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## CURRICULUM VITAE

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Citizenship: United States

Place of Birth: Thanjavur, Tamilnadu, India

Present Position: Professor of Medicine, Chief of Cardiology  
VA Medical Center, Director, Cardiac Catherization  
Laboratory VA Medical Center

Education: 1965-67 M.D., University of Delhi  
New Delhi, India

1957-62 M.B.B.S., Jawaharal Institute of Post-  
graduate Medical Education  
and Research, Pondicherry,  
India

1955-57 BSc., Loyola College, Madras, India

Experience:	1/90 to present	Professor of Medicine, Chief of Cardiology, VA Medical Center Associate Chief, Division of Cardiology, Department of Medicine, University of Tennessee Director, Cardiac Catheterization Laboratory, VA Medical Center
	7/85-12/89	Director, Cardiac Catheterization Laboratories, University of TN. and VA Medical Centers, Memphis, TN
	7/82-6/85	Director, Cardiac Catheterization Laboratory, University of Tennessee Medical Center, Memphis, TN
	7/80-6/82	Co-Director CVICU, Co-Director Cardiac Catheterization Laboratory, University of Tennessee Medical Center, Memphis, TN
	7/79-6/80	Co-Director Cardiovascular Intensive Care Unit, University of Tennessee Medical Center, Memphis, TN
	1/77-6/79	Director, Intensive Care Unit, Presby- terian University of Pennsylvania Medical Center, Philadelphia, PA
	7/75-1/77	Cardiology Research Fellow, Presbyterian University of Pennsylvania Medical Center, Philadelphia, Pa.
	5/73-6/75	Registrar in Cardiology, The General Infirmary, Leeds, England
	1/72-4/73	Registrar in Cardiology, Newcastle Regional Cardiac Center, Shotley Bridge General Hospital, Consett, England
	5/71-1/72	Senior House Officer in Cardiology, Killingbeck Hospital, Leeds, England

2/71-4/71	Locum Medical Registrar in General Medicine, Shrodells Hospital, Watford, England
1/70-1/71	Senior House Officer in General Medicine, Friarage Hospital, Northallerton, United Kingdom
12/68-1/70	Senior House Officer in Chest and General Medicine, Poole Hospital, Middlesborough, United Kingdom
11/65-8/68	Registrar in General Medicine, Sefdarjang Hospital, New Delhi, India
1964-65	Senior House Officer in Medicine, Medical College Hospital, Pondicherry, India
1963-64	Compulsory Rotatory Houseman in Medicine, Surgery and Midwifery, Medical College Hospital, Pondicherry, India

## Qualifications:

Degree or Diploma	University or College	Country	Date
B.S.	Madras	India	June, 1957
M.B.B.S.	Madras	India	April, 1964
M.D.	New Delhi	India	August, 1967
M.R.C.P.	Royal College of Physicians	England	January, 1971

Board Certified in Internal Medicine, June, 1977, #53571

Board Certified in Cardiovascular Disease, June, 1979, #53571

Board Certified in Interventional Cardiology, November, 1999, #53571

Licensure: India, England, Pennsylvania, Tennessee, Washington, California

## Awards and Honors:

Distinction in Anatomy

Medallist in Pathology

Merit Scholarship during undergraduate medical studies  
 Outstanding Teaching Award, Presby. University of PA., 1978  
 American Heart Association, Research Fellowship Award,  
 Southeastern Pennsylvania Chapter, July 1976-77  
 American Heart Association, Tennessee Affiliate, Grant Award,  
 7/1/80-7/1/81  
 American Heart Association, TN. Affiliate, Memphis Chapter,  
 Grant Award, 7/1/81-7/1/82  
 American Heart Association, TN. Affiliate, Memphis Chapter,  
 Grant Award, 7/1/85-6/30/86

#### Medical Societies:

Royal College of Physicians, United Kingdom	Member	1971 to present
American Heart Association, Tennessee Affiliate Memphis, TN., Chapter	Member	1979 to present
Memphis & Shelby County Medical Society Memphis, TN	Member	6/80 to present
American College of Physicians	Fellow	1980 to present
American Heart Association, Council on Clinical Cardiology	Fellow	1980 to present
American College of Chest Physicians	Fellow	1981 to present
Society of Critical Care Medicine	Member	1982-92
Southern Society for Clinical Investigation	Member	1994 to present

