

April 2006

CURRICULUM VITAE
ERIC RANDALL POWERS

Education:

1965 - 1969 Cornell University, B.A.
1969 - 1974 Harvard University, M.D.

Residency and Fellowship Training:

1974 - 1975 Intern in Medicine, Massachusetts General Hospital,
Boston Massachusetts
1975 - 1976 Resident in Medicine, Massachusetts General Hospital,
Boston, Massachusetts
1976 - 1979 Clinical and Research Fellow, Cardiac Unit,
Massachusetts General Hospital, Boston, Massachusetts

Licensure:

New York
Virginia
South Carolina

Faculty Positions:

1979 - 1986 Assistant Professor, Department of Medicine,
College of Physicians and Surgeons, Columbia University, New York, NY
1979 - 1986 Assistant Physician,
The Presbyterian Hospital, New York, NY
1979 - 1988 Staff Member, Cardiovascular Laboratory,
Columbia-Presbyterian Medical Center, NY
1980 - 1982 Associate Director, Adult Cardiovascular Laboratory,
Columbia-Presbyterian Medical Center, New York, NY

ERIC R. POWERS, M.D.

- 1982 - 1988 Director, Adult Cardiovascular Laboratory,
Columbia-Presbyterian Medical Center, New York, NY
- 1986 - 1988 Associate Professor of Clinical Medicine,
College of Physicians and Surgeons, Columbia University, New York, NY
- 1986 - 1988 Associate Attending Physician, The Presbyterian Hospital, New York, NY
- 1987 - 1988 Associate Chief, Division of Cardiology,
Columbia University, College of Physicians and Surgeons
- 1988 - 2005 Director, Cardiac Catheterization Laboratory,
University of Virginia Hospital, Charlottesville, VA.
- 1988 - 2005 Professor of Medicine,
University of Virginia, Charlottesville, VA.
- 1992 - 2005 Donald C. Barnes Professor of Cardiology In Internal Medicine,
University of Virginia, Charlottesville, VA
- 1994 - 2005 Director, Cardiac Catheterization Laboratory,
Augusta Medical Center, Fishersville, VA
- 1997- 2005 Director, Cardiac Catheterization Laboratory,
Martha Jefferson Hospital, Charlottesville, VA
- 2005 - Professor of Medicine, Medical University of South Carolina, Charleston,
SC
- 2005 - Director, Acute Coronary Syndrome Center
Medical University of South Carolina, Charleston, SC
- 2006 - Medical Director for Access, Heart and Vascular PCU, Medical University of
South Carolina

Certifications:

Diplomate, American Board of Internal Medicine

Diplomate, Subspecialty Board of Cardiovascular Disease

ERIC R. POWERS, M.D.

Diplomate, Subspecialty Board of Interventional Cardiology

Honors and Awards:

Summa cum Laude, Phi Beta Kappa, Cornell University

AOA, Harvard Medical School

1978 - 1979 National Research Service Award

1972 Second Prize Winner, Student Awards Competition,
Eastern Section of the American Federation for Clinical Research

1978 - 1979 American Heart Association, Massachusetts Affiliate Research Fellowship
Award

1983 - 1988 Principal Investigator, Contract NHLBI HV 82-11,
Thrombolysis in Myocardial Infarction

1987 - 1994 Principal Investigator, NHLBI Registry for Balloon Valvuloplasty

1989 - 1994 Co-Principal Investigator, University of Virginia, Thrombolysis for Myocardial
Infarction and Thrombolysis In Myocardial Ischemia (TIMI)

1989 - 1996 Principal Investigator, University of Virginia, Effects of OPC-8212 In
Patients With Chronic Congestive Heart Failure. Otsuka America, Inc.

1990 - 1993 Principal Investigator, University of Virginia, Effects of Angioplasty and
Contrast Media on Platelet Activation. Mallinckrodt Medical Inc.

1995 – 1996 Principal Investigator, University of Virginia, A Randomized, Double-Blind,
Placebo Controlled Study of the Effects of MK-383 on Cardiac
Outcomes in Patients Undergoing Percutaneous Transluminal Coronary
Angioplasty or Atherectomy Due to Unstable Angina Pectoris or
Following Acute Myocardial Infarction. Merck & Co., Inc.

1997 – 1997 Principal Investigator, University of Virginia, A Randomized, Double-Blind,
Multicenter Placebo-Controlled, Dose-Ranging Study of Oral MK-0853
(DMP 754) in Aspirin-Treated Patients undergoing Coronary Angioplasty.

ERIC R. POWERS, M.D.

Merck & Co., Inc.

- 1997 Principal Investigator, University of Virginia, Paragon Elective or Acute Stenting (PAS) Trial. Progressive Angioplasty Systems, Inc.
- 1997 Principal Investigator, University of Virginia, Study of the Safety and Effectiveness of Percutaneous Myocardial Revascularization in Patients With Class III and VI Angina. Eclipse Surgical Technologies, Inc.
- 1997 – 1998 J Edwin Wood Jr. Cardiovascular Division Teachers Award, Univ. of Virginia
- 1998 Clinical Excellence Award, Department of Medicine U.Va. Health Sciences Center
- 1998 Principal Investigator, University of Virginia, AMISTAD II Trial
- 1999 Principal Investigator, University of Virginia, TARGET Trial
- 2000 Principal Investigator, University of Virginia, BARI II Study
- 2002 Principal Investigator, University of Virginia, TAXUS V Trial
- 2001 - 2005 “America’s Top Doctors” Castle Connolly Guide
“Best Doctors In America”
- 2004 – 2005 J Edwin Wood Jr, Cardiovascular Division Teaching Award, Univ. of Virginia
- 2005 William “Billy” Gitchell Award, AHA, Charlottesville, Virginia.
- 2005 Establishment of the annual Eric R. Powers lectureship at the University of Virginia

Professional Affiliations:

Member, Councils on Circulation, Basic Science and Radiology, American Heart Association

Fellow, Council on Clinical Cardiology AHA

ERIC R. POWERS, M.D.

Fellow, American College of Cardiology

Former Member, Review Panel on Cardiopulmonary Function, National Aeronautics and Space Administration

Former Member, Mortality and Morbidity Committee, Balloon Valvuloplasty Registry Fellow, Society for Cardiac Angiography and Interventions

1985 - 1988 Member, Research Council, New York Heart Association

1985 - 1988 Member, Steering Committee, NHLBI Trial of Thrombolysis in Myocardial Infarction

1990 - 1995 Member, Radiation Safety Committee, University of Virginia

1990 - 1993 Member, Research Council, Virginia Heart Association

1992 - 1997 Chairman, Promotions Committee, Department of Medicine, University of Virginia

1992 - 1995 Member, Research Council, New York Heart Association

1992 - 1995 Member, Committee on Cardiac Catheterization, American Heart Association

1992 - 1998 Member, Database Committee, American College of Cardiology

1994 – 2004 Director, Annual University of Virginia Postgraduate Course in Cardiovascular Disease

1994 – 1995 Member, Committee on Utilization of Revascularization Procedures, Rand Corporation

1995 – 1996 Member, Department of Medicine Internal Review Committee

2000 – 2004 Member, Data Safety and Monitoring Board, “Companion” study

1999 – 2005 Ad Hoc Reviewer for the National Cancer Institute, NIH

2000 – 2005 Member, BARI II Steering Committee

ERIC R. POWERS, M.D.

2000 – 2005 Member, NIH Study Section ZRG1 SSS-W(10)

Selected Invited Presentations:

- 1989 American Heart Association, Council on Clinical Cardiology, "Percutaneous Balloon Valvuloplasty, Current Status"
- 1991 American College of Physicians, Meet the Professor
- 1992 American College of Cardiology, Luncheon Panel "Current Status of Aortic and Mitral Valvuloplasty"
- 1992 American College of Physicians, Meet the Professor, "Treatment of Acute Myocardial Infarction" and "Evaluation and Treatment of Congestive Heart Failure"
- 1992 Echo Now, Echo 2000 Symposium, "Echocardiography In the Cath Lab, the Future"
- 1992 Paul Dudley White Society, "Prediction of Recovery in Function After Angioplasty in Patients With Recent Infarction"
- 1992 New York Cardiological Society, Interventions in the Treatment of Heart Disease "Collaterals Preserve Myocardium in The Majority of Infarct Patients" "The Influence of Late Recanalization Upon Late Potentials"
- 1993 American College of Physicians, Meet the Professor, "Acute Myocardial Infarction, Treatment"
- 1994 American College of Cardiology, Mini Course, "Prognosis After Acute Myocardial Infarction: Can The Cardiologist Enhance Outcome; Role of Collateral Derived Blood Flow"
- 1994 American College of Physicians, Meet the Professor, "Myocardial Infarction," "Treatment of Congestive Heart Failure"
- 1994 American Heart Association, Post Graduate Seminar: "Late Reperfusion and the Concept of the Open Artery"

ERIC R. POWERS, M.D.

Invited Presentations (continued):

- 1994 American Heart Association; Cardiovascular Conference: "Cardiogenic Shock and Pump Failure"
- 1995 American College of Physicians, Meet the Professor, "Management of Congestive Heart Failure"
- 1995 Roanoke Valley Heart Net, "Modern Management of Unstable Angina."
- 1996 Society for Cardiac Angiography and Interventions, "Contrast Echocardiography."
- 1996 Recent Advances in Clinical Medicine Course, University of Virginia
- 1996 Abstract Reviewer, Session Moderator, Meeting of American Heart Association and American College of Cardiology
- 2000 Speaker "Multiple Small Feedings of the Mind" at the ACP-ASIM Annual Session
- 2004 Fractional Flow Reserve, physiologic assessment of coronary stenosis severity , Medical University of South Carolina
- 2005 Eric R. Powers lecturer at the University of Virginia

Publications

1. Powers ER, Powell WJ Jr. Effect of arterial hypoxia on myocardial oxygen consumption. *Circ Res* 33:749-756, 1973.
2. Powers ER, Foster JR, Powell WJ Jr. Interaction of interval-force relationships with aortic pressure and stroke volume. *Am J Physiol* 230:893-900, 1976.
3. Foster JR, Powers ER, Powell WJ Jr. Interaction of aortic pressure with left ventricular end-diastolic pressure in the determination of the performance of the intact left ventricle. *Am J Physiol* 232:H697-H704, 1977.
4. Garan H, Powers ER, Ruskin JN, Powell WJ Jr. Neural effect of digitalis glycosides on gracilis vascular resistance in hypotension. *Am J Physiol* 238:H729-H735, 1980.
5. Bregman D, Nichols AB, Weiss MB, Powers ER, Martin EC, Casarella WJ. Percutaneous intraaortic balloon pump insertion. *Am J Cardiol* 46:261-264, 1980.
6. Powers ER, Bannerman KS, Stone J, Reison DS, Escala EC, Kalischer A, Weiss MB, Sciacca RR, Cannon PJ. The effect of captopril on renal, coronary, and systemic patients with severe congestive heart failure. *Am Heart J* 104:1203-1210, 1982.
7. Powers ER, Cannon PJ. The effect of hypertonic mannitol infusion during prolonged coronary occlusion. *Cardiovasc Res* 17:528-525, 1983.
8. Johnson LL, Powers ER, Tzall W, Sciacca RR, Cannon PJ. Left ventricular volume and ejection fraction response to exercise in aortic insufficiency. *Am J Cardiol* 151:1379-1385, 1983.
9. Powers ER, DiBona DR, Powell WJ Jr. Myocardial cell volume and coronary resistance during low flow myocardial ischemia in the dog. *Am J Physiol* 247:H467-H477, 1984.
10. Palacios I, Powers ER, Powell WJ Jr. Effect of end-diastolic volume on the canine left ventricular ejection fraction. *Am Heart J* 109:1059-1069, 1985.
11. Powers ER, Bannerman KS, Fitz-James I, Cannon PJ. The effect of elevations of coronary artery Pco₂ on coronary blood flow. *J Am Coll Cardiol* 8:1178-1181, 1986.
12. Owen J, Friedman KD, Grossman BA, Wilkins C, Berke AD, Powers ER. Quantitation of fragment X formation during thrombolytic therapy with streptokinase and tissue plasminogen activator. *J Clin Invest* 79:1642-1647, 1987.

