Arterial Perfusion Pressure
Martin J. Sullivan, MD, J. David Knight, PhD, Michael B. Higginbotham, MB, and Frederick R. Cobb, MD .......................................................... 769

Indications, Complications, and Short-term Clinical Outcome of Percutaneous Transvenous Mitral Commissurotomy
Masakiyo Nobuyoshi, MD, Naoya Hamasaki, MD, Takeshi Kimura, MD, Hideyuki Nosaka, MD, Hiroatsu Yokoi, MD, Hitoshi Yasumoto, MD, Hisanori Horiuchi, Hitoshi Nakashima, MD, Takahisa Shindo, MD, Takahisa Mori, MD, Alfonso T. Miyamoto, MD, and Kanji Inoue, MD .......... 782

Programmed Electrical Stimulation at Potential Ventricular Reentry Circuit Sites: Comparison of Observations in Humans With Predictions From Computer Simulations
William G. Stevenson, MD, Koonlawee Nademanee, MD, James N. Weiss, MD, Isaac Wiener, MD, Keesaq Baron, MD, Lawrence A. Yeatman, MD, and C. Todd Sherman, MD .................................................. 793

Usefulness of High-Dose Dipyridamole Echocardiography Test in Coronary Angioplasty
Eugenio Picano, MD, Salvatore Pirelli, MD, Mario Marzilli, MD, Francesco Faletra, MD, Fabio Lattanzi, MD, Luigi Campolo, MD, Daria Massa, MD, Antonella Alberti, MD, Elisabetta Gara, MD, Alessandro Distante, MD, and Antonio L’Abbate, MD, FACC .......................................................... 807

Functional Significance of Hypertrophy of the Noninfarcted Myocardium After Myocardial Infarction in Humans
Leonard E. Ginzton, MD, Richard Conant, PhD, Derek M. Rodrigues, MD, and Michael M. Laks, MD .......................................................... 816

Early Improvement in Left Ventricular Diastolic Function After Relief of Chronic Right Ventricular Pressure Overload
Howard C. Dittrich, MD, Leon C. Chow, MD, and Pascal H. Nicod, MD .......................................................... 823

Pediatric Cardiology

Neonatal Critical Valvar Aortic Stenosis: A Comparison of Surgical and Balloon Dilation Therapy
Benjamin Zeevi, MD, John F. Keane, MD, Aldo R. Castaneda, MD, Stanton B. Perry, MD, and James E. Lock, MD, FACC .......................................................... 831

Coarctation of the Aorta: Long-term Follow-up and Prediction of Outcome After Surgical Correction
Marc Cohen, MD, Valentin Fuster, MD, Peter M. Steele, MBBS, David Driscoll, MD, and Dwight C. McGoon, MD .......................................................... 840

The Safety of Maximal Exercise Testing
Larry Gibbons, MD, Steven N. Blair, PED, Harold W. Kohl, MSPH, and Kenneth Cooper, MD .......................................................... 846

Increased Morning Incidence of Myocardial Infarction in the ISAM Study: Absence With Prior β-Adrenergic Blockade
Stefan N. Willich, MD, Thomas Linderer, MD, Karl Wegscheider, PhD, Alain Leizorovicz, MD, Ives Alamercy, Rolf Schröder, MD, and the ISAM Study Group .......................................................... 853
Application of New Methods

Regional Myocardial Oxygen Consumption Determined Noninvasively in Humans With [1-13C]Acetate and Dynamic Positron Tomography

Jürgen J. Armbrrecht, MD, Denis B. Buxton, PhD, Richard C. Brunken, MD, Michael E. Phelps, PhD, and Heinrich R. Schelbert, MD

Intravascular Ultrasound Cross-Sectional Arterial Imaging Before and After Balloon Angioplasty In Vitro

Jonathan M. Tobis, MD, John A. Mallery, MD, Jim Gessert, PhD, Jim Griffith, PhD, Don Mahon, MD, Matthew Bessen, MD, Masahito Moriuchi, MD, Lachlan McLeay, MD, Michael McRae, MD, and Walter L. Henry, MD

Blunted Sympathetic Response to Cardiopulmonary Receptor Unloading in Hypertensive Patients With Left Ventricular Hypertrophy: A Possible Compensatory Role of Atrial Natriuretic Factor

Bruno Trimarco, MD, Giuseppe Lembo, MD, Nicola De Luca, MD, Massimo Volpe, MD, Bruno Ricciardelli, MD, Gianluigi Condorelli, MD, Giovanni Rosiello, MD, and Mario Condorelli, MD

Low-Dose Infusion of Atrial Natriuretic Factor in Mild Essential Hypertension

G. Tonolo, A.M. Richards, P. Manunta, C. Troffia, A. Pazzola, P. Madeddu, A. Towrie, R. Fraser, and N. Glorioso

Hemodynamic and β-Adrenergic Receptor Adaptations During Long-term β-Adrenoceptor Blockade: Studies With Acebutolol, Atenolol, Pindolol, and Propranolol in Hypertensive Patients

Anton H. van den Meiracker, Arie J. Man in ’t Veld, Frans Boomsma, Perry J. Molinoff, and Maarten A.D.H. Schalekamp

Mitril Valve Dimensions and Motion in Marfan Patients With and Without Mitril Valve Prolapse: Comparison to Primary Mitril Valve Prolapse and Normal Subjects

Riccardo Pini, MD, Mary J. Roman, MD, Randi Kramer-Fox, MS, and Richard B. Devereaux, MD

Ultrasonic Tissue Characterization of Human Hypertrophied Hearts In Vivo With Cardiac Cycle-Dependent Variation in Integrated Backscatter

Toshiro Masuyama, MD, Frederick G. St. Goar, MD, Terrence L. Tye, RDMS, Gary Oppenheim, MD, Ingela Schnittger, MD, and Richard L. Popp, MD

Treatment of Acute Venous Thromboembolism With Low Molecular Weight Heparin (Fragmin): Results of a Double-Blind Randomized Study

J. Albada, MD, H.K. Nieuwenhuis, MD, PhD, and J.J. Sixma, MD, PhD

LABORATORY INVESTIGATION

The Diastolic Hyperemic Flow Versus Pressure Relation: A New Index of Coronary Stenosis Severity and Flow Reserve