#### Faculty Affiliate:

University of Tennessee, Memphis Memphis, TN	Associate Chief, Division of Cardiology Active Staff	1989 to Present
St. Joseph Hospital Memphis, TN 38105	Courtesy Staff	1982 to Present

St. Francis Hospital Memphis, TN 38117	Courtesy Staff	1981 to Present
Baptist Memorial Hospital Memphis, TN 38146	Courtesy Staff	2/80 to Present
Regional Medical Center Memphis, TN 38103	Active Staff	2/80 to Present
Veterans Administration Hospital Memphis, TN	Active Staff	2/80 to Present
University of Tennessee, Memphis Memphis, TN.	Director, Cardiac Catheterization Laboratory, Co-Director Cardiovascular Intensive Care Unit	1979 to 1989
University of Pennsylvania Medical Center Philadelphia, PA	Director, Intensive Care Unit	1/77 to 6/79

## Academic Appointment:

University of Tennessee Memphis, TN	Professor of Medicine	7/86 to present
University of Tennessee Memphis, TN	Associate Professor of Medicine	7/79 to 6/86
University of Pennsylvania Philadelphia, PA	Assistant Professor of Medicine	1/77 to 6/79

## Community Activities:

Trustee -	India Association of Memphis - 1985 - 87
Board Member -	American Heart Association, Memphis Chapter and Tennessee Affiliate - 1986 to date.

Treasurer -	Memphis Cardiovascular Society - 1987 - 88
Secretary -	Memphis Cardiovascular Society - 1988 - 89
Vice-President -	Memphis Cardiovascular Society - 1989 - 90
President -	Memphis Cardiovascular Society - 1990 - 91

**PUBLICATIONS**JOURNALS:

1. Ramanathan KB, Davidson C: Cardiac arrhythmia and impiramine therapy. *British Medical Journal* 22:661-662, 1975.
2. Ramanathan KB, Bodenheimer MM, Banks VS, Raina S, Helfant RH: Contrasting effects of dopamine and isoproterenol in experimental myocardial infarction. *American Journal of Cardiology* 39:413-417, 1977.
3. Ramanathan KB, Bodenheimer MM, Banks VS, Raina S, Helfant RH: Contrasting effects of nitroprusside and phentolamine in experimental myocardial infarction. *American Journal of Cardiology* 39:994-999, 1977.
4. Ramanathan KB, Bodenheimer MM, Banks VS, Helfant RH: Electrophysiologic effects of partial coronary occlusion and reperfusion. *American Journal of Cardiology* 40:50-54, 1977.
5. Walker BR, Shah RS, Ramanathan KB, Vanov SK, Helfant RH: Guanabenz and methyldopa on hypertension and cardiac performance. *Clinical Pharmacology and Therapeutics* 22:868-874, 1977.
6. Ramanathan KB, Raina S, Banks VS, Bodenheimer MM, Helfant RH: Effects of reperfusion on the regional contraction of ischemic and nonischemic myocardium following partial coronary obstruction. *Circulation* 57:47-52, 1978.
7. Banka VS, Bodenheimer MM, Ramanathan KB, Herman GA, Helfant RH: Progressive transmural electrographic, myocardial potassium ion/sodium ion/ratio and ultra structural changes as a function of time after acute coronary occlusion. *American Journal of Cardiology* 42:429-443, 1978.
8. Raina S, Banka VS, Ramanathan KB, Bodenheimer MM, Helfant RH: Beneficial effects of propranolol and digitalis on contraction and ST segment elevation after acute coronary occlusion. *American Journal of Cardiology* 42:226-233, 1978.
9. Ramanathan KB, Bodenheimer MM, Banka VS, Helfant RH: Severity of contraction abnormalities following acute myocardial infarction in man - response to nitroglycerin. *Circulation* 60:1230-1237, 1979.