Publications

13. Owen J, Friedman KD, Grossman BA, Wilkins C, Berke AD, Powers ER. Thrombolytic therapy with tissue plasminogen activator or streptokinase induces transient thrombin activity. *Blood* 72:228-236, 1988.
14. Nichols AB, Berke AD, Han J, Reison DS, Watson RM, Powers ER. Cinevideodensitometric analysis of the effect of coronary angioplasty on coronary stenotic dimensions. *Am Heart J* 115:722-732, 1988.
15. Horn EM, Corwin SJ, Steinberg SF, Chow YK, Neuberg GW, Cannon PJ, Powers ER, Bilezikian JP. Reduced guanine nucleotide regulatory proteins and beta adrenergic receptors in congestive heart failure and reversal with angiotensin converting enzyme inhibitor therapy. *Circulation* 78:1373-1378, 1988.
16. Nichols AB, Smith R, Berke AD, Shlofmitz RA, Powers ER. Importance of balloon size in coronary angioplasty. *J Am Coll Cardiol* 13:1094-1100, 1989.
17. Petrossian GA, Nichols AB, Marboe CC, Sciacca R, Rose EA, Smith CR, Cannon PJ, Reemtsma K, Powers ER. Relationship between survival and development of coronary artery disease and anti-HLA antibodies after cardiac transplantation. *Circulation* 80(5):III-122-III-125, 1989.
18. Spotnitz WD, Matthew TL, Keller MW, Powers ER, Kaul S. Intraoperative demonstration of coronary collateral flow using myocardial contrast two-dimensional echocardiogram. *J Am Coll Cardiol* 65:1259-1260, 1990.
19. Sarembock IJ, Gertz SD, Gimple LW, Owen RM, Powers ER, Roberts WC. Effectiveness of recombinant desulphatohirudin on restenosis following balloon angioplasty in rabbits. *Circulation* 84:232-243, 1991.
20. Gasperetti CM, Feldman MD, Burwell LR, Angello DA, Haugh KH, Owen RM, Powers ER. Influence of contrast media on thrombus formation during coronary angioplasty. *J Am Coll Cardiol* 18:443-450, 1991.
21. Horn EH, Daniel P, Apfelbaum MA, Barr ML, Pepino P, Powers ER, Smith CR, Rose EA, Bilezikian JP. Beta-adrenergic receptor sensitivity and guanine nucleotide regulatory proteins in transplanted human hearts and autotransplanted baboons. *Transplantation* 52:960-966, 1991.
22. Sabia PJ, Powers ER, Jayaweera AR, Ragosta M, Kaul S. Functional significance of collateral blood flow in patients with recent acute myocardial infarction: A study using myocardial contrast echocardiography. *Circulation* 85:2080-2089, 1992.

Publications

23. Gimple LW, Gertz SD, Haber HL, Ragosta M, Powers ER, Roberts WC, Sarembock IJ. Effect of chronic subcutaneous or intramural administration of heparin on femoral artery restenosis after balloon angioplasty in hypercholesterolemic rabbits. A quantitative angiographic and histopathologic study. *Circulation* 86:1536-1546, 1992.
24. Sabia PJ, Powers ER, Ragosta M, Sarembock IJ, Burwell L.R, Kaul S. An association between collateral blood flow and myocardial viability in patients with recent myocardial infarction. *N Engl J Med* 327:1825-1831, 1992.
25. Sarembock IJ, Gertz SD, Gimple LW, Owen RM, Powers ER, Roberts WC. Recombinant desulphatohirudin in reducing restenosis (letter). *Circulation* 85:1953-1954, 1992.
26. Ragosta M, Sabia PJ, Kaul S, DiMarco JP, Sarembock IJ, Powers ER. Effects of late (1 to 30 days) reperfusion after acute myocardial infarction on a single-averaged ECG. *Am J Cardiol* 71:19-23, 1993.
27. Haber HL, Simek CL, Bergin JD, Sadun A, Gimple L.W, Powers ER, Feldman MD. Bolus intravenous nitroglycerin predominantly reduces afterload in patients with excessive arterial elastance. *J Am Coll Cardiol* 22:251-257, 1993.
28. Haber HL, Gertz SD, Gimple L.W, Ragosta M, Powers ER, Roberts WC, Sarembock IJ. Oral terbinafine does not limit restenosis after balloon angioplasty of atherosclerosis femoral arteries in rabbits. *J Invas Cardiol* 5:128-136, 1993.
29. Sabia PJ, Powers ER, Ragosta M, Smith WH, Watson DD, Kaul S. Role of quantitative planar thallium-201 imaging for predicting viability in patients with acute myocardial infarction and a totally-occluded infarct related artery. *J Nucl Med* 5:728-736, 1993.
30. Petrossian G, Nichols AB, Rose E, Smith CR, Powers ER. Quantitative cinevideodensitometric analysis of serial coronary angiograms following cardiac transplantation. *J Invas Cardiol* 5:258-266, 1993.
31. Haber HL, Simek CL, Gimple LW, Bergin JD, Subbiah K, Jayaweera AR, Powers ER, Feldman MD. Why do patients with congestive heart failure tolerate the initiation of β -blocker therapy? *Circulation* 88:1610-1619, 1993.
32. Gasperetti CM, Gonias SL, Gimple L.W, Powers ER. Platelet activation during coronary angioplasty in humans. *Circulation* 88:2728-2734, 1993.
33. Gertz SD, Gimple LW, Ragosta M, Roberts WC, Haber HL, Powers ER, Perez LS, Sarembock IJ. Response of femoral arteries of cholesterol fed rabbits to balloon angioplasty with or without laser: Emphasis on the distribution of foam cells. *Exp Mol Pathol* 59:225-243, 1993.

Publications

34. Ragosta M, Gimple LW, Gertz SD, Dunwiddie CT, Vlasuk GP, Haber HL, Powers ER, Roberts WC, Sarembock IJ. Specific factor Xa inhibition reduces restenosis following balloon angioplasty of atherosclerotic femoral arteries in rabbits. *Circulation* 89:1262-1271, 1994.
35. Ragosta M, Camarano G, Kaul S, Powers ER, Sarembock IJ, Gimple LW. Microvascular integrity indicates myocellular viability in patients with recent myocardial infarction: New insights using myocardial contrast echocardiography. *Circulation* 89:2562-2569, 1994.
36. Haber HL, Powers ER, Gimple LW, Wu CC, Subbiah K, Johnson WH, Feldman MD. Intracoronary angiotensin converting enzyme inhibition improves diastolic function in patients with hypertensive left ventricular hypertrophy. *Circulation* 89:2616-2625, 1994.
37. Gertz SD, Gimple LW, Banai S, Ragosta M, Powers ER, Roberts WC, Perez L.S, Sarembock IJ. Geometric remodeling is not the principal pathogenetic process in restenosis after balloon angioplasty: Evidence from collective angiographic-histomorphometric studies of atherosclerotic arteries in rabbits. *Circulation*, 90:3001-3008, 1994.
38. Camarano G, Ragosta M, Gimple L.W, Powers ER, Kaul S. Identification of viable myocardium with contrast echocardiography in patients with poor left ventricular systolic function caused by recent or remote myocardial infarction. *Am J Cardiol* 75:215-219, 1995.
39. Desmarais RL, Sarembock IJ, Ayers CR, Vernon SM, Powers ER, Gimple L.W. Elevated serum lipoprotein(a) is a risk factor for restenosis after coronary balloon angioplasty. *Circulation* 91:1403-1409, 1995.
40. Ismail S, Combs MJ, Goodman NC, Teotia SS, Teates CD, Abbott RD, Fechner RE, Nolan SP, Powers ER, Spotnitz WD. Reduction of femoral arterial bleeding post catheterization using percutaneous application of fibrin sealant. *Cathet Cardiovasc Diagn* 34:88-95, 1995.
41. Ragosta M, Gertz SD, Sarembock IJ, Deckelbaum L, Haber HL, Powers ER, Gimple L.W. Effect of mid-infrared laser angioplasty with and without balloon angioplasty on acute outcome and restenosis in atherosclerotic femoral arteries in rabbits. *Lasers Surg Med* 16:235-245, 1995.
42. Gertz SD, Gimple LW, Ragosta M, Powers ER, Sarembock IJ, Banai S, Perez LS, Roberts WC. Geometric remodeling (letter). *Circulation* 92:3581-3583, 1995.
43. Ragosta M, Barry WL., Gimple LW, Gertz SD, McCoy KW, Stouffer GA, McNamara CA,

Publications

- Powers ER, Owens GK, Sarembock IJ. Effect of thrombin inhibition with desulfatohirudin on early kinetics of cellular proliferation after balloon angioplasty in atherosclerotic rabbits. *Circulation* 93:1194-1200, 1996.
44. Barry WL, Gimple LW, Humphries JE, Powers ER, McCoy KW, Sanders JM, Owens GK, Sarembock IJ. Arterial thrombin activity after angioplasty in an atherosclerotic rabbit model: Time course and effect of hirudin. *Circulation* 94:88-93, 1996.
45. Ismail S, Jayaweera AR, Camarano G, Gimple LW, Powers ER, Kaul S. Relation between air-filled albumin microbubble and red blood cell rheology in the human myocardium: Influence of echocardiographic systems and chest wall attenuation. *Circulation* 94:445-451, 1996.
46. Sarembock IJ, Gertz SD, Thome LM, McCoy KW, Ragosta M, Powers ER, Maraganore JM, Gimple LW. Effectiveness of hirulog in reducing restenosis after balloon angioplasty of atherosclerotic femoral arteries in rabbits. *J Vasc Res* 33:308-314, 1996.
47. Keeling A, Taylor V, Nordt LA, Powers E, Fisher C. Reducing time in bed after cardiac catheterization (TIBS II). *Am J Crit Care* 5:277-281, 1996.
48. Feldman MD, Pak PH, Wu C.C, Haber HL, Heesch CM, Bergin JD, Powers ER, Cowart TD, Johnson W, Feldman AM, Kass DA. Congestive Heart Failure/Pulmonary Hypertension: Acute cardiovascular effects of OPC 18970 in patients with congestive heart failure. Time and dose dependent analysis based on pressure-volume relations. *Circulation* 93:474-483, 1996.
49. Vernon SM, Camarano G, Kaul S, Sarembock IJ, Gimple LW, Powers ER, Ragosta M. Myocardial contrast echocardiography demonstrates that collateral blood flow can preserve myocardial function beyond a chronically occluded coronary artery. *Am J Cardiol* 78:958-890,1996.
50. Falstron JK, Goodman NC, Ates G, Abbott RD, Powers ER, Spotnitz W.D. Reduction of femoral artery bleeding post catheterization using a collagen enhanced fibrin sealant. *Cathet Cardiovasc Diagn* 41:79-84, 1997.
51. Barry WL, Wiegman PJ, Gimple LW, Gertz SD, Powers ER, Owens GK, Sarembock IJ. A new single-injury model of balloon angioplasty in cholesterol-fed rabbits: Beneficial effect of hirudin and comparison with double-injury model. *Lab Invest* 77:109-116, 1997.
52. Gertz SD, Barry WL, Gimple LW, Banai S, Perez LS, McNamara CA, Powers ER, Ragosta M, Owens GK, Roberts WC, Sarembock IJ. Predictors of luminal narrowing by neointima after angioplasty in atherosclerotic rabbits. *Cardiovasc Res* 36:396-407, 1997.