G.B. John Mancini, MD, Mark J. McGillem, BS, Scott F. DeBoe, BS, and Kim P. Gallagher, PhD

Chronic Incomplete Atrioventricular Block Induced by Radiofrequency Catheter Ablation

Shoei K. Stephen Huang, MD, Saroja Bharati, MD, Anna R. Graham, MD, Grace Gorman, BS, and Maurice Lev

Control of Radiofrequency Lesion Size by Power Regulation

Fred H.M. Wittkampf, MSc, Richard N.W. Hauer, MD, and Etienne O. Robles de Medina, MD

Assessment of Myocardial Salve and Reperfusion Using Magnetic Resonance Imaging and Spectroscopy

Christopher L. Wolfe, MD, Michael E. Moseley, PhD, Mats G. Wikstrom, MD, Richard E. Sievers, BS, Michael F. Wendland, PhD, Jean W. Dupon, PhD, Walter E. Finkbeiner, MD, Martin J. Lipton, MD, William W. Parmley, MD, and Robert C. Brasch, MD

Mechanisms of Improved Ischemic Regional Dysfunction by Bradycardia: Studies on UL-FS 49 in Swine

Ciro Indolfi, MD, Brian D. Guth, PhD, Toshiro Miura, MD, Shunichi Miyazaki, MD, Rainer Schulz, MD, and John Ross Jr., MD

Acute Electrophysiologic Effects of Sodium Administration in Dogs Treated With O-Desmethyl Encainide

Ashok K. Bajaj, MD, Raymond L. Woosley, MD, PhD, and Dan M. Roden, MD
pH-Dependent Effects of Lidocaine on Defibrillation Energy Requirements in Dogs
Debra S. Echt, MD, Elizabeth L. Cato, and D. Robertson Coxe ........................................ 1003

Opiate Receptor Inhibition Improves the Blunted Baroreflex Function in Conscious Dogs With
Right-Sided Congestive Heart Failure
Susumu Sakamoto, MD, and Chang-seng Liang, MD, PhD .............................................. 1010

Measurement of End-Systolic Pressure-Volume Relations by Intra-Aortic Balloon Occlusion
Krishanu B. Gupta, MSE, Joseph E. Bavaria, MD, Mark B. Ratcliffe, MD,
L. Henry Edmunds Jr., MD, and Daniel K. Bogen, MD, PhD ............................................ 1016

Influence of Inflation Pressure and Balloon Size on the Development of Intimal Hyperplasia After
Balloon Angioplasty: A Study in the Atherosclerotic Rabbit
Ian J. Sarembock, MBChB, MD, FCP, Paul J. LaVeau, MD, Stephen L. Sigal, MD,
Ian Timms, AB, Jeffrey Sussman, MD, Christian Haudenschild, MD, and
Michael D. Ezekowitz, MBChB, FRCP, DPhil ............................................................. 1029

Endothelium-Derived Relaxing Factor and Protection Against Contractions Induced by Histamine
and Serotonin in the Human Internal Mammary Artery and in the Saphenous Vein
Zhihong Yang, MD, Dennis Diederich, MD, Kurt Schneider, MD, Robert Siebenmann, MD,
Peter Stulz, MD, Ludwig von Segesser, MD, Marko Turina, MD, Fritz R. Bühler, MD, and
Thomas F. Lüscher, MD .............................................................................................. 1041

Point of View
Reperfusion Injury and Its Pharmacologic Modification
L.H. Opie, MD, DPhil ........................................................................................................... 1049

Mechanisms and Risk Factors for Proarrhythmia With Type Ia Compared With Ic Antiarrhythmic
Drug Therapy
Joseph H. Levine, MD, Joel Morganroth, MD, and Alan H. Kadish, MD ............................... 1063

Editorials
The Cholesterol Controversy Is Over: Why Did It Take so Long?
Daniel Steinberg, MD, PhD ............................................................................................... 1070

New and Old Paradoxes: Acidosis and Cardiopulmonary Resuscitation
Allan S. Jaffe, MD ............................................................................................................... 1079

Editorial Comments
The Peripheral Circulation and Lactic Acid Metabolism in Heart, or Cardiovascular, Failure
Karlman Wasserman, MD, PhD .......................................................................................... 1084

Balloon Therapy of Critical Aortic Stenosis in the Neonatal: The Therapeutic Conundrum Resolved?
Robert M. Freedom, MD, FRCP ......................................................................................... 1087

The Enigma of Primary Raynaud’s Disease
Jay D. Coffman, MD ............................................................................................................ 1089

Intravascular and Intracardiac Ultrasound Imaging: An Old Concept, Now On the Road to Reality
Natesa G. Pandian, MD ....................................................................................................... 1091

Noninvasive Assessment of Myocardial Composition and Function in the Hypertrophied Heart
David J. Skorton, MD ......................................................................................................... 1095

Letters to the Editor
Guidelines for Ambulatory Electrocardiography
Daniel David, MD .............................................................................................................. 1098

ACC/AHA Task Force Report: Guidelines for Ambulatory Electrocardiography
Jack E. Lohman ................................................................................................................... 1098

INSTRUCTIONS TO AUTHORS ..................................................................................... A11
ANNOTATED TABLE OF CONTENTS ........................................................................... A21
ABSTRACT FILE CARDS ............................................................................................... A47
NEWS FROM THE AMERICAN HEART ASSOCIATION ................................................... A91
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>A107</td>
</tr>
<tr>
<td>Abroad</td>
<td>A118</td>
</tr>
<tr>
<td>CIRCULATION RESEARCH TABLE OF CONTENTS</td>
<td>A134</td>
</tr>
<tr>
<td>HYPERTENSION TABLE OF CONTENTS</td>
<td>A139</td>
</tr>
<tr>
<td>INDEX TO ADVERTISERS</td>
<td>A140</td>
</tr>
</tbody>
</table>