10. Ramanathan KB, Bodenheimer MM, Banka VS, Helfant RH: Natural history of contractile abnormalities after acute myocardial infarction in man: Severity and response to nitroglycerin as a function of time. *Circulation* 63:731-738, 1981.
11. Bodenheimer MM, Ramanathan KB, Banka VS, Helfant RH: Effect of progressive pressure reduction with nitroprusside on acute myocardial infarction in humans. *Annals of Internal Medicine* 94:435-439, 1981.
12. Ramanathan KB, Yamazaki H, Bodenheimer MM, Banka VS, Helfant RH: Regional coronary flow and contraction after partial coronary obstruction. Comparative effects of nitroglycerin and nitroprusside. *Chest* 80:481-486, 1981.
13. Ramanathan KB, Mann J: Myocardial infarction of nonatheromatous origin. *Journal of Tennessee Medical Association* 75:39-45, 1982.
14. Ramanathan KB: Use of radionuclide angiography in the noninvasive evaluation of ventricular function. *Indian Pediatrics* 19:67-77, 1982.
15. Sullivan JM, Ramanathan KB: Cardiac disease in pregnancy. In: *Medical and Surgical Problems in Obstetrics*, M. Brudenell and P. Wilds, Eds., John Wright and Sons, Ltd., London, pp 11-28, 1984.
16. Frederick RC, Ramanathan KB: Peripartum cardiomyopathy. *Journal Tennessee Medical Association* 77:29-33, 1984.
17. Haste CE, Erwin SW, Ramanathan KB: Ergonovine-induced coronary spasm refractory to intracoronary nitroglycerin but responsive to nitroprusside. *American Heart Journal* 107:778-781, 1984.
18. Ramanathan KB, Knowles J, Connor MJ, Tribble R, Kroetz FM, Sullivan JM, Mirvis DM: Natural history of chronic mitral insufficiency: Relation of peak systolic pressure/end systolic pressure/end systolic volume ratio to morbidity and mortality. *Journal of American College of Cardiology* 3:1412-416, 1984.
19. Ramanathan KB, Erwin SW, Sullivan JM: Relationship of peak systolic pressure/end systolic volume ratio to standard ejection phase indices and ventricular function curves in coronary disease. *American Journal of the Medical Sciences* 288:162-164, 1984.

20. Mirvis DM, Ingram L, Holly MK, Wilson JL, Ramanathan KB: Electrocardiographic effects of experimental nontransmural myocardial infarction. *Circulation* 71:1206-1214, 1985.
21. Mirvis DM, Wilson JL, Ramanathan KB: Effects of experimental myocardial infarction on the S-T segment response to tachycardia. *Journal of the American College of Cardiology* 6:665-673, 1985.
22. Wilson JL, Netherland DE, Ingram LA, Ramanathan KB, Mirvis DM: Myocardial infarction following acute occlusion and reperfusion of the septal coronary artery. *Basic Research in Cardiology* 80:670-676, 1985.
23. Sullivan JM, Ramanathan KB: Management of medical problems in pregnancy. Severe cardiac disease. *New England Journal of Medicine*, 313:304-313, 1985.
24. Samaha JK, Connor MJ, Tribble R, Kroetz FW, Sullivan JM, Ramanathan KB, Mirvis DM: Natural history of left anterior descending coronary artery obstruction: Significance of location of stenosis in medically treated patients. *Clinical Cardiology* 8:415-422, 1985.
25. Mirvis DM, Ramanathan KB, Wilson JL: Regional blood flow correlates of S-T segment depression in tachycardia-induced myocardial ischemia. *Circulation* 73:365-373, 1986.
26. Mirvis DM, Ingram LA, Ramanathan KB, Wilson JL; R and S wave changes produced by experimental Nontransmural and transmural myocardial infarction. *Journal of the American College of Cardiology*, 8: 675-681, 1986.
27. Ramanathan KB, Vander Zwaag R, Lemp GF, Kroetz FW, Sullivan JM, Mirvis DM: Prognastic value of the pressure-volume ratio in patients with coronary artery disease. *American Journal of Medical Sciences*, 293:159-163, 1987.
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29. Mirvis DM, Ramanathan KB, Wilson JL: Alterations in transmural blood flow alterations and body surface ST segment abnormalities produced by ischemia in the circumflex and left anterior descending artery beds of the dog. *Circulation* 76:697-704, 1987.