Publications

53. Vernon S, Kaul S, Powers ER, Camarano G, Gimple LW, Ragosta M. Myocardial viability in patients with chronic coronary artery disease and previous myocardial infarction-comparison of myocardial contrast echocardiography and myocardial perfusion scintigraphy. *Am Heart J* 134:835-840, 1997.
54. Gertz SD, Sanai S, Gimple LW, Powers ER, Sarembock IJ, Roberts WC. Remodeling rather than neointimal formation? (Letter). *Circulation* 92:3581-3583, 1997.
55. Thome LM, Gimple LW, Bachhuber BD, McNamara CA, Ragosta M, Gertz SD, Powers ER, Owens GK, Humphries JE, Sarembock IJ. Early plus delayed hirudin reduces restenosis in the atherosclerotic rabbit more than early administration alone: Potential implications for dosing of antithrombin agents. *Circulation* 98:2301-2306, 1998.
56. Ragosta M, Karve M, Brezynski D, Humphries J, Sanders JM, Sarembock IJ, Gimple LW, Powers ER. Effectiveness of heparin in preventing thrombin generation and thrombin activity in patients undergoing coronary intervention. *Am Heart J* 137:250-257, 1999.
57. Manka DR, Wiegman P, Din S, Sanders JM, Green SA, Gimple LW, Ragosta R, Powers E, Ley K, Sarembock IJ. Arterial injury increases expression of inflammatory adhesion molecules in the carotid arteries of apolipoprotein-E-efficient mice. *J Vasc Res* 36:372-378, 1999.
58. Bishop GG, Wiegman P, McNamara C, Din S, Sanders J, Hesselbacher S, Feldman M, McPherson JA, Humphries JE, Hammarskjoid ML, Gimple LW, Ragosta M, Powers ER, Dickek D, Owens GK, Sarembock IJ. Local adenovirus-mediated delivery of hirudin in a rabbit arterial injury model. *J Vasc Res* 36:343-352. 1999.
59. McPherson JA, Robinson PS, Powers ER, Sarembock IJ., Ragosta M. Angiographic findings in patients undergoing catheterization for recurrent symptoms within 30 days of successful coronary intervention. *Am J Cardiol* 84(5):589-592, 1999.
60. Wiegman P, Barry WL, McPherson JA, McNamara CA, Gimple LW, Sanders JM, Bishop GG, Powers ER, Ragosta M, Owens GK, Sarembock IJ. All-trans-retinoic acid limits restenosis after balloon angioplasty in the focally atherosclerotic rabbit: A favorable effect on vessel remodeling. *Atheroscler Thromb Vasc Biol* 20:89-95, 2000.
61. Keeling AW, Fisher CA, Haugh KH, Powers ER, Turner MS. Reducing time in bed after percutaneous transluminal coronary angioplasty. (TIBS III). (Clinical Trial.) *Am J Crit Care* 9(3):185-7, 2000.
62. Buckley RS, Kaul S, Jayaweera AR, Gimple LW, Powers ER, Dent JM. Quantification of

Publications

mitral regurgitation in the cardiac catheterization laboratory with contrast echocardiography. *Am Heart J* 139(6):1109-12, 2000.

63. Ragosta M, Powers ER, Samady H, Gimple LW, Sarembock IJ, Beller GA. Relationship between extent of residual myocardial viability and coronary flow reserve in patients with recent myocardial infarction. *Am Heart J* 141(3):456-462, 2001.
64. Bishop GG, McPherson JA, Sanders JM, Hesselbacher SE, Feldman MJ, McNamara CA, Gimple LW, Powers ER, Mousa SA, Sarembock IJ. Selective alpha(v)beta(3)-receptor blockade reduces macrophage infiltration and restenosis after balloon angioplasty in the atherosclerotic rabbit. *Circulation* 103(14):1906-1911, 2001.
65. McPherson JA, Barringhaus KG, Bishop GG, Sanders JM, Rieger JM, Hesselbacher SE, Gimple LW, Powers ER, MacDonald T, Sullivan G, Linden J, Sarembock IJ. Adenosine A_{2A} receptor stimulation reduces inflammation and neointimal growth in a murine carotid ligation model. *Arterioscler Thromb Vasc Biol* 21(5):791-796, 2001.
66. Fischer JJ, Samady H, McPherson JA, Sarembock IJ, Powers ER, Gimple LW, Ragosta M. Comparison between visual assessment and quantitative angiography versus fractional flow reserve for native coronary narrowings of moderate severity. *Am J Cardiol* 90:210-215, 2002.
67. Samady H, Yi-Hwa L, Choi CJ, Ragosta M, Pfau SE, Cleman MW, Powers ER, Kramer CM, Wackers FJ, Beller GA, Watson DD. Electromechanical mapping for detecting myocardial viability and ischemia in patients with severe ischemic cardiomyopathy. *Am J Cardiol* 91:807-811, 2003.
68. Balcells E, Powers ER, Lepper W, Belcik T, Wei K, Ragosta M, Samady H, Lindner JR. Detection of myocardial viability by contrast echocardiography in acute infarction predicts recovery of resting function and contractile reserve. *J Am Coll Cardiol* 41: 827-833, 2003.
69. Ragosta M, Samady H, Isaacs RB, Gimple LW, Sarembock IJ, Powers ER. Coronary flow reserve abnormalities in patients with diabetes mellitus who have end-stage renal disease and normal epicardial arteries. *Am Heart J* 147 (6):1017-1023, 2004.
70. Ragosta M, Samady H, Gimple LW, Sarembock IJ, Fenster M and Powers ER. Percutaneous treatment of focal vs. diffuse in-stent restenosis: A prospective randomized comparison of conventional therapies. *Catheterization and Cardiovascular Interventions* 61:344-349, 2004.
71. McClish JC, Ragosta M, Powers ER, Barringhaus KG, Gimple LW, Fischer J, Garnett J, Siadaty M, Sarembock IJ, Samady H. Effect of acute myocardial infarction on the utility of

Publications

fractional flow reserve for the physiologic assessment of the severity of coronary artery narrowing. *Am J Cardiol* 93:1102-1106, 2004.

72. Samady H, Choi CJ, Ragosta M, Powers ER, Beller GA, Kramer CM. Electromechanical mapping identifies improvement in function and retention of contractile reserve after revascularization in ischemic cardiomyopathy. *Circulation*. 110:2410-2416, 2004.
73. Fischer JJ, Samady H, Sarembock IJ, Powers ER, Gimble LW, Ragosta M: Importance of adjunctive physiologic measurement combined with angiography to make appropriate decisions regarding coronary revascularization. Submitted for publication
74. Micari A, Belcik TA, Balcells EA, Powers E, Wei K, Kaul S. Improvement in microvascular reflow and reduction of infarct size with adenosine in patients undergoing primary coronary stenting. *Am J Cardiol*, 96:1410-1415, 2005.
75. Chhatrwalla AN, Ragosta M, Powers ER, Fischer JJ, Barringhaus KG, Sarembock IJ, Gimble LW, Kramer CM, Samady H. High left ventricular mass index does not limit the utility of fractional flow reserve for the physiologic assessment of lesion severity. Submitted for publication.
76. Le DE, Powers ER, Bin JP., Leong-Poi, Goodman NC, Kaul S. Transmyocardial revascularization ameliorates ischemia by cardiac denervation and not by angiogenesis: new insights using a canine model of chronic ischemia Submitted for publication.
77. Samady H, Lepper W, Powers ER, Wei K, Ragosta M, Bishop GG, Sarembock IJ, Gimble L, Watson DD, Beller GA, Barringhaus KG. Fractional Flow Reserve of infarct related arteries identifies reversible defects on non-invasive myocardial perfusion imaging early after myocardial infarction. In press. *J Am Coll Cardiol*.

ERIC R. POWERS, M.D.

Multi-Center Publications

1. The Captopril Multicenter Research Group. A placebo-controlled trial of captopril in refractory chronic congestive heart failure. *J Am Coll Cardiol* 2:755-763, 1983.
2. The TIMI Study Group. The thrombolysis in myocardial infarction (TIMI) trial: Phase I findings. *N Engl J Med* 312:932-936, 1985.
3. Hillis LD, Borer J, Braunwald E, Chesebrough JH, Cohen LS, Dalen J, Dodge HT, Francis CK, Knatterud G, Ludbrook P, Markis JE, Mueller H, Desuigne-Nickens P, Passamani ER, Powers ER, Rao KA, Roberts R, Ross A, Ryan TJ, Sobel BE, Winniford M., Zaret B, and co-investigators. High-dose intravenous streptokinase for acute myocardial infarction: Preliminary results of a multicenter trial. *J Am Coll Cardiol* 6:957-962, 1985.
4. Williams DO and TIMI Principal Investigators. Intravenous recombinant tissue type plasminogen activator in acute myocardial infarction: A report from the NHLBI thrombolysis in myocardial infarction (TIMI) trial. *Circulation* 73:338-346, 1986.
5. Powers ER, Chiaramida A, DeMaria AN, Giles TD, Hackshaw B, Hart W, Haugland M, Johnston R, Katz R, Kirlin P, et al. A double-blind comparison of lisinopril with captopril in patients with symptomatic congestive heart failure. *J Cardiovasc Pharmacol* 9(Suppl 3):S82-S88, 1987.
6. Sheehan FH and TIMI Principal Investigators. The effect of intravenous thrombolytic therapy on left ventricular function: A report on tissue plasminogen activator and streptokinase from the Thrombolysis in Myocardial Infarction (TIMI Phase I) Trial. *Circulation* 75:817-829, 1987.
7. Chesebrough JH and TIMI Principal Investigators. Thrombolysis in Myocardial Infarction (TIMI), Trial, Phase I. A comparison between intravenous tissue plasminogen activator and intravenous streptokinase. *Circulation* 76:142-154, 1987.
8. Mueller HS and TIMI Principal Investigators. Thrombolysis in Myocardial Infarction (TIMI). Comparison studies of coronary reperfusion and systemic fibrinogenolysis with two forms of recombinant tissue-type plasminogen activator. *J Am Coll Cardiol* 10:479-490, 1987.
9. Walinsky P, LeJemtel T, Powers ER, et al. Hemodynamic benefits of single and multiple doses of intravenous enalaprilat, an angiotensin converting enzyme

ERIC R. POWERS, M.D.

Multi-Center Publications

- inhibitor. *Heart Failure* 3:108-113, 1987.
10. Williams D and TIMI Investigators. Coronary angiography following recombinant tissue-type plasminogen activator in acute myocardial infarction: A report from the Thrombolysis in Myocardial Infarction Trial. *J Am Coll Cardiol* 10:5:45B-50B, 1987.
 11. Passamani E and TIMI Investigators. The (TIMI) Thrombolysis in Myocardial Infarction Phase II Pilot: Tissue plasminogen activator (rt-PA) followed by percutaneous transluminal coronary angioplasty (PTCA). *J Am Coll Cardiol* 10:5:51B-64B, 1987.
 12. Rao AK and TIMI Principal Investigators. The Thrombolysis in Myocardial Infarction (TIMI) Trial, Phase I. Hemorrhagic manifestations and changes in plasma fibrinogen and fibrinolytic system. *J Am Coll Cardiol* 11:1, 1988.
 13. Dalen JE, et al, and TIMI Investigators. Six and twelve-month follow-up of the Phase I Thrombolysis In Myocardial Infarction (TIMI) trial. *Am J Cardiol* 62:179-185, 1988.
 14. Giles TD, Katz R, Sullivan JM, Wolfson P, Haugland M, Kirlin P, Powers ER, Rich S, Hackshaw B, Chiaramida A, Rouleau JL, Fisher MB, Pigeon J, Rush JE for the Multicenter Lisinopril-Captopril CHF Study Group. Short and long-term angiotensin converting enzyme inhibitors: A randomized trial of lisinopril versus captopril in the treatment of congestive heart failure. *J Am Coll Cardiol* 13(6):1240-1247, 1988.
 15. The TIMI Study Group. Comparison of invasive and conservative strategies following intravenous tissue plasminogen activation in acute myocardial infarction: Results of the Thrombolysis in Myocardial Infarction (TIMI) II trial. *N Engl J Med* 320:618-627, 1989.
 16. Wackers FJ, Terrin ML, Kayden DS, Knatterud G, Forman S, Braunwald E, Zaret BL and the TIMI Investigators. Quantitative radionuclide assessment of regional ventricular function after thrombolytic therapy for acute myocardial infarction: Results of Phase I Thrombolysis in Myocardial Infarction (TIMI) Trial. *J Am Coll Cardiol* 13:998-1005, 1989.
 17. The TIMI Study Group. Variables predictive of good functional outcome following thrombolytic therapy in the Thrombolysis in Myocardial Infarction phase II (TIMI II) pilot study. *Am J Cardiol* 63:503-512, 1989.