_Circulation_ (ISSN 0009-7322) is issued monthly in two indexed volumes per year by the American Heart Association, Inc., 7320 Greenville Avenue, Dallas, TX 75231. Annual subscriptions accepted at any time. Subscription rates for Japan and Europe are available through respective exclusive agents. All orders for Japan must go through Nankodo Co., Ltd., 42-6 Hongo 3-chome, Bunkyo-Ku, Tokyo 113, Japan. All orders for Europe must go through Harcourt Brace Jovanovich Ltd., Foots Cray High Street, Sidcup, Kent DA14 5HP, England. Individuals may subscribe to _Circulation_ for their personal use at the following rates: $76 in the United States; $90 outside the United States, Japan, or Europe. Interns, residents, and medical students (United States, Canada or Mexico only) are eligible for a reduced rate if payment is accompanied by a letter from the department chairman verifying post held and completion date. Special reduced rates are $38.00 in the United States, $45 in Canada and Mexico. Subscriptions for libraries, reading rooms, and other multiple-use institutions are available at special rates; contact the AHA for details. Remittances for subscriptions outside Japan and Europe must be made by check, draft, post office or express money order in U.S. dollars drawn on a U.S. bank, payable to the American Heart Association with _Circulation_ on the face of the check. Payment can also be made by VISA or MasterCard if account number, expiration date, name as it appears on card and signature are furnished. Issues will be mailed after payment is received. Prices are subject to change without notice. Air mail and single copy rates are available upon request. Second class postage paid at Dallas, Texas, and additional mailing offices. POSTMASTER: Send address changes to _Circulation_, American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231. The Customer Service Department should be advised of change of address 30 days before date of issue with both the subscriber’s old and new addresses given. Telephone: (214) 706-1310. FAX: (214) 691-2704.
Clinical Progress Series

Current Approaches to Drug Therapy for the Hypercholesterolemic Patient
Joseph L. Witzum, MD .............................................................. 1101

Research Advances Series

Deleterious Effects of Oxygen Radicals in Ischemia/Reperfusion: Resolved and Unresolved Issues
Robert A. Klener, MD, PhD, Karin Przyklenk, PhD, and Peter Whittaker, PhD ...................... 1115

CLINICAL INVESTIGATION

End-Stage Dilated Cardiomyopathy: Persistence of Enterovirus RNA in Myocardium at Cardiac Transplantation and Lack of Immune Response
Neil E. Bowles, Marlene L. Rose, Pat Taylor, Nicholas R. Banner, Peter Morgan-Capner, Louise Cunningham, Leonard C. Archard, and Magdi H. Yacoub ...................................................... 1128

Ventricular Expression of Atrial Natriuretic Polypeptide and Its Relations With Hemodynamics and Histology in Dilated Human Hearts: Immunohistochemical Study of the Endomyocardial Biopsy Specimens
Genzou Takemura, MD, Hisayoshi Fujiwara, MD, Kiyoshi Horiike, MD, Masashi Mukoyama, MD, Yoshihiko Saito, MD, Kazuwa Nakao, MD, Mitsu Matsuda, MD, Atsushi Kawamura, MD, Moriharu Ishida, MD, Mitsugu Kida, MD, Takashi Uegaito, MD, Masahiro Tanaka, MD, Akira Matsumori, MD, Yasunori Fujiwara, MD, Takako Fujisawa, MD, Hiroo Imura, MD, and Chuichi Kawai, MD .................................................................................. 1137

Risk Stratification of Patients With Non-Q Wave Myocardial Infarction: The Critical Role of ST Segment Depression
Kenneth B. Schechtman, PhD, Robert J. Capone, MD, FACC, Robert E. Kleiger, MD, FACC, Robert S. Gibson, MD, FACC, David J. Schwartz, MD, FACC, Robert Roberts, MD, FACC, Phillip M. Young, PharmD, and William E. Boden, MD, FACC .............................................................. 1148

Recurrent Ischemia Without Warning: Analysis of Risk Factors for In-Hospital Ischemic Events Following Successful Thrombolysis With Intravenous Tissue Plasminogen Activator
Stephen G. Ellis, MD, Eric J. Topol, MD, Barry S. George, MD, Dean J. Kereiakes, MD, Darrell Debowey, MS, Kristina N. Sigmon, MA, Ann Pickel, RN, Kerry L. Lee, PhD, and Robert M. Califf, MD .............................................................. 1159

Serial Angiographic Assessment of Coronary Artery Obstruction and Collateral Flow in Acute Myocardial Infarction: Report From the Second Mount Sinai–New York University Reperfusion Trial
K. Peter Rentrop, MD, Frederick Feit, MD, Warren Sherman, MD, and John C. Thornton, PhD .. 1166

Clinical Trials

Medical Compared With Surgical Management of Unstable Angina: 5-Year Mortality and Morbidity in the Veterans Administration Study
Alfred F. Parisi, MD, Shukri Khuri, MD, Robert H. Deupree, PhD, G.V.R.K. Sharma, MD, Stewart M. Scott, MD, and Robert J. Luchi, MD .............................................................. 1176

Saphenous Vein Graft Patency 1 Year After Coronary Artery Bypass Surgery and Effects of Antiplatelet Therapy: Results of a Veterans Administration Cooperative Study
Steven Goldman, MD, Jack Copeland, MD, Thomas Moritz, MS, William Henderson, PhD, Karen Zadina, RN, MA, Theron Ovitt, MD, James Doherty, MD, Raymond Read, MD, Elliot Chesler, MD, Y. Sako, MD, PhD, Larry Lancaster, MD, Robert Emery, MD, G.V.R.K. Sharma, MD, Miguel Josa, MD, Ivan Pacold, MD, Alvaro Montoya, MD, Dineshak Parikh, MD, Gulshan Sethi, MD, John Holt, MD, James Kirklin, MD, Ralph Shabetai, MD, William Moores, MD, Janiero Aldridge, MD, Zaki Masud, MD, Henry DeMots, MD, Storm Floten, MD, Claire Haakenson, RPh, MS, and Laurence A. Harker, MD .................................................................................. 1190
Primary Pulmonary Hypertension

Histopathology of Primary Pulmonary Hypertension: A Qualitative and Quantitative Study of Pulmonary Blood Vessels From 58 Patients in the National Heart, Lung, and Blood Institute, 

Primary Pulmonary Hypertension Registry
Giuseppe G. Pietra, MD, William D. Edwards, MD, J. Michael Kay, MD, Stuart Rich, MD, 
Janet Kernis, MPH, Betsy Schloo, MD, Stephen M. Ayres, MD, Edward H. Bergofsky, MD, 
Bruce H. Brundage, MD, Katherine M. Detre, MD, DrPh, Alfred P. Fishman, MD, 
Roberta M. Goldring, MD, Bertron M. Groves, MD, Paul S. Levy, ScD, Lynne M. Reid, MD, 
Carol E. Vreim, PhD, and George W. Williams, PhD ........................................ 1198

Primary Pulmonary Hypertension: Vascular Structure, Morphometry, and Responsiveness to Vasodilator Agents
Harold I. Palevsky, MD, Betsy L. Schloo, MD, Giuseppe G. Pietra, MD, Karl T. Weber, MD, 
Joseph S. Janicki, PhD, Eben Rubin, MD, and Alfred P. Fishman, MD ........................................ 1207

Pharmacodynamics of Thrombolysis With Recombinant Tissue-Type Plasminogen Activator: Correlation With Characteristics of and Clinical Outcomes in Patients With Acute Myocardial Infarction
David C. Stump, MD, Robert M. Califf, MD, Eric J. Topol, MD, Kristina Sigmon, MA, 
Dagnija Thornton, BS, Ramona Masek, RN, Linda Anderson, RN, 
and Désiré Collen, MD, PhD ........................................ 1222

Dispatcher-Assisted Cardiopulmonary Resuscitation: Validation of Efficacy
Arthur L. Kellermann, MD, MPH, Bela B. Hackman, MD, and Grant Somes, PhD ........................................ 1231

The Effect of Diltiazem on Coronary Flow Reserve in Humans
James D. Rossen, MD, Ignazio Simonetti, MD, Melvin L. Marcus, MD, Peter Braun, MD, 
and Michael D. Winniford, MD ........................................ 1240

Antiarrhythmic Efficacy, Clinical Electrophysiology, and Pharmacokinetics of 3-Methoxy-O-Desmethyl Encainide (MODE) in Patients With Inducible Ventricular Tachycardia or Fibrillation
Dan M. Roden, MD, John T. Lee, MD, Raymond L. Woosley, MD, and Debra S. Echt, MD ........................................ 1247

Electrophysiologic Abnormalities in Patients With Hypertrophic Cardiomyopathy: A Consecutive Analysis in 155 Patients
Lameh Fanunapazir, MD, Cynthia M. Tracy, MD, Martin B. Leon, MD, Judith B. Winkler, BS, 
Richard O. Cannon III, MD, Robert O. Bonow, MD, Barry J. Moran, MD, and 
Stephen E. Epstein, MD ........................................ 1259

Association of Elevated Anti-Sarcolemma, Anti-Idiotypic Antibody Levels With the Clinical and Pathologic Expression of Chronic Chagas Myocarditis
Moyes Sadigursky, MD, Betsy F. von Kreau, PhD, Pei-Ying Ling, BS, 
and Charles A. Santos-Buch, MD ........................................ 1269

Feasibility of Tomographic 99mTc-Hexakis-2-Methoxy-2-Methylpropyl-isonitrile Imaging for the Assessment of Myocardial Area at Risk and the Effect of Treatment in Acute Myocardial Infarction
R.J. Gibbons, MD, M.S. Verani, MD, T. Behrenbeck, MD, P.A. Pelliika, MD, 
M.K. O'Connor, PhD, J.J. Mahmanian, MD, J.H. Chesbro, MD, and F.J. Wackers, MD ........................................ 1277

A New Method for Estimating Left Ventricular dP/dt by Continuous Wave Doppler-Echocardiography: Validation Studies at Cardiac Catheterization
Gian Siro Bergiggia, MD, Carla Bertucci, MD, Franco Recusani, MD, Arturo Raisaro, MD, 
Stefano de Servi, MD, Liliain M. Valdes-Cruz, MD, David J. Sahn, MD, and Luigi Iacono, MD ........................................ 1287

Ventricular Sensory Endings Mediate Reflex Bradycardia During Coronary Arteriography in Humans
James A. Arrowood, MD, Pramod K. Mohanty, MD, John McB. Hodgson, MD, 
Mark E. Dibner-Dunlap, MD, and Marc D. Thames, MD ........................................ 1293

Electrocardiographic Quantitation of Ventricular Repolarization
Mario Merri, PhD, Jesaia Benhorin, MD, Michela Alberti, MS, Emanuela Locati, MD, 
and Arthur J. Moss, MD ........................................ 1301

Inverse Relation Between Serum Cotinine Concentration and Blood Pressure in Cigarette Smokers
Neal L. Benowitz, MD, and Dan S. Sharp, MD, PhD ........................................ 1309

HMG CoA Reductase Inhibitors Lower LDL Cholesterol Without Reducing Lp(a) Levels
Gerhard M. Kostner, PhD, Dov Gavish, MD, Beate Leopold, PhD, Klaus Bolzano, PhD, 
Moshe S. Weintraub, MD, and Jan L. Breslau, MD ........................................ 1313

A Prospective Study of Nutritional Factors and Hypertension Among US Women
Jacqueline C.M. Wittman, MS, Walter C. Willett, MD, Meir J. Stampfer, MD, 
Graham A. Colditz, MB, BS, Frank M. Sacks, MD, Frank E. Speizer, MD, Bernard Rosner, PhD, 
and Charles H. Hennekens, MD ........................................ 1320
13N Ammonia Myocardial Imaging at Rest and With Exercise in Normal Volunteers: Quantification of Absolute Myocardial Perfusion With Dynamic Positron Emission Tomography
Janine Krivokapich, MD, Gary T. Smith, MD, Sung-Cheng Huang, DSc, Edward J. Hoffman, PhD, Osman Ratib, MD, Michael E. Phelps, PhD, and Heinrich R. Schelbert, MD ........................................... 1328

Contribution of Intrinsic Skeletal Muscle Changes to 31P NMR Skeletal Muscle Metabolic Abnormalities in Patients With Chronic Heart Failure
Donna M. Mancini, MD, Edward Coyle, PhD, Andrew Coggan, PhD, John Beltz, MA, Nancy Ferraro, RN, Scott Montain, MS, and John R. Wilson, MD .................................................. 1338