ERIC R. POWERS, M.D.

Multi-Center Publications

18. Chaitman BR, Thompson BW, Kern MJ, Vandormael MG, Cohen MG, Ruocco NA, Solomon RE, Braunwald E, and the TIMI Investigators. Tissue plasminogen activator followed by percutaneous transluminal coronary angioplasty. One year TIMI Phase II Pilot results. *Am Heart Journal* 119(2):213-223, 1990.
19. Habib GB, Heibig J, Forman SA, Brown BG, Roberts R, Terrin ML, Bolli R, and the TIMI Investigators. Influence of coronary collateral vessels on myocardial infarct size in humans. Results of Phase I Thrombolysis in Myocardial Infarction Trial. *Circulation* 83(3):739-746, 1991.
20. Roberts R, Rogers WJ, Mueller HS, Lambrew CT, Diver DJ, Smith HC, Willerson JT, Knatterud GL, Forman S, Passamani E, Zaret BL, Wackers JT, Braunwald E, for the TIMI Investigators. Immediate versus deferred beta-blockade following thrombolytic therapy in patients with acute myocardial infarction. Results of the Thrombolysis in Myocardial Infarction (TIMI) II-B study. *Circulation* 83(2):422-437, 1991.
21. Gore JM, Sloan M, Price TR, Randall AMY, Bovill E, Collen D, Forman S, Knatterud GL, Sopko G, Terrin ML, and the TIMI investigators. Intracerebral hemorrhage, cerebral infarction, and subdural hematoma after acute myocardial infarction and thrombolytic therapy in the Thrombolysis in Myocardial Infarction Study. *Circulation* 83(2):448-459, 1991.
22. Reeder GS, Nishimura RA, Holmes DR, and the Mansfield Scientific Aortic Valvuloplasty Registry Investigators. Patient age and results of balloon aortic valvuloplasty: the Mansfield Scientific Registry experience. *J Am Coll Cardiol* 17(4):909-913, 1991.
23. NHLBI Balloon Valvuloplasty Registry Participants. Percutaneous balloon aortic valvuloplasty: Acute and 30 day follow-up results in 674 patients from the NHLBI Balloon Valvuloplasty Registry. *Circulation* 84:2383-2397, 1991.
24. NHLBI Balloon Valvuloplasty Registry Participants. Multi-center experience with balloon mitral commissurotomy: NHLBI Balloon Valvuloplasty Registry report on Immediate and 30-day follow-up results. *Circulation* 85:448-461, 1992.
25. NHLBI Balloon Valvuloplasty Registry Participants. Complications and mortality of percutaneous balloon mitral commissurotomy. *Circulation* 85:2014-2024, 1992.

ERIC R. POWERS, M.D.

Multi-Center Publications

26. Tofler GH, Muller JE, Stone PH, Forman S, Solomon RE, Knatterud GL, Braunwald E, and the TIMI Research Group. Modifiers of timing and possible triggers of acute myocardial infarction in the Thrombolysis in Myocardial Infarction Phase II (TIMI II) study group. *J Am Coll Cardiol* 20:1049-1055, 1992.
27. Kleiman NS, Terrin M, Mueller H, Chaitman B, Roberts R, Knatterud GL, Solomon R, McMahon RP, Braunwald E, and the TIMI Investigators. Mechanisms of early death despite thrombolytic therapy: Experience from the Thrombolysis in Myocardial Infarction Phase II (TIMI II) study. *J Am Coll Cardiol* 19:1129-1135, 1992.
28. Williams DO, Braunwald E, Knatterud G, Babb J, Bresnahan J, Greenberg MA, Raizner A, Wasserman A, Robertson T, Ross R, and the TIMI Investigators. One-year results of the Thrombolysis in Myocardial Infarction Investigation (TIMI) Phase II trial. *Circulation* 85:533-542, 1992.
29. Mueller HS, Cohen LS, Braunwald E, Forman S, Feit F, Ross A, Schweiger M, Cabin H, Davison R, Miller D, Solomon R, Knatterud GL, and the TIMI Investigators. Predictors of early morbidity and mortality following thrombolytic therapy of acute myocardial infarction: Analysis of patient subgroups in the Thrombolysis in Myocardial Infarction (TIMI) trial, Phase II. *Circulation* 85:1254-1264, 1992.
30. Zaret BL, Wackers EJT, Terrin ML, Ross R, Weiss M, Slater J, Morrison J, Bourge RC, Passamani E, Knatterud G, Braunwald E, and the TIMI Investigators. Assessment of global and regional left ventricular performance at rest and during exercise following thrombolytic therapy for acute myocardial infarction: Results of the Thrombolysis in Myocardial Infarction (TIMI) II study. *Am J Cardiol* 69:1-9, 1992.
31. Terrin ML, Williams DO, Kleiman NS, Willerson J, Mueller HS, Desvigne-Nickens P, Forman S, Knatterud GL, Braunwald E, for the TIMI II Investigators. Two- and three-year results of the Thrombolysis and Myocardial Infarction (TIMI) Phase II Clinical Trial. *J. Am Coll Cardiol* 22(7):1763-1772, 1993.
32. Feldman AM, Bristow MR, Parmley WW, Carson PE, Pepine CJ, Gilbert EM, Strobeck JE, Hendrix GH, Powers ER, Bain RP, White BG. Effects of vesnarinone on morbidity and mortality in patients with heart failure. *N Engl J Med* 329:149-

ERIC R. POWERS, M.D.

Multi-Center Publications

155, 1993.

33. Otto CM, Mickel MC, Kennedy JW, Alderman EL, Bashore TM, Block PC, Brinker JA, Diver D, Ferguson J, Holmes DR, Lambrew CT, McKay CR, Palacios IF, Powers ER, Rahimtoola SH, Weiner BH, Davis KB. Three-year outcome after balloon aortic valvuloplasty. *Circulation* 89:642-650, 1994.
34. Cannon CP, McCabe CH, Henry TD, Schweiger MJ, Gibson RS, Mueller HS, Becker RC, Kleiman NS, Haughland M, Anderson JL, Sharaf BL, Edwards SJ, Rogers WJ, Williams DO, Braunwald E, for the TIMI 5 Investigators. A pilot trial of recombinant desulfathohirudin compared with heparin in conjunction with tissue-type plasminogen activator and aspirin for acute myocardial infarction: Results of the thrombolysis in myocardial infarction (TIMI) 5 trial. *J Am Coll Cardiol* 23:993-1003, 1994.
35. Karagounis LA, Anderson JL, Sorensen SG, Moreno FLL, for the TEAM-3 Investigators. Relation of reperfusion success with anistreplase or alteplase in acute myocardial infarction to body weight. *Am J Cardiol* 73:16-22, 1994.
36. Anderson JL, Becker LC, Sorensen S, Karagounis L, Browne KF, Shah PK, Morris DC, Fintel DJ, Mueller HS, Ross AM, Hall SM, Askins JC, Doorey AJ, Grines CL, Moreno FLL, Marder NJ, for the TEAM-3 Investigators. Anistreplase versus alteplase in acute myocardial infarction: comparative effects on left ventricular function, 1 day patency, and morbidity: the TEAM-3. *J Am Coll Cardiol* 20:753-766, 1992.
37. Chaitman BR, McMahon RP, Terrin M, Younis LT, Shaw LJ, Weiner DA, Frederick MM, Knatterud GL, Sopko G, Braunwald E, for the TIMI Investigators. Impact of treatment strategy on predischage exercise test in the Thrombolysis in Myocardial (TIMI) II Trial. *Am J Cardiol* 71:131-138, 1993.
38. de Marchena EJ, Mallon SM, Knopf WD, Parr K, Moses JW, Murphy-Chutorian D, Myerburg RJ, for the Holmium Laser Coronary Registry. Effectiveness of holium laser-assisted coronary angioplasty. *Am J Cardiol* 73:117-121, 1994.
39. The TIMI IIIB Trial. Unstable angina/myocardial infarction. Effects of tissue plasminogen activator and a comparison of early invasive and conservative strategies in unstable angina and non-Q wave myocardial infarction: Results of the TIMI IIIB Trial. *Circulation* 89:1545-1555, 1994.

ERIC R. POWERS, M.D.

Multi-Center Publications

40. Bittl JA, Strony J, Brinker JA, Ahmed WH, Meckel CR, Chaitman BR, Managanore J, Deutsch E, Adelman B, for the Hirulog angioplasty study investigators. Treatment with bivalirudin (Hirulog) as compared with heparin during coronary angioplasty for unstable or post infarction angina. *N Engl J Med* 333:764-769, 1995.
41. The RESTORE Investigators. Effects of platelet glycoprotein IIb/IIIa blockade with tirofiban on adverse cardiac events in patients with unstable angina or acute myocardial infarction undergoing coronary angioplasty. *Circulation* 96(5):1445-1453, 1997.
42. The EPISTENT Investigators. Randomized placebo-controlled and balloon-angioplasty-controlled trial to assess safety of coronary stenting with use of platelet glycoprotein-IIb/IIIa blockade. *Lancet* 352:87-92, 1998.
43. The PURSUIT Trial Investigators. Inhibition of platelet glycoprotein IIb/IIIa with eptifibatid in patients with acute coronary syndromes. *N Engl J Med* 339:436-443, 1998.
44. Mahaffey KW, Harrington RA, Simoons ML, Granger CB, Graffagnino C, Alberts MJ, Laskowitz DT, Miller JM, Sloan MA, Berdan LG, MacAulay CM, Lincoff AM, Deckers J, Topol EJ, Califf RM. Stroke in patients with acute coronary syndromes: Incidence and outcomes in the platelet glycoprotein IIb/IIIa in unstable angina. Receptor suppression using integrilin therapy (PURSUIT) trial. The PURSUIT Investigators. *Circulation* 99(18):2371-2377, 1999.
45. Alexander JH, Harrington RA, Tuttle RH, Berdan LG, Lincoff AM, Deckers JW, Simoons ML, Guerci A, Hochman JS, Wilcox RG, Kitt MM, Eisenberg PR, Califf RM, Topol EJ, Karsh K, Rtuzylo W, Stepinska J, Widimsky P, Boland JB, Armstrong PW. Prior aspirin use predicts worse outcomes in patients with non-ST-elevation acute coronary syndromes. PURSUIT Investigators. Platelet II/b III/a in unstable angina: Receptor suppression using integrilin therapy. *Am J Cardiol* 83(8):1147-1151, 1999.
46. Lincoff AM, Califf RM, Moliterno DJ, Ellis SG, Ducas J, Kramer JH, Kleiman NS, Cohen EA, Booth JE, Sapp SK, Cabot CF, Topol EJ for The Evaluation of Platelet IIb/IIIa Inhibition in Stenting Investigators. Complementary clinical benefits of coronary-artery stenting and blockade of platelet glycoprotein IIb/IIIa receptors. *N*

ERIC R. POWERS, M.D.

Multi-Center Publications

Engl J Med 341:319-327, 1999.

47. Topol EJ, Moliterno DJ, Herrmann HC, Powers ER, Grines CL, Cohen DJ, Cohen EA, Bertrand M, Neumann FJ, Stone GW, DiBattiste PM, Yakubov SJ, DuLucca PT, Demopoulos L, TARGET Investigators. Comparison of two platelet glycoprotein IIb/IIIa inhibitors, tirofiban and abciximab, for the prevention of ischemic events with percutaneous coronary revascularization. *N Engl J Med* 344:1888-1894, 2001.
48. Fearon WF, Luna J, Samady H, Powers ER, Feldman T, Dib N, Tuzeu M, Cleman MW, Chou TM, Cohen D J, Ragosta M, Takagi A, Jeremias A, Fitzgerald PJ, Yeung AC, Kern MJ, Yock PG. Fractional flow reserve compared with intravascular ultrasound guidance for optimizing stent deployment. *Circulation* 104:1917-1922, 2001.
49. Stone GW, Moliterno DJ, Bertrand M, Neumann F, Herrmann HC, Powers ER, Grines CL, Moses JW, Cohen DJ, Cohen EA, Cohen M, Wolski K, DiBattiste PM, Topol EJ. Impact of clinical syndrome acuity on the differential response to 2 glycoprotein IIb/IIIa inhibitors in patients undergoing coronary stenting. The TARGET Trial. *Circulation* 105:2347-2354, 2002.
50. Pijls N, Klauss V, Siebert U, Powers ER, Takazawa K, Fearon WF, Escaned J, Tsurumi Y, Akasaka T, Samady H, DeBruyne B, Bernard MD, for the Fractional Flow Reserve (FFR) Post-Stent Registry Investigators. Coronary pressure measurement after stenting predicts adverse events at follow up: A multicenter registry. *Circulation* 105(25):2950-2954, 2002.
51. Roffi M, Moliterno DJ, Meier B, Powers ER, Grines CL, DiBattiste PM, Herrmann HC, Bertrand M, Harris KE, Demopoulos LA, Topol EJ. Impact of different platelet glycoprotein IIb/IIIa receptor inhibitors among diabetic patients undergoing percutaneous coronary intervention: Do Tirofiban and ReoPro Give Similar Efficacy Outcomes Trial (TARGET) 1-year follow-up. *Circulation* 105(23):2730-2736, 2002.
52. Whitlow PL, DeMaio SJ Jr, Perin EC, O'Neill WW, Lasala JM, Schneider JE, McKeever LS, Ezratty AM, Knopf WD, Powers ER, Shawl FA; Eclipse Investigators. One-year results of percutaneous myocardial revascularization for refractory angina pectoris. *Am J Cardiol* 91:807-811, 2003

ERIC R. POWERS, M.D.

Multi-Center Publications

53. Ross AM, et al. A randomized, double-blinded, placebo controlled multicenter trial of adenosine as an adjunct to reperfusion in the treatment of acute myocardial infarction (AMISTAD-II). *J Am Coll Cardiol*, 45:1775-80, 2005.
54. Stone GW, et al. Comparison of a polymer-based paclitaxel-eluting stent with a bare metal stent in patients with complex coronary artery disease. A randomized controlled trial. *JAMA* 294:1215-1223, 2005.
55. Stone GW, et al. Paclitaxel-eluting stents vs vascular brachytherapy for in-stent restenosis within bare-metal stents. The TAXUS V ISR randomized trial. *JAMA* 295:1253-1263, 2006.

ERIC R. POWERS, M.D.

Book Chapters, Reviews, and Editorials

1. Powell WJ Jr, Powers ER, Vlahakes GJ. Observations on myocardial oxygen consumption in the hypoxic and ischemic canine heart. *Circulation* 53:(1):1-173-1-175, 1976.
2. Cannon PJ, Nichols AB, Powers ER, Reison DS, Sciacca RR. Studies of regional myocardial perfusion in man with intracoronary ¹³³Xenon. In: *Interventional Nuclear Medicine*. Spencer RP, ed.
3. Powers ER. New directions in the non-operative management of coronary artery disease. *Clin Ther* 8:468-480, 1986.
4. Powers ER. Palliative percutaneous aortic balloon valvuloplasty prior to noncardiac surgery and invasive diagnostic procedures. *Mayo Clin Proc* 64:871-873, 1989.
5. Powers ER. *Congestive heart failure: The Informed Project of Columbia Presbyterian Medical Center*. 1990.
6. Powers ER. *Reperfusion therapy in myocardial infarction: The informed Project of Columbia Presbyterian Medical Center*. 1990.
7. Powers ER. Clinical experience: Percutaneous balloon valvuloplasty for mitral stenosis. *Hosp Pract* 25:37-46, 1990.
8. Jan K, Powers ER, Reinhardt W, Berke A, Nichols A, Watson R, Reison D, Schwartz A, Chien S. Altered rheological properties of blood following administration of tissue plasminogen activator and streptokinase in patients with acute myocardial infarction. In: *Fibrinogen, Thrombosis, Coagulation and Fibrinolysis*. Liu CY, Chien S., eds. Plenum Press, 1991.
9. Powers ER. Effects of contrast agents on platelet function and coagulation: Potential importance during coronary angiographic and angioplasty procedures. *J Invas Cardiol* 3:41B-46B, 1991.
10. Powers ER, Bergin JD. Current concepts in evaluating and managing congestive heart failure. *Modern Medicine* 60:54-71, 1992.

ERIC R. POWERS, M.D.

Book Chapters, Reviews, and Editorials

11. Ragosta M, Powers ER. Functional significance of coronary collateral flow in acute MI. *Cardio April*:67-71, 1993.
12. Powers ER, Bergin JD. Congestive heart failure: New insight into pathogenesis. A patient evaluation. Part 1. *Consultant* 33(4):151-153, 1993.
13. Powers ER, Bergin JD. Congestive heart failure: How to tailor therapy from a variety of therapeutic options. Part 2. *Consultant* 33(4):154-159, 1993.
14. Bergin JD, Powers ER. Evaluation and management of severe heart failure. *Contemp Intern Med* 5(9):58-71, 1993.
15. Powers ER. The issue of collaterals. *ACC Curr J Rev* 2:18-19, 1993.
16. Bergin JD, Powers ER. A practical guide to the out-patient management of congestive heart failure. *Consultant* 35(8):1143-1146, 1995.
17. Powers ER. The Atlas of Heart Disease. Chronic Ischemic Heart Disease. Volume V. Chapter 5. Coronary Angiography. 5.1 - 5.21, 1995.
18. Bergin JD, Powers ER. Congestive heart failure: Today's therapeutic options. *Consultant* 35(8):1143-1152, 1995.
19. Powers ER. Should everyone have an open artery after myocardial infarction? *Invasive Cardiology: Current Diagnostic and Therapeutic Issues*. Armonk, NY: Futura Publishing Co. Inc., 1996:585-598.
20. Bergin JD, Powers ER. The management of congestive heart failure. *Compr Ther* 22(5):291-296, 1996.
21. Powers ER. Congestive Heart Failure. *Internal Medicine: Heart Disease/AICD-Base Disorders, Audio Digest Vol 43*, 1996.
22. McNamara CA, Sarembock IJ, Bachhuber BG, Stouffer GA, Ragosta M, Barry W, Gimple LW, Powers ER, Owens GK. Thrombin and vascular smooth muscle cell proliferation: Implications for atherosclerosis and restenosis. *Semin Thromb Hemost* 22:139-144, 1996.

ERIC R. POWERS, M.D.

Book Chapters, Reviews, and Editorials

23. Kryzhanovsky VA, Powers ER. Stenting during primary angioplasty in patients with myocardial infarction. *Kardiologiya* 39:60-68, 1999.
24. Kron IL, Kern JA, Beller GA, Bergin J, Fiser SM, Gangemi JJ, McPherson JA, Powers ER. Cardiac screening before non-cardiac operations. *Curr Probl Surg* 37(6):385-454, 2000.
25. Kryzhanovsky VA, Powers ER. Primary angioplasty in myocardial infarction patients. *Kardiologiya* 39:66-77, 1999.
26. Powers ER. Hemodynamic Rounds, 2nd ed. CME Book Review. *Clin Cardiol* 23:310, 2000.
27. Kryzhanovsky VA, Powers ER. Secondary angioplasty in patients with myocardial infarction. Part 1. *Kardiologiya* 5, 2000.
28. Kryzhanovsky VA, Powers ER. Secondary angioplasty inpatients with myocardial infarction. Part 2. Delayed secondary angioplasty. Are coronary angiography and angioplasty indicated to all patients with myocardial infarction before discharge? *Kardiologiya* 6, 2000.

ERIC R. POWERS, M.D.

Abstracts

1. Powers E.R. and Powell W.J., Jr.: The effect of arterial hypoxia and myocardial oxygen consumption. *Clin Res* 20:860, 1972.
2. Powers E.R., Foster J.R. and Powell W.J., Jr.: The interaction of treppe with preload and afterload. *Circulation* 48:(IV):66, 1973.
3. Garan H., Powers E.R. and Powell W.J., Jr.: Dependence of the neurogenic vascular resistance effect of digitalis on the background level of sympathetic activity in skeletal muscle. *Fed Proc* 33:584, 1974.
4. Foster J.R., Powers E.R. and Powell W.J., Jr.: Interaction of aortic pressure and left ventricular end-diastolic pressure in determination of intact ventricular performance. *Fed Proc* 33:397, 1974.
5. Palacios I., Powers E.R. and Powell W.J., Jr.: Effect of preload and afterload on ventricular ejection fraction. *Circulation* 56:(II)483, 1977.
6. Garan H., Powers E.R. and Powell W.J., Jr.: Neurogenic effect of digoxin on vascular resistance during hypertension. *Circulation* 56:(II):920, 1977.
7. Powers E.R., DiBona D.R. and Powell W.J., Jr.: The development of a perfusion deficit and myocardial cell swelling during low flow ischemia. *Circulation* 58:(II):678, 1978.
8. Powers E.R. and Powell W.J., Jr.: The relationship between myocardial edema and coronary blood flow during low flow myocardial ischemia. *Clin Res* 28:(2):472A, 1980.
9. Powers E.R. and Cannon P.J.: The relationship between myocardial pCO₂ and blood flow following coronary artery occlusion. *Clinic Res* 29:(2):232A, 1981.
10. Bannerman K.S., Powers E.R. and Cannon P.J.: The relationship between coronary blood flow and myocardial pH during reperfusion following prolonged coronary occlusion. *Circulation* 64:(IV):266, 1981.
11. Powers E.R., Stone J.E., Bannerman K.S., Reison D.S., Weiss M.B., Sciacca R.R. and Cannon P.J.: The effect of captopril on systemic and renal hemodynamics in patients with congestive heart failure. *Am J Cardiol* 49:925, 1982.

ERIC R. POWERS, M.D.

Abstracts

12. Powers E.R., Reison D.S., Weiss M.B and Cannon P.J.: Effect of Nitroprusside on coronary systemic hemodynamics in patients with severe congestive heart failure. *Circulation* 66:(II):211, 1982.
13. Johnson L.L., Powers E.R., Tzall W.R., Feder J., Sciacca R.R. and Cannon P.J.: Combined volume and ejection fraction response to exercise in aortic insufficiency. 3rd World Congress of Nuclear Cardiology, Paris, France, September, 1982. Reison D.S., Powers E.R., Berke A., Marcella J.J., Weiss M.B., Sciacca R.R., Nichols A.B. and Cannon P.J.: Sympathetic nerve activity during the cold pressor test. *J Am Coll Cardiol* 1(2):694, 1983.
14. Pucillo A.L., Reison D.S., Rose E.A., Reemtsma K. and Powers E.R.: Reversibility of elevated pulmonary vascular resistance after cardiac transplantation. *J Am Coll Cardiol* 1:(2):722, 1983.
15. Powers E.R., Bannerman K.S., Fitz-James I. and Cannon P.J.: Effect of progressive elevations of coronary arterial Pco₂ on coronary vascular resistance. *Circulation* 68:(III):204, 1983.
16. Groves B.M., Ditchey R.V., Reeves J.T., Brundage B.H., McKay C.R., Powers E.R., Barst R., Rubin L.J., Aker V.T., Siegel R. and Zadacca H.: Multicenter trial of a new guidewire thermodilution catheter. *J Am Coll Cardiol* 3:599, 1984.
17. Reison D.S., Powers E.R., Cassidy F., Boyer C., Rose C. and Cannon P.J.: The effect of ganglionic blockade on cardiac norepinephrine release and regional myocardial blood flow during coronary occlusion. *Circulation* 70:(II):216, 1984.
18. Williams D.O., et al.: Intravenous recombinant tissue type plasminogen activator in acute myocardial infarction: A report from the NHLBI Thrombolysis in Myocardial Infarction (TIMI) Trial. *J Am Coll Cardiol* 5:495, 1985.
19. Ross A.M., et al.: Electrocardiographic and angiographic correlations in myocardial infarction patients treated with thrombolytic agents: A report from the NHLBI Thrombolysis in Myocardial Infarction (TIMI) Trial. *J Am Coll Cardiol* 5:495, 1985.
20. Pucillo A.L., Reison D.S., Cannon P.J. and Powers E.R.: Systemic and coronary hemodynamics during intravenous nitroglycerin infusion in patients with unstable angina. *J Am Coll Cardiol* 5:505, 1985.