LABORATORY INVESTIGATION

Seeding of Intravascular Stents With Genetically Engineered Endothelial Cells
David A. Dichek, MD, Richard F. Neville, MD, James A. Zwiebel, MD, Scott M. Freeman, MD, Martin B. Leon, MD, and W. French Anderson, MD .......................................................... 1347

Transesophageal Low-Energy Cardioversion in an Animal Model of Life-Threatening Tachyarrhythmias
Cai Yunchang, MD, Fan Shoulian, MD, Peng Duanxing, MD, Gan Shixiang, MD, Feng Jifeng, MD, Kuang Zhushen, MD, and Li Zhongfan, MD ............................................................. 1354

Left Ventricular Volume Measurement by Conductance Catheter in Intact Dogs: Parallel Conductance Volume Depends on Left Ventricular Size
Chester M. Boltwood Jr., MD, Robert F. Appleyard, PhD, and Stanton A. Glantz, PhD ........................................... 1360

Comparison of Measures of Left Ventricular Contractile Performance Derived From Pressure-Volume Loops in Conscious Dogs
William C. Little, MD, Che-Ping Cheng, PhD, Michael Mumma, MD, Yuichiro Igarashi, MD, Jakob Vinten-Johansen, PhD, and William E. Johnston, MD ................................................ 1378

Intracoronary Adenosine Administered After Reperfusion Limits Vascular Injury After Prolonged Ischemia in the Canine Model
David G. Babbitt, MD, Renu Virmani, MD, and Mervyn B. Forman, MD ............................................................... 1388

Increased Adenosine Concentration in Blood From Ischemic Myocardium by AICA Riboside: Effects on Flow, Granulocytes, and Injury
Harry E. Gruber, Mike E. Hoffer, David R. McAllister, Paul K. Laikind, Thomas A. Lane, Geert W. Schmid-Schoenbein, and Robert L. Engler ................................................................. 1400

Slow and Long-Lasting Modulation of Myocardial Repolarization Produced by Ectopic Activation in Isolated Rabbit Hearts: Evidence for Cardiac “Memory”
Angelika Costard-Jäckle, MD, Bettina Goetsch, Matthias Antz, and Michael R. Franz, MD ........................................... 1412

Action Potential Duration Alternans in Dog Purkinje and Ventricular Muscle Fibers: Further Evidence in Support of Two Different Mechanisms
Hirokazu Saitoh, MD, John C. Bailey, MD, and Boris Surawicz, MD ................................................................. 1421

Singlet Oxygen-Induced Arrhythmias: Dose- and Light-Response Studies for Photoactivation of Rose Bengal in the Rat Heart
Yoshiki Kusama, MD, Michèle Bernier, PhD, and David J. Hearse, PhD, DSc ............................................................ 1432

Myocardial Glutathione Depletion Impairs Recovery After Short Periods of Ischemia
Alvin Blaustein, MD, Susan M. Denenze, PhD, Ruth I. Stolz, MD, Deborah Baxter, BSc, Nancy Healey, BSc, and Barry L. Fanburg, MD ................................................................. 1449

Effects of Graded Reductions in Coronary Perfusion Pressure on the Diastolic Pressure-Segment Length Relation and the Rate of Isovolumic Relaxation in the Resting Conscious Dog
Eli R. Farhi, MD, PhD, John M. Canty Jr., MD, and Francis J. Klocke, MD ............................................................ 1458

Continued on page A6

Circulation (ISSN 0009-7322) is issued monthly in two indexed volumes per year by the American Heart Association, Inc., 7320 Greenville Avenue, Dallas, TX 75231. Annual subscriptions accepted at any time. Subscription rates for Japan and Europe are available through respective exclusive agents. All orders for Japan must go through Nankodo Co., Ltd., 42-6 Hongo 3-chome, Bunkyo-Ku, Tokyo 113, Japan. All orders for Europe must go through Harcourt Brace Jovanovich Ltd., Foots Cray High Street, Sidcup, Kent DA14 5HP, England. Individuals may subscribe to Circulation for their personal use at the following rates: $76 in the United States; $90 outside the United States, Japan, or Europe. Interns, residents, and medical students (United States, Canada or Mexico only) are eligible for a reduced rate if payment is accompanied by a letter from the department chairman verifying post held and completion date. Special reduced rates are $38.00 in the United States, $45 in Canada and Mexico. Subscriptions for libraries, reading rooms, and other multiple-use institutions are available at special rates; contact the AHA for details. Remittances for subscriptions outside Japan and Europe must be made by check, draft, post office or express money order in U.S. dollars drawn on a U.S. bank, payable to the American Heart Association with Circulation on the face of the check. Payment can also be made by VISA or MasterCard if account number, expiration date, name as it appears on card and signature are furnished. Issues will be mailed after payment is received. Prices are subject to change without notice. Air mail and single copy rates are available upon request. Second class postage paid at Dallas, Texas, and additional mailing offices. POSTMASTER: Send address changes to Circulation, American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231. The Customer Service Department should be advised of change of address 30 days before date of issue with both the subscriber’s old and new addresses given. Telephone: (214) 706-1310. FAX: (214) 691-2704.
Point of View

Cellular Abnormalities in Chronically Denervated Myocardium: Implications for the Transplanted Heart

Angela J. Drake-Holland, PhD, CIBiol, and Mark I.M. Noble, DSc, PhD, FRCP

Editorial Comments

Recurrent Ischemic Events After Successful Thrombolysis in Acute Myocardial Infarction: The Achilles’ Heel of Thrombolytic Therapy

Carl W. White, MD

Primary Pulmonary Hypertension: The Risk and Benefit of Lung Biopsy

Pascal Nicod, MD, and Kenneth M. Moser, MD

Sudden Death in Hypertrophic Cardiomyopathy: Assessment of Patients at High Risk

William J. McKenna, MD, and A. John Camm, MD

Cigarette Smoking, Cotinine, and Blood Pressure

Gary D. Friedman, MD

Gene Therapy: A New Approach to the Treatment of Cardiovascular Disease

Judith L. Swain, MD

Announcement

Brief Rapid Communications

Letters to the Editor

Power Spectrum Analysis of Heart Rate Variability in Human Cardiac Transplant Recipients