ERIC R. POWERS, M.D.

Abstracts

21. Jan K.M., Reinhardt W., Chien S., Berk A., Powers E.R., Nichols A., Watson R., Reison D. and Schwartz A.: Altered rheological properties of blood following administrations of tissue plasminogen activator and streptokinase in patients with acute myocardial infarction. *Circulation* 72(III):413, 1985.
22. Owen J., Friedman K.D., Berke A.D., Grossman B.A., Wilkins C. and Powers E.R.: Fragment X formation during thrombolytic therapy with streptokinase or with recombinant tissue plasminogen activator. *Clin Res* 34:332A, 1986.
23. Owen J., Friedman K.D., Berke A.D., Grossman C. and Powers E.R.: Transient activation of the coagulation system in response to infusion of streptokinase or of recombinant tissue plasminogen activator. *Clin Res* 34:332A, 1986.
24. Horn E.M., Steinberg S.F., Chow Y.K., Neuberg G.W., Corwin S.C., Powers E.R. and Bilezikian J.P.: Altered beta adrenergic receptors and guanine nucleotide binding regulatory proteins in congestive heart failure. *Clin Res* 34:857A, 1986.
25. Horn E.M., Chow Y.K., Neuberg G.W., Corwin S.J., Powers E.R., Bilezikian J.P., Cannon P.J. and Steinberg S.F.: The guanine nucleotide regulatory protein Ns is reduced in congestive heart failure. *Circulation* 74:(II):198, 1986.
26. Corwin S.J., Horn E.M., Steinberg S.F., Neuberg G.W., Chow Y.K., Bilezikian J.P. and Powers E.R.: The effects of angiotensin converting enzyme inhibition on components of the beta receptor system in congestive heart failure. *Circulation* 74:(II):310, 1986.
27. Giles T.D., Chiaramida A., DeMaria A., Hackshaw B., Hart M., Haugland M., Johnston R., Katz P., Kirlin M., McCall S., Mohivddin S., Powers E.R., Rich S., Sullivan J., Wolfson P., Snapinn S., Gibson T. and Fisher M.: A comparison of lisinopril and captopril in congestive heart failure. *Circulation* 74(II):39, 1986.
28. Nichols A.B., Berke A.D., Han J., Reison D.S., Watson R.M., Garcia B. and Powers E.R.: Comparison of cinevideodensitometric and caliper measurements of coronary stenosis after angioplasty. *J Am Coll Cardiol* 9:196A, 1987.
29. Nichols A.B., Berke A.D., Smith R.J., Schlofmitz R.A. and Powers E.R.: Selection of optimal balloon size for coronary angioplasty by cinevideodensitometric measurements. *J Am Coll Cardiol* 11:130A, 1988.

ERIC R. POWERS, M.D.

Abstracts

30. Nichols A.B., Rose E., Smith C.R., Smith R.J., Drusin R., Reison D.J. and Powers E.R.: Cinevideodensitometric quantification of coronary artery disease following cardiac transplantation. *J Am Coll Cardiol* 11:150A, 1988.
31. Berke A.D., Antunes M.L., Johnson L.L., Seldin D.W., Tregallo M.E., Escala E.L. and Powers E.R.: Long-term follow-up and changes in ventricular performance following aortic balloon valvuloplasty. *Clin Res*, 1988.
32. Miller K.P., Berke A.D., Sciacca R.R., Tregallo M.E. and Powers E.R.: Initial results of aortic valvuloplasty do not predict late recurrent symptoms. *Circulation* 78(II):533, 19834.
33. Powers E.R., for the NHLBI Valvuloplasty Registry. Early results of aortic valvuloplasty from the NHLBI Balloon Valvuloplasty Registry. *Circulation* 78(I):594, 1988.
34. Powers, E.R., for the NHLBI Valvuloplasty Registry. Early results of aortic valvuloplasty from the NHLBI Balloon Valvuloplasty Registry. *Circulation* 78(I):594, 1988.
35. Petrossian G.A., Hernadi S., Nichols A.B., Reed E. and Powers E.R.: Increased mortality and coronary artery disease in cardiac transplant recipients with lymphocytotoxic anti-HLA antibodies. *Circulation* 78(II):251, 1988.
36. Apfelbaum M.A., Horn E.M., Chaekal W., Morrow B., Fishsman G., Powers E.R., Bilezikian J.P.: Loss of concordance between lymphocyte and myocardial beta-adrenergic receptor complex following cardiac transportation. *Circulation* 78(II):163, 1988.
37. Gasperetti C.M., Feldman M.D., Burwell L.R., Angello D.A., Haugh K.H., Owen R.M., Powers E.R.: Nonionic contrast martial is associated with thrombus formation during PTCA. *Circulation* 80(II):375, 1989.
38. Sabia P., Powers E., Sarembock I, Kaul S.: Myocardial contrast echocardiography can be used to assess collateral flow in humans. *Circulation* 82(II):III-27, 1990.
39. Brinker J.A., Powers E.R., Slater J., Mickel M., Davis K.: From the NHLBI Valvuloplasty Registry. Influence of procedure variables on the acute

ERIC R. POWERS, M.D.

Abstracts

- hemodynamic results of balloon aortic valvuloplasty: A report of the NHLBI Valvuloplasty Registry. *Circulation* 82(III):III-78, 1990.
40. Gimple L.W., Owen R.M., Lodge V.P., Powers E.R., Sarembock I.J.: Reduction in angioplasty restenosis in rabbits by chronic subcutaneous heparin with or without intramural heparin delivery. *Circulation* 82(III):III-338, 1990.
 41. Sarembock I.J., Gertz S.D., Gimple L.W., Powers E.R., Roberts W.C.: Angiographic and pathologic study of the effect of re-combinant desuphathirudin on restenosis following balloon angioplasty in rabbits. *Circulation* 82(III):III-339, 1990.
 42. Sabia P., Powers E.R., Beller G.A., Kaul S.: Thallium imaging can be used to assess the presence of viable myocardium in patients with acute myocardial infarction. *Circulation* 82(III):III-542, 1990.
 43. Sabia P., Kaul S., Ragosta M., Tedesco C.L., Burwell L.R., Powers E.R.: How long after acute Infarction does the myocardium remain viable in humans? *J Am Coll Cardiol* 17:45A, 1991.
 44. Haber H.L., Powers E.R., Simek C.L., Pollock S.G., Sadun A., Owen R., Sarembock I.J., Feldman M.D.: The use of bolus intravenous nitroglycerin to alter load as a beat-by-beat basis to generate left ventricular pressure-volume relationships in patients with congestive heart failure. *J Am Coll Cardiol* 17:84A, 1991.
 45. Sabia P., Powers E.R., Ragosta M., Kaul S.: Myocardial contrast echocardiography can be used to determine viability after acute myocardial infarction in humans. *J Am Coll Cardiol* 17:349A, 1991.
 46. Ragosta M., Powers E.R., Sabia P.J., Sarembock I.J., Burwell L.R., Kaul S.: Importance of collateral-derived blood flow on myocardial viability in patients with recent myocardial infarction. *Circulation* 84(II):15, 1991.¹
 47. Ragosta M., Sabia P.J., Sarembock I.J., DiMarco J.P., Powers E.R.: The signal-averaged electrocardiogram does not change after late reperfusion following myocardial infarction. *Circulation* 84(II):II-237, 1991.

¹ Finalist. Samuel E. Levine Young Clinical Investigator Award American Heart Association.

Abstracts

48. Haber H.L., Gimple L.W., Goldstein C., Owen R.M., Ragosta M., Powers E.R., Sarembock I.J.: The effect of Terbinafine on restenosis following balloon angioplasty in rabbits. *Circulation* 84(II):II-332, 1991.
49. Haber H.L., Simek C.L., Bergin J.D., Sarembock I.J., Owen R.M., Sadun A., Powers E.R., Feldman M.D.: The beta-adrenergic system supports systolic function but not diastolic compliance in congestive heart failure. *Circulation* 84(II):II-469, 1991.
50. Haber H.L., Simek C.L., Bergin J.D., Sadun A., Owen R.M., Powers E.R., Feldman M.D.: Nitroglycerin predominantly reduces afterload in patients with excessive arterial elastance. *Circulation* 84(II):II-564, 1991.
51. Gasperetti C.M., Gonias S.L., Gimple L.W., Feldman M.D., Angello D.A., Burwell L.R., Sarembock I.J., Craddock G.B., Powers E.R.: During PTCA, platelets show increased responsiveness to serotonin. *Circulation* 84(II):II-728, 1991.
52. Ragosta M., Gimple L.W., Haber H.L., Dunwiddie C.T., Vlasick G.P., Powers E.R., Sarembock I.J.: Effectiveness of specific factor Xa inhibition on restenosis following balloon angioplasty in rabbits. *J Am Coll Cardiol* 19:164A, 1992.
53. Gimple L.W., Gertz S.D., Haber H.L., Powers E.R., Roberts W.C., Sarembock I.J.: Effect of "in situ" heparin delivery by a perous balloon catheter in restenosis following balloon angioplasty. *J Am Coll Cardiol* 19:169A, 1992.
54. Gasperetti C.M., Gonias S.L., Gimple L.W., Powers E.R.: Contrast effects on platelet aggregation during PTCA. *J Am Coll Cardiol* 19:383A, 1992.
55. Haber H.L., Gimple L.W., Simek C.L., Bergin J.D., Subbiah K., Jayaweera A.R., Powers E.R., Feldman M.D.: Why do patients with congestive heart failure tolerate the initiation of beta blocker therapy? *Circulation* 86(I):I-17, 1992.²
56. Feldman A.M., Bristow M.R., Parmley W.W., Larson P.E., Pepine C.J., Gilbert E.M., Strobeck J.E., Hendrix G.H., Powers E.R., Bain R.P., White B.G.: Results of a multi-center study of OPC-8212 in chronic congestive heart failure. *Circulation* 86(I):I-374, 1992.

² Winner. Samuel E. Levine Young Clinical Investigator Award. American Heart Association

ERIC R. POWERS, M.D.

Abstracts

57. Haber H.L., Powers E.R., Subbiah K., Jayaweera A.R., Gimple L.W., Feldman M.D.: Effect of intracoronary enalaprilat on diastolic function in patients with hypertension. *Circulation* 86(1):1-379, 1992.
58. Sabia P.J., Powers E.R., Ragosta M., Watson D.D., Kaul S.: Role of quantitative planar thallium-201 imaging for predicting viability in patients with acute myocardial infarction. *Circulation* 86(1):1-418, 1992.
59. Gasperetti C.M., Powers E.R.: Effect of heparin and contrast media on platelet aggregation in patients with rest angina. *Circulation* 86(1):1-446, 1992.
60. McLaughlin D.P., Nath S., Powers E.R., Cummerford P.J., Sarembock I.J.: Hemodynamic and echo profiles at rest and peak exercise before and after aortic valve replacement for chronic aortic regurgitation. *J Am Coll Cardiol* 21:63A, 1993.
61. Ragosta M, Gertz S.D., Haber H.L., Gimple L.W., Powers E.R., DeFrancisco J., Roberts W.C., Sarembock I.J: Combined laser plus balloon angioplasty increases restenosis versus balloon angioplasty alone in rabbits. *J Am Coll Cardiol* 21:386A, 1993.
62. Haber H.L., Powers E.R., Wu C.C., Gimple L.W., Feldman M.D.: Intracoronary enalaprilat improves active relaxation in patients with hypertensive left ventricular hypertrophy. *Circulation* 88(1):1-118, 1993.
63. Ismail S., Jayaweera A.R., Camarano G., Gimple L.W., Powers E.R., Kaul S.: Albunex microbubbles mimic red blood cell transit through the human myocardium. *Circulation* 88(1):1-163, 1993.
64. Desmarais R.L., Ayers C.R., Gimple L.W., Sarembock I.J., Powers E.R.: Serum lipoprotein(a) levels as a risk factor for restenosis after coronary angioplasty. *Circulation* 88(1):1-272, 1993.
65. Feldman A.M., Pepine C.J., Bristow M.R., Hendrix G.H., Powers E.R., Bertolet B. Baughman K.L., Young N., Cowart D., White B.G. for the Vesnarinone investigators. Incidence of vesnarinone I induced neutropenia: The U.S. experience. *Circulation* 88(1):1-301, 1993.
66. Feldman M.D., Haber H.L., Wu C.C., Tedesco C.L., Carnivale M., Pak P.H.,

ERIC R. POWERS, M.D.

Abstracts

- Feldman A.M., Bergin J.D., Cowart T.D., Powers E.R., Kass D.A.: Clinical determination of myocardial vs load effects of OPC-18790, a novel intravenous agent for the treatment of patients with congestive heart failure. *Circulation* 88(1):1-301, 1993.
67. McCoy K., Gimple L.W., Gertz S.D., Powers E.R., Maraganore J.M., Sarembock I.J.: Effectiveness of hirulog in reducing restenosis after balloon angioplasty of atherosclerotic femoral arteries in rabbits. *Circulation* 88(1):1-338, 1993.
68. Ragosta M., Camarano G., Kaul S., Powers E.R., Sarembock I.J., Gimple L.W.: Myocardial viability can be determined at the time of coronary angiography in patients with recent infarction using myocardial contrast echocardiography. *Circulation* 88(1):1-490, 1993.
69. Wu C.C., Haber H.L., Powers E.R., Anne A., Skalak T.C., Feldman M.D.: Effective arterial elastance measurement in patients with congestive heart failure and hypertension: can we ignore effective downstream pressure? *Circulation* 88(1):1-499, 1993. Ragosta M., Camarano G.P., Kaul S., Powers E.R., Gimple L.W.: Microvascular patency indicates myocellular inability in patients with recent infarction: a study utilizing myocardial contrast echocardiography. *J Am Coll Cardiol* 2A, 1994.³
70. Camarano G., Ragosta M., Gimple L.W., Powers E.R., Kaul S.: Identification of viable myocardium with contrast echo in patients with myocardial infarction and poor left ventricular function. *J Am Coll Cardiol* 450A, 1994.
71. Anderson H.V., Williams D.O., Powers E.R., Cannon C.P., Stone P., Sharaf B., Thompson B, Schactman M., Willerson J.T., for the TIMI-III Investigators. Coronary thrombus seen on early angiography in unstable angina/non Q-wave MI: TIMI-III results. Presented at AHA, Dallas, Texas Convention November 1994.
72. Brezinski D.A., Powers E.R., Humphries J.E., Sanders J.M., Sarembock I.J., Gimple L.W.: Markers of thrombin generation, but not platelet activation, are elevated in the femoral sheath following percutaneous transluminal coronary angioplasty (PTCA). *Blood* 84:693a, 1994.
73. Brezinski D.A., Powers E.R., Humphries J.E., Sanders J.M., Sarembock I.J.,

³ Winner. Young Investigator Award, American College of Cardiology.

ERIC R. POWERS, M.D.

Abstracts

- Gimple L.W.: Markers of platelet activation, but not thrombin generation increase early after coronary interventions. *Blood* 84:696a, 1994.
74. Haber H.L., Wu C.C., Tedesco C.L., Johnson W.H., Cowart T.D., Fenster M.S., Powers E.R., Feldman M.D.: Effects of intracoronary OPC-18790 in patients with congestive heart failure. *Circulation* 90(2):I-112, 1994.
75. Barry W.L., Gertz S.D., Gimple L.W., McCoy K.W., Stouffer G.A., McNamara C.A., Powers E.R., Owens G.K., Sarembock I.J.: Thrombin-mediated plaque growth and macrophage accumulation occur early following balloon angioplasty in atherosclerotic rabbits. *Circulation* 90(2):I-239, 1994.
76. Anderson H.V., William D.O., Powers E.R., Cannon C.P., Stone P., Sharaf B., Thompson B., Schactman M., Willerson J.T., for the TIMI-III Investigators. Coronary thrombus seen on early angiography in unstable angina/non Q-wave MI: TIMI-III results. *Circulation* 90(2):I-664, 1995.
77. Thome L.M., Gertz S.D., Gimple L.W., McCoy K.W., Powers E.R., Maraganore J.M., Sarembock I.J.: Effectiveness of recombinant hirulog in reducing restenosis after balloon angioplasty in the atherosclerotic rabbit. *J Am Coll Cardiol* 50A, 1995.
78. Vernon S.M., Sarembock I.J., Ayers C.R., Powers E.R., Gimple L.W.: Lipoprotein(a) assayed from frozen insights into clinical effects. *J Am Coll Cardiol* 76A, 1995.
79. Gertz S.D., Barry W.L., Gimple L.W., Banai S., Perez L.S., McNamara C.A., Powers E.R., Ragosta M., Owens G.K., Sarembock I.J.: Immunohistochemical changes in the media predictive of luminal narrowing after angioplasty in atherosclerotic rabbits. *Circulation* 92(1):I-293, 1995.
80. Thome L.M., Gimple L.W., Ragosta M., Gertz S.D., McNamara C.A., Powers E.R., Sarembock I.J.: Early plus delayed hirudin infusion reduces restenosis in the atherosclerotic rabbit more than early administration alone. *Circulation* 92(1):I-382, 1995.
81. Vernon S.M., Camarano G., Kaul S., Gimple L.W., Powers E.R., Ragosta M.: Regional function distal to a chronically occluded coronary artery correlates with collaterals on myocardial contrast echocardiography and not with angiographic collaterals. *Circulation* 92(1):I-659, 1995.

ERIC R. POWERS, M.D.

Abstracts

82. Wiegman P.J., Barry W.L., Gimple L.W., Kim J, McNamara C.A., Powers E.R., Ragosta M., Sarembock I.J.: All-trans retinoic acid limits restenosis after balloon angioplasty in a rabbit model of focal femoral atherosclerosis. Restenosis Summit VIII, Cleveland, Ohio, May 16 & 17, 1996.
83. Wiegman P.J., Barry W.L., Gimple L.W., Kim J., McNamara C.A., Powers E.R., Ragosta M., Sanders J., Sarembock I.J.: Hirudin limits restenosis after balloon injury in a hypercholesterolemic rabbit. Restenosis Summit VIII, Cleveland, Ohio, May 16 & 17, 1996.
84. Barry W.L., Gertz S.D., Gimple L.W., Banai S., Perez L.S., Powers E.R., Owens G.K., Sarembock I.J.: Stenosis severity and foam cell accumulation are similar after balloon angioplasty of normal and atherosclerotic arteries in hypercholesterolemic rabbits. Restenosis Summit VIII, Cleveland, Ohio, May 16 & 17, J Am Coll Cardiol, 1996.
85. Wiegman P.J., Barry W.L., McNamara C.A., Gimple L.W., Kim J.J., Powers E.R., Ragosta M, Owens G.K., Sarembock I.J.: All-trans retinoic ACID limits restenosis in focally atherosclerotic rabbits. Circulation 94(1):1-4, 1996.
86. Buckley R.S., Jayaweere A.R., Kaul S., Gimple L.W., Powers E.R., Dent J.M.: Quantitation of mitral regurgitation on contrast echocardiography: Applications in patients undergoing catheterization. J Am Coll Cardiol 440A 1997.
87. Wiegman P.J., Barry W.L., McNamara C.A., Gimple L.W., Kim J., Powers E.R., Ragosta M., Owens G.K., Sarembock I.J.: All-trans retinoic ACID limits restenosis in focally atherosclerotic rabbits. IX International Vascular Biology Meeting. J Vas Res 33(Suppl):107, 1996.
88. Din S., Wiegman P., Kim J., Sanders J., McNamara C., Ragosta M., Gimple L., Powers E.R., Ley K., Sarembock I.J.: Pattern of cellular adhesion molecule expression following cholesterol feeding and endothelial injury in Apo-E knockout in mice. Research Day, Department of Medicine, 1997.
89. Wiegman P., Din S., Kim J. Sanders J., McNamara C., Ragosta M., Gimple L.W., Powers E.R., Hammarskjold M-L, Sarembock I.J.: Local delivery of Hirudin via adenoviral mediated gene transfer: Effect on restenosis in the hypercholesterolemia rabbit. Annual Research Day, Department of Medicine, 1997.

ERIC R. POWERS, M.D.

Abstracts

90. Din S., Wiegman P., Kim J., McNamara C., Ragosta M., Gimple L.W., Powers E.R., Ley K., Sarembock I.J.: Pattern of cellular adhesion molecule expression following cholesterol feeding and endothelial injury in Apo-E knockout mice. Restenosis Summit IX, May 15-16, Cleveland, Ohio, 1997.
91. Wiegman P., Din S., Kim J., Sanders J., McNamara C., Ragosta M., Gimple L., Powers E., Hammarskjold M-L, Sarembock I.J.: Local delivery of hirudin via adenoviral mediated gene transfer: Effect on restenosis in the hypercholesterolemic rabbit. Restenosis Summit IX May 15-16, Cleveland, Ohio, 1997.
92. Vernon S.M., Wei K., Gimple L.W., Kaul S., Sarembock I.J., Powers E.R., Ragosta M.: Perfusion and timing of collateral recruitment during angioplasty using contrast echocardiography. *Circulation* 96:1-273, 1997.
93. Bishop, G., Wiegman, P., Din, S., Sanders, J., Feldman, M., Kim, J., Manka, D., McPherson, J., McNamara, C., Hammarskjold, M-L., Owens, G.K., Humphries, J., Gimple, L.W., Ragosta, M., Powers, E.R., Owens, G., Sarembock, I.J.: Limitations of local gene delivery for attenuation of restenosis: Lessons learned from a rabbit arterial injury model using the adenovirus hirudin construct. Presented Dept. of Medicine Research Day, April 13, 1998.
94. Manka, D., Wiegman, P., Din, S., Sanders, J., Gimple, L.W., Ragosta, M., Powers, E.R., Ley, K, Sarembock, I.J.: Expression of cellular adhesion molecules in a model of arterial injury in apolipoprotein-E-deficient mice. Presented Dept of Medicine Research Day, April 13, 1998.
95. McPherson, A., Robinson, P.S., Powers, E.R., Sarembock, I.J., Gimple, L.W., Ragosta, M.: Restenosis in patients undergoing angiography within 30 days of PTCA is associated with complex lesion morphology and is rare in patients with coronary stents. *Cath Cardiovasc Diag.* May 1998.
96. Bishop, G.G., Wiegman, P., Din, S., Sanders, J., Feldman, M., McNamara, C., Hammarskjold, M-L., Owens, G.K., Humphries, J., Gimple, L., Ragosta, M., Powers, E., Dichek, D.A., Sarembock, I.J.: Locally delivered adenovirus stimulates neointimal formation and negates the potential benefit of adenovirus hirudin construct in a rabbit arterial injury model. Astra Merck Cardiovascular Young Investigators Forum, Lake Tahoe, CA, August 20-23, 1998.

ERIC R. POWERS, M.D.