Joseph P. Zbilut, PhD, DNSc, and Christine E. Lawless, MD

Reply

Marvin L. Appel, MS, Richard J. Cohen, MD

INSTRUCTIONS TO AUTHORS

ANNOTATED TABLE OF CONTENTS

ABSTRACT FILE CARDS

NEWS FROM THE AMERICAN HEART ASSOCIATION

MEETINGS CALENDAR

Domestic

Abroad

CIRCULATION RESEARCH TABLE OF CONTENTS

HYPERTENSION TABLE OF CONTENTS

INDEX TO ADVERTISERS
Clinical Progress Series

Antithrombotic Therapy in Cardiac Disease: An Emerging Approach Based on Pathogenesis and Risk
Bernardo Stein, MD, Valentin Fuster, MD, Jonathan L. Halperin, MD,
and James H. Chesebro, MD .................................................. 1501

CLINICAL INVESTIGATION

Aortic Stenosis in Elderly Patients Aged 80 or Older: Treatment by Percutaneous Balloon
Valvuloplasty in a Series of 92 Cases
Brice Letac, MD, Alain Cribier, MD, René Koning, MD, and Eric Lefebvre, MD .......... 1514

Assessment of Left-to-Right Atrial Shunting After Percutaneous Mitral Valvuloplasty by
Transeosophageal Color Doppler Flow-Mapping
Kiyoshi Yoshida, MD, Junichi Yoshikawa, MD, Takashi Akasaka, MD, Yasuko Yamaura, MD,
Masahiro Shakudo, MD, Takeshi Hozumi, MD, and Takashi Fukaya, MD ................. 1521

Catheter Ablation of the Atrioventricular Junction With Radiofrequency Energy
Jonathan J. Langberg, MD, Michael C. Chin, BS, Marten Rosenqvist, MD, PhD,
James Cockrell, MD, Navneet Dullet, MD, George Van Hare, MD, Jerry C. Griffin, MD, and
Melvin M. Scheinman, MD ...................................................... 1527

Electrophysiologic Effects of Dipyridamole on Atrioventricular Nodal Conduction and
Supraventricular Tachycardia: Role of Endogenous Adenosine
Bruce B. Lerman, MD, Robert C. Wesley, MD, and Luiz Belardinelli, MD ................. 1536

Clinical Trials

Randomized Placebo-Controlled, Double-Blind Trial of Ketanserin in Claudicants: Changes in
Claudication Distance and Ankle Systolic Pressure
PACK Claudication Substudy Investigators .................................. 1544

Conservative Drug Treatment in Patients With Moderately Severe Chronic Occlusive Peripheral
Arterial Disease
Folke Lindgärde, MD, Rolf Jelnes, MD, Hilding Björkman, MD, Göran Adielsson, MD,
Thomas Kjellström, MD, Ingela Palmquist, MD, and Lars Stavenow, MD,
of the Scandinavian Study Group ............................................. 1549

Prevention of Symptomatic Recurrences of Paroxysmal Atrial Fibrillation in Patients Initially
Tolerating Antiarrhythmic Therapy: A Multicenter, Double-Blind, Crossover Study of Flecainide
and Placebo With Transtelephonic Monitoring
Jeffrey L. Anderson, MD, Edward M. Gilbert, MD, Barry L. Alpert, MD, Richard W. Henthorn, MD,
Albert L. Waldo, MD, Anil K. Bhandari, MD, Ronald W. Hawkinson, MS,
Edward L.C. Pritchett, MD, and the Flecainide Supraventricular Tachycardia Study Group .... 1557

Reversal of Proarrhythmic Effects of Flecainide Acetate and Encainide Hydrochloride by Propranolol
Robert J. Myerburg, MD, Kenneth M. Kessler, MD, Marilyn M. Cox, MD, Heikki Huikuri, MD,
Elizabeth Terracall, RN, Alberto Interian Jr. MD, Pedro Fernandez, MD,
and Agustin Castellanos, MD .................................................. 1571

Recurrent Ischemia More Than 1 Year After Successful Percutaneous Transluminal Coronary
Angioplasty: An Analysis of the Extent and Anatomic Pattern of Coronary Disease
Randy K. Bottner, MD, FACC, Curtis E. Green, MD, FACC, Carolyn J. Ewels, BS,
Evelyn Recientes, BS, Geoffrey A. Patrissi, MA, and Kenneth M. Kent, MD, PhD, FACC .... 1580

Exercise Treadmill Testing Is a Poor Predictor of Anatomic Restenosis After Angioplasty for Acute
Myocardial Infarction
Michael B. Honan, MD, James R. Bengtson, MD, MPH, David B. Pryor, MD,
David S. Rendall, PA-C, Richard S. Stack, MD, Tomyaki Hinohara, MD,
Thomas N. Skelton, MD, Robert M. Califf, MD, Mark A. Hlatky, MD,
and Daniel B. Mark, MD, MPH ................................................. 1585
Noninvasive Determination of Coronary Artery Bypass Graft Patency by Cine Magnetic Resonance Imaging  
Gerard P. Aurigemma, MD, Nathaniel Reichek, MD, Leon Axel, PhD, MD, Mark Schiebler, MD,  
Christine Harris, RT, and Herbert Y. Kressel, MD .......................................................... 1595

Impact of Compensatory Enlargement of Atherosclerotic Coronary Arteries on Angiographic  
Assessment of Coronary Artery Disease  
Georg M. Stiel, MD, MSc, Ludmilla S.G. Stiel, MD, MA, Joachim Schofer, MD,  
Karl Donath, MD, DDS, and Detlef G. Mathey, MD ....................................................... 1603

Four-Year Follow-up Study in Patients With Angina Pectoris and Normal Coronary Arteriograms  
(“Syndrome X”)  
Dieter Opherk, MD, Gerhard Schuler, MD, Karl Wetterauer, Joachim Manthey, MD,  
Franz Schwarz, MD, and Wolfgang Kübler, MD ............................................................... 1610

Circadian Variation of Plasma Fibrinopeptide A Level in Patients With Variant Angina  
Hisao Ogawa, MD, Hirofumi Yasue, MD, Shuichi Oshima, MD, Ken Okumura, MD,  
Koshi Matsuyama, MD, and Kenji Obata, MD ................................................................. 1617

Effects of Atrial Natriuretic Peptide on the Coronary Arterial Vasculature in Humans  
Alan Chu, MD, Kenneth G. Morris, MD, William D. Kuehl, MD, Jack Casma, PhD,  
Frank Navetta, MD, and Frederick R. Cobb, MD .............................................................. 1627

Prognosis in Patients With Low Left Ventricular Ejection Fraction After Myocardial Infarction:  
Importance of Exercise Capacity  
Louise Piloite, MD, Jonathan Silberberg, MB, MSc, Robert Lisbona, MD, and  
Allan Snidman, MD ........................................................................................................ 1636

Selective Enhancement of the Cardiac Sympathetic Response to Exercise by Anginal Chest Pain in  
Humans  
Alastair J. McCance, MRCP, and J. Colin Forfar, MD, FRCPE ......................................... 1642

Noninvasive Determination of Age-Related Changes in the Human Arterial Pulse  
R. Kelly, MB, FRACP, C. Hayward, MB, BSc, A. Avolio, PhD, and M. O’Rourke, MD, FACC  
.......................................................................................................................... 1652

α1-Receptor-Mediated Vasoconstriction in Patients With Congestive Heart Failure  
Spencer H. Kubo, MD, Thomas S. Rector, PhD, Steven M. Heifetz, MD, and Jay N. Cohn, MD . 1660

Noninvasive Detection of Skeletal Muscle Underperfusion With Near-Infrared Spectroscopy in  
Patients With Heart Failure  
John R. Wilson, MD, Donna M. Mancini, MD, Kevin McCully, PhD, Nancy Ferraro, RN,  
Vita Lanoce, MS, and Britton Chance, PhD ........................................................................ 1668

Diverse Mechanisms of Unexpected Cardiac Arrest in Advanced Heart Failure  
Michael Loo, MD, William G. Stevenson, MD, Lynne Warner Stevenson, MD, Keesag Baron, MD,  
and Julie Walden, RN ........................................................................................................ 1675

β2-Microglobulin: A Reliable Parameter for Differentiating Between Graft Rejection and Severe  
Infection After Cardiac Transplantation  
Harald Teufelsbauer, Friedrich C. Prischl, MD, Michael Havel, MD, Christoph Holzinger, MD,  
Thomas Lion, MD, Joseph D. Schwarzmeier, MD, and Axel Laczkovics, MD ...................... 1681

Pediatric Cardiology

Results of the Arterial Switch Operation for Transposition of the Great Arteries With Ventricular  
Septal Defect: Surgical Considerations and Midterm Follow-up Data  
Roberto M. Di Donato, MD, Gil Wernovsky, MD, Edward P. Walsh, MD, Steven D. Colan, MD,  
Peter Lang, MD, David L. Wessel, MD, Richard A. Jonas, MD, John E. Mayer Jr., MD, and  
Aldo R. Castañeda, MD, PhD ......................................................................................... 1689

Two-dimensional Echocardiographic and Color Flow Doppler Evaluation of Ductal Occlusion With  
the Rashkind Prosthesis  
Norman N. Musewe, MD, Lee N. Benson, MD, Jeffrey F. Smallhorn, MBBS, and  
Robert M. Freedom, MD .............................................................................................. 1706

Fetal Cardiac and Peripheral Arterial Flow Velocity Waveforms in Intrauterine Growth Retardation  
Irene A.L. Groenenberg, MD, Jurij W. Wladimiroff, MD, PhD, and Wim C.J. Hop, MSc ...... 1711

Platelet and Vascular Function During Coronary Thrombolysis With Tissue-Type Plasminogen  
Activator  
David M. Kerins, MD, Louis Roy, MD, Garret A. FitzGerald, MD, and  
Desmond J. Fitzgerald, MD ............................................................................................. 1718
LABORATORY INVESTIGATION

Abolition of In Vivo Platelet Thrombus Formation in Primates With Monoclonal Antibodies to the Platelet GPIIb/IIIa Receptor: Correlation With Bleeding Time, Platelet Aggregation, and Blockade of GPIIb/IIIa Receptors
Barry S. Coller, MD, John D. Folts, PhD, Steven R. Smith, BS, Lesley E. Scudder, BS, and Robert Jordan, PhD 1766

Prevention of Reoccluding Platelet-Rich Thrombi in Canine Femoral Arteries With a Novel Peptide Antagonist of Platelet Glycoprotein IIb/IIIa Receptors
Ethan J. Haskel, MD, Steven P. Adams, PhD, Larry P. Feigen, PhD, Jeffrey E. Saffitz, MD, PhD, FACC, Richard J. Gorczynski, PhD, Burton E. Sobel, MD, FACC, and Dana R. Abendshain, PhD 1775

Determinants of End-Systolic Pressure-Volume Relations During Acute Regional Ischemia In Situ
David A. Kass, MD, Paolo Marino, MD, W. Lowell Maughan, MD, and Kiichi Sagawa, MD 1783

Relation Between Myocardial Glutathione Content and Extent of Ischemia-Reperfusion Injury
Amar Singh, MB, BCh, MRCP, Kevin J. Lee, MS, C.Y. Lee, MD, PhD, Roy D. Goldfarb, PhD, and Min-Fu Tsan, MD, PhD 1795

Effect of a Critical Coronary Stenosis on Myocardial Neutrophil Accumulation During Ischemia and Early Reperfusion in Dogs
Vincent J. Richard, PhD, Spring E. Brooks, BS, Robert B. Jennings, MD, and Keith A. Reimer, MD, PhD 1805

Neutrophil Depletion Limited to Reperfusion Reduces Myocardial Infarct Size After 90 Minutes of Ischemia: Evidence for Neutrophil-Mediated Reperfusion Injury
Marc R. Litt, MD, Richmond W. Jeremy, MD, PhD, Harlan F. Weisman, MD, Jerry A. Winkelstein, MD, and Lewis C. Becker, MD 1816

Alleviation of Myocardial Stunning by Leukocyte and Platelet Depletion
William Westlin and Kevin M. Mullane, PhD 1828