Abstracts

97. McPherson, J.A., Bishop, G.G., Sanders J.M., Hesselbacher, S.A., Gimple, L.W., Powers, E.R., MacDonald, T.L., Sullivan, G., Linden, J., Sarembock, I.J.: Prolonged adenosine A_{2A} receptor stimulation reduces inflammation and neointima formation in a murine carotid ligation model. *Circulation* 100;I-692A;1999.
98. Bishop, G.G., McPherson, J.A., Sanders, J.M., Hesselbacher, S.E., Feldman, M.J., Gimple, L.W., Powers, E.R., Mousa, S.A., Sarembock, I.J.: Vitronectin receptor blockade reduces restenosis and intramural macrophage infiltration following balloon angioplasty of the atherosclerotic rabbit femoral artery. *Circulation* 100;1-450;2368, 1999.
99. Bishop, G.G., Wiegman, P.J., McNamara, C.A., Din, S.U., Sanders, J., Feldman, M.J., McPherson, J.A., Humphries, J.E., Hammarskjold, M-L., Gimple, L.W., Ragosta, M., Powers, E.R., Dichek, D.A., Owens, G.K., Sarembock, I.J: Locally delivered adenovirus stimulates neointimal formation and negates the potential benefit of adenovirus hirudin construct in rabbit arterial injury model. American College of Cardiology 47th Scientific Session, March 7-10, New Orleans, LA, 1999.
100. Bishop, G.G., McPherson, J.A., Sanders, J., Feldman, M.J., Gimple, L.W., Ragosta, M., Powers, E.R., Mousa, S.A., Sarembock, I.J.: avB3 receptor blockade reduces restenosis following balloon angioplasty in the atherosclerotic rabbit. American College of Cardiology 47th Scientific Session, March 7 – 10, New Orleans, LA, 1999.
101. Bishop, G.G., McPherson, J.A., Sanders, J., Feldman, M.J., Gimple, L.W., Ragosta, M., Powers, E.R., Mousa, S.A., Sarembock, I.J.: avB3 receptor blockade reduces restenosis following balloon angioplasty in the atherosclerotic rabbit. Oral Presentation, Medicine Research Day, April 12th, 1999.
102. Bishop, G.G., Wiegman, P., McNamara, C., Din, S., Sanders, J., Feldman, M., McPherson, J.A., Humphries, J.E., Hammarskjold, M-L., Gimple, L.W., Ragosta, M., Powers, E.R., Dichek, D.A., Owens, G.K., Sarembock, I.J.; Locally delivered adenovirus stimulates neointimal formation and negates the potential benefit of adenovirus hirudin construct in a rabbit arterial injury model. Poster presentation, Experimental Biology 1990, April 17 – 21, Washington, D.C., *Faseb J* 13:A367, 1999.
103. Webb, L.A., Powers E.R., Sarembock, I.J., Gimple, L.W., Burwell, L.R., Ragosta,

ERIC R. POWERS, M.D.

Abstracts

- M.: Risks of early and long-term events following coronary stenting are not predicted by traditional lesion classifications. *J Am Coll Cardiol* 35:30A, 2000.
104. Bishop, G.G., McPherson, J.A., Sanders, J., Heaselbacker, S., Felman, M.J., Gimple, L.W., Powers, E.R., Mousa, S.A., Sarembock, I.J.: α vB3 integrin receptor blockade reduces restenosis and macrophage infiltration with a reduction in cellular adhesion molecule expression following balloon angioplasty in the atherosclerotic rabbit. *J Am Coll Cardiol* 35:71A, 2000.
105. Whitlow, P.L., Cleveland Clin Fdn, Cleveland, OH; L'Allier, P. L., Montreal Heart Inst; Demaio S. J., Perin E.C., Texas Heart Inst, Dallas, TX, Lasdala, J.M., Washington Univ; Schneider, J., McKeever, L., Ezratty, A., Knopf, W., Atlanta Cardiology Group; Powers, E., Shawl, F.A.: Severity of angina predicts response to percutaneous transmyocardial revascularization. *Circulation* 102:II-735, 2000.
106. Bishop, G.G., McPherson, J.A., Sanders, J.M., Hesselbacher, S.E., Gimple, L.W., Powers, E.R., Sullivan, G., Linden, J.M., Sarembock, I.J.: Selective adenosine A_{2A} agonist reduces inflammation early after balloon angioplasty in the cholesterol fed rabbit. *Circulation* 102:II-329, 2000.
107. Ragosta, M., Isaacs, R.B., Sarembock, I. J., Gimple, L.W., Samady, H., Powers, E.R.: Abnormal coronary flow reserve in diabetes in normal coronaries is associated with hypertension and microangiopathy in other organs. *Circulation* 102:II-2318, 2000.
108. McClintock, D., Miller, J.R., Thompson, N., Mathews, F., Isaacs, R.B., Ragosta, M., Powers, E.R.: Rapid progression of coronary artery disease in patients with end stage renal disease awaiting renal transplantation. *Circulation* 102:II-611, 2000.
109. Fearon, W.F., Takagi, A., Luna, Gorge, Stanford Univ., Stanford, CA; Samady, H., Powers, E.R., U. Va., Charlottesville, Va., Feldman T., Univ. of Chicago Hosp. Chicago, Ill., Cleman, M.W., Yale Univ., New Haven, CT., Chou, T.M., Univ. of CA, San Francisco, CA., Cohen, D.J., Beth Israel Deaconess Med Ctr., Brookline, MA.; Dib, N. Arizona Heart Inst., Phoenix, AZ., Yeung, A.C., Stanford Univ., Stanford, CA., Kern, M.J., St. Louis Univ. Health Science Ctr., St. Louis, MO.: A comparison between the use of fractional flow reserve and intravascular ultrasound for determining optimal stent deployment (Fusion Study). *Circulation* 102:II-635, 2000.
110. Le, E., Powers, E.R., Leong-Poi, H., Rim S., Pelberg, R.A., Kaul, S.:

ERIC R. POWERS, M.D.

Abstracts

- Transmyocardial revascularization ameliorates ischemia by cardiac denervation and not by angiogenesis: New insights using contrast echocardiography. *Circulation* 102:II-659, 2000.
111. Samady, H., Choi, C.J., Ragosta, M., Unger, S., Goode, A.R., Hunter, J., Gimple, L., Powers, E., Sarembock, I., Beller, G., Kramer, C., Watson, D.: Electromechanical mapping can predict recovery of regional ventricular function in patients with ischemic cardiomyopathy undergoing revascularization. *Circulation* 104:II-719, 2001.
112. Balcells E , Lindner JR, Wei K, Ragosta M, Sarembock I, Gimple L, Burwell L, Samady H, Powers, E: Detection of Myocardial Viability After Primary Percutaneous Intervention with Intravenous Myocardial Contrast Echocardiography. *Circulation* 2001;104:II-410
113. Phillips JW, Barringhaus KG, Sanders JM, Czarnik AC, Chen M, Yang Z, Powers ER, Nadler J, Sarembock IJ. Rosiglitazone prevents the development of hyperglycemia and hyperinsulinemia and significantly reduces neointimal formation following carotid wire injury in ApoE (-/-) mice fed a western diet. *Circulation* 2001;104:II-117
114. Samady H, Choi J, Ragosta M, Unger S, Good AR, Hunter J, Gimple LW, Powers ER, Sarembock IJ, Beller GA, Kramer C, Watson D. Electromechanical mapping predicts improvement of regional ventricular function in patients with ischemic cardiomyopathy undergoing revascularization. *Circulation* 2001;104:3179, 2001.
117. Exaire JE, Dauerman HL, Moliterno DJ, Blankenship JC, Hsu A., Raymond RE, Powers ER, Cohen EA, Topol EJ, The Cleveland Clinic Foundation, Cleveland, Ohio. Triple antiplatelet therapy does not increase femoral access bleeding with vascular closure devices: results from Target. *J Am Coll Cardiol* 41:1051-196, 2003.
118. Sadenghi HM, Grines CI, Moliterno DJ, White J, Herrmann H, Powers, Cohen DJ, Bertrand ME, Neumann FJ, DiBattiste PM, Stone W, Topol EJ. William Beaumont Hospital, Royal Oak, MI, The Cleveland Clinic Foundation, Cleveland, Ohio. Timing and risk factors for enzymatic myocardial-infarctions in patients undergoing percutaneous intervention: insights from Target. *J Am Coll Cardiol*

ERIC R. POWERS, M.D.

Abstracts

41:1076-187, 2003.

119. McClish JC, Ragosta M, Powers ER, Bishop GA, Fischer J, Barringhaus KG, Garnett J, Gimple LW, Sarembock IJ, Samady H. Recent myocardial infarction does not limit the utility of fractional flow reserve for the physiologic assessment of lesion severity. *J Am Coll Cardiol* 41:61A, 2003.
120. Barringhaus KG, Bishop GG, Ragosta M, Watson DD, Garnett J, Gimple LW, Sarembock IJ, Beller GA, Powers ER, Samady H. Fractional flow reserve of the infarct-related artery early after myocardial infarction identifies reversibility on dipyridamole sestamibi single-photon emission computed tomography perfusion imaging.. *J Am Coll Card* 41:62A, 2003.
121. Phillips JW, Samady H, Synder L, Christensen RH, Gibson J, Bruns DE, Sayre S, Gimple LW, Ragosta R, Powers ER, Sarembock IJ. Recent myocardial infarction does not limit the utility of fractional flow reserve for the physiologic assessment of lesion severity. *J Am Coll of Card* 41:61 A, 2003.
122. Fischer JJ, Samady H, Powers ER, Gimple LW, Sarambock IJ, Ragosta M. Progression of coronary stenosis severity leads to target vessel revascularization in patients with fractional flow reserve greater than 0.75 in whom percutaneous coronary intervention is initially deferred. *Cath Cardiovasc Intervent* 59:(A-17)97, 2003.
123. Barringhaus KG, Ragosta M, Powers ER, Watson DD, Gimple LW, Sarembock IJ, Bishop G, Phillips JW, Garnett J, Samady H: Myocardial segments subtended by hemodynamically significant stenoses demonstrate recovery of function independent of reversibility or viability on perfusion imaging in patients undergoing early post-infarction revascularization. *Cath Cardiovasc Intervent* 59:(A-19) 98, 2003.
124. Chhatriwalla AK, Barringhaus KG, Ragosta M, Powers ER, McClish C, Fischer JJ, Bishop AH, Gimple LW, Sarembock IJ, Choi CJ, Kramer CM, Samady H. High left ventricular mass does not limit the utility of fractional reserve for the physiologic assessment of lesion severity. *J Am Coll Cardiol* 43:76A, 2004.
125. Stone GW, et al, Outcomes of the polymer-based, paclitaxel-eluting Taxus stent in complex lesions: first report from the Taxus-V pivotal randomized trial. *Circulation* 110 (III):527, 2004.

ERIC R. POWERS, M.D.

Abstracts

126. Micari A, Belcik T, Balcells E, Kaul S, Wei K, Powers ER, Lindner JR> intravenous adenosine improves microvascular reflow assessed by contrast echocardiography in patients with acute myocardial infarction. *Circulation* 110 (III): 527, 2004.
127. Stone GW, et al. Outcomes of the polymer-based, paclitaxel-eluting Taxus stent in complex lesions: First report from the TAXUS-V pivotal randomization trial. *Circulation* 110 (III): 718, 2004.
128. Micari A, Belcik T, Balcells E, Kaul S, Wei K, Powers ER, Lindner JR. Intravenous adenosine improves microvascular reflow assessed by contrast echocardiography in patients with acute myocardial infarction. *Circulation* 110 (III), 718, 2004.
129. Powers E., et al. Impact of glycemic control on outcomes after paclitaxel-stent implantation: Results from the TAXUS V study. TCT, 2005.
130. Ellis SG, et al. Twelve month clinical outcomes of paclitaxel-eluting stents in complex lesions (TAXUS V): Focus on late clinical benefits and stent thrombosis risk. *Circulation* 12(II): 650, 2005.