Verapamil Preserves Myocardial Performance and Energy Metabolism in Left Ventricular Hypertrophy Following Ischemia and Reperfusion: Phosphorus 31 Magnetic Resonance Spectroscopy Study
Peter T. Buser, MD, Stefan Wagner, MD, Shao T. Wu, PhD, Nikita Derugin, MS, William W. Parmley, MD, Charles B. Higgins, MD, and Joan Wikman-Coffelt, PhD 1837

Progressive Impairment of Regional Myocardial Perfusion After Initial Restoration of Posts ischemic Blood Flow
Giuseppe Ambrosio, MD, PhD, Harlan F. Weisman, MD, John A. Mannisi, MD, and Lewis C. Becker, MD 1846
Sympathoadrenal Inhibition by Atrial Natriuretic Peptide Is Not Attenuated During Development of Congestive Heart Failure in Dogs
   Jürgen Holtz, MD, Thomas Münzel, MD, Olaf Sommer, and Eberhard Bassenge, MD ................. 1862

Metabolic Protection by Verapamil During Graded Coronary Flow Reduction Independent of Effect on Baseline Systolic Function: Separation of Mechanical and Ionic Markers of Ischemia
   Mark G. Jenkins, MD, Timothy A. Johnson, PhD, Connie Engle, AAS, and Leonard S. Gettes, MD .............................................. 1870

Reflex Responses to Myocardial Ischemia and Reperfusion: Role of Prostaglandins
   Marc D. Thames, MD, and Anthony J. Minisi, MD ............................................................... 1878

Captopril Restores Hemodynamic Responsiveness to Atrial Natriuretic Peptide in Rats With Heart Failure
   Thomas E. Raya, MD, Richard W. Lee, MD, Teresa Westhoff, BS, and Steven Goldman, MD .... 1886

Biochemical Basis for the Difference Between Normal and Atherosclerotic Arterial Fluorescence
   Lawrence I. Laifer, MD, Kenneth M. O’Brien, MS, Mark L. Stetz, BS, Gene R. Gindi, PhD, Timothy J. Garrand, MD, and Lawrence I. Deckelbaum, MD ................. 1893

Point of View

Asymptomatic Wolff-Parkinson-White: Should We Intervene?
   G.J. Klein, MD, E.N. Prystowsky, MD, R. Yee, MD, A.D. Sharma, MD, and A. Laupacis, MD .... 1902

Editorial Comments

Severe Aortic Stenosis in the Sick Octogenarian: A Clear Indicator for Balloon Valvuloplasty as the Initial Procedure
   Melvin D. Cheitlin, MD ............................................................... 1906

Syndrome X: “What’s in a Name . . . ?”
   Richard O. Cannon III, MD .......................................................... 1909

Arterial Switch Repair for Transportation With Ventricular Septal Defect
   John W. Kirklin, MD ................................................................. 1912

Doppler Ultrasound Studies of Human Fetal Blood Flow
   Kathryn L. Reed, MD ................................................................. 1914

Platelet Inhibition With an Antibody to Glycoprotein IIb/IIIa
   Desmond J. Fitzgerald, MD ......................................................... 1918

Receptor-Specific Antiplatelet Therapy
   Zaverio M. Ruggeri .................................................................... 1920

Letters to the Editor

VT and Sudden Death in HCM Patients
   Lameh Fananapazir, MD, and Stephen E. Epstein, MD ..................................................... 1923

Digital Nerve Blockade in Raynaud’s Disease
   Robert R. Freedman, PhD, Maureen D. Mayes, MD, and Subhash C. Subharwal, MD .... 1923

Possible and Up-to-Now Not-Exploited Treatment of Restenosis
   Jiri Beranek, MD ...................................................................... 1924

Reply
   R. Wayne Alexander and Spencer B. King III, MD ......................................................... 1924

Special Report

Guidelines for Clinical Intracardiac Electrophysiologic Studies: A Report of the American College of Cardiology/American Heart Association Task Force on Assessment of Diagnostic and Therapeutic Cardiovascular Procedures (Subcommittee to Assess Clinical Intracardiac Electrophysiologic Studies)

Subcommittee Members Douglas P. Zipes, MD, FACC, Chairman; Masood Akhtar, MD, FACC; Pablo Denes, MD, FACC; Roman W. DeSanctis, MD, FACC; Arthur Garson, Jr., MD, FACC; Leonard S. Gettes, MD, FACC; Mark E. Josephson, MD, FACC; Jay W. Mason, MD, FACC; Robert J. Myerburg, MD, FACC; Jeremy N. Ruskin, MD, FACC; Hein J.J. Wellens, MD, FACC

Task Force Members Charles Fisch, MD, FACC, Chairman; Roman W. DeSanctis, MD, FACC; Harold T. Dodge, MD, FACC; Harriet P. Dustan, MD, FACC; J. Ward Kennedy, MD, FACC; T. Joseph Reeves, MD, FACC; Sylvan Lee Weinberg, MD, FACC .................................................. 1925

A6
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN APPRECIATION</td>
<td>1940</td>
</tr>
<tr>
<td>ERRATUM</td>
<td>1946</td>
</tr>
<tr>
<td>AUTHOR INDEX</td>
<td>1947</td>
</tr>
<tr>
<td>SUBJECT INDEX</td>
<td>1955</td>
</tr>
<tr>
<td>INSTRUCTIONS TO AUTHORS</td>
<td>A13</td>
</tr>
<tr>
<td>ANNOTATED TABLE OF CONTENTS</td>
<td>A19</td>
</tr>
<tr>
<td>ABSTRACT FILE CARDS</td>
<td>A43</td>
</tr>
<tr>
<td>NEWS FROM THE AMERICAN HEART ASSOCIATION</td>
<td>A75</td>
</tr>
<tr>
<td>MEETINGS CALENDAR</td>
<td></td>
</tr>
<tr>
<td>Domestic</td>
<td>A80</td>
</tr>
<tr>
<td>Abroad</td>
<td>A83</td>
</tr>
<tr>
<td>CIRCULATION RESEARCH TABLE OF CONTENTS</td>
<td>A96</td>
</tr>
<tr>
<td>HYPERTENSION TABLE OF CONTENTS</td>
<td>A101</td>
</tr>
<tr>
<td>INDEX TO ADVERTISERS</td>
<td>A102</td>
</tr>
</tbody>
</table>