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32. Ramanathan KB, Wilson JL, Mirvis DM: Effects of coronary occlusion on transmural distribution of blood flow in the interventricular septum and in the left ventricular free wall. *Basic Research in Cardiology*, 83:229-237, 1988.
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34. Vander Zwaag R, Lemp GF, Hughes JP, El-Zelay F, Maddock V, Kroetz FW, Ramanathan KB, Sullivan JM, Mirvis DM: The effect of cigarette smoking on the pattern of coronary atherosclerosis: A case-control study. *Chest* 94:290-294, 1988.
35. Lemp GF, Vander Zwaag R, Hughes JP, Maddock V, Kroetz F, Ramanathan KB, Mirvis DM, Sullivan JM: Association between the severity of diabetes mellitus and coronary arterial atherosclerosis. *American Journal of Cardiology* 60:1015-1019, 1988.
36. Sullivan JM, Vander Zwaag R, Lemp GF, Hughes JP, Maddock V, Kroetz FW, Ramanathan KB, Mirvis DM: Postmenopausal estrogen use and coronary atherosclerosis, *Annals of Internal Medicine* 108:358-363, 1988.
37. Bottroff MB, Hoon PF, Rodman JH, Gerlach P, Ramanathan KB: Pharmacokinetics and pharmacodynamics of intravenous urapidil in patients with critically elevated blood pressure. *Journal of Clinical Pharmacology* 28:420-26, 1988.
38. Wilson JL, Ramanathan KB, Ingram LA, Mirvis DM: Effects of residual stenosis on infarct size and ischemic and border zone transmural coronary blood flow following total or partial reperfusion. *American Heart Journal* 116: 1523-1529, 1988.

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52. Halle AA, Ramanathan KB, Sullivan JM. Ergonovine testing and forearm plethysmography in cocaine related myocardial ischemia. *American Journal of Cardiology*: 72:104-106, 1993.
53. Ramanathan KB, Wilson JL, Ingram LA, Mirvis DM. Effects of immature collaterals on myocardial blood flow and ischemic myocardium following acute coronary occlusion. *J Lab Clin Med* 1995;125:66-71.
54. Ramanathan KB, El-Zeky F, VanderZwaag R, Crenshaw J, Sullivan JM, Mirvis DM. Long-term survival of patients with coronary artery disease during the seventies: A Cohort Study. *Chest* 1995;107:20-27).
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56. McCully RB, ElZeky F, VanderZwaag R, Ramanathan KB, Sullivan JM. Impact of patency of the left anterior descending coronary artery on long-term survival. *Am J Cardiol* 1995;76:250-254.
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59. Sullivan JM, El-Zeky F, Vander-Zwaag R, Ramanathan KB. Effect on survival of estrogen replacement therapy after coronary artery bypass grafting. *J Am Coll Cardiol* 1997;79:847-850.
60. Wolford DC, Jost CMT, Madu EC, Walker W, Ramanathan KB. Role of transesophageal echocardiography in the clinical management of a patient with a giant coronary artery aneurysm. *Clin Cardiol* 1997;20:573- 575.
61. Philbin EF, Garg R, Danisa K, Denny DM, Gosselin G, Hassapoyannes C, Horney A, Johnstone DE, Lang RM, Ramanathan KB, Safford RE, Sarma RJ, Weiss R, Williford WO, Fleg JL, for the Digitalis Investigation Group. The relationship between cardiothoracic ratio and left ventricular ejection fraction in congestive heart failure. *Arch Intern Med* 1998;158:501-506.
62. Ramanathan KB, Folland ED, Fortin T, Hartigan P, Boucher CA, Parisi AF & Acme Investigators. Accuracy and limitations of planar thallium scintigraphy for identifying the involved coronary artery in patients with single vessel disease: Findings in the ACME trial. Accepted for Publication in *The Journal of Noninvasive Cardiology* August, 1999.
63. Packer M, Cohn JN, on behalf of the Steering Committee and Membership of the Advisory Council to Improve Outcomes Nationwide in Heart Failure. Consensus recommendations for the management of chronic heart failure. *The American Journal of Cardiology* 1999;83(2A).
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65. Ramanathan KB and Horn HR. Anticoagulation for the patient with valvular heart disease and atrial fibrillation. Book Chapter, *Valvular Heart Disease*, Third Edition. Published by Lippincott Williams & Wilkins, 2000.

#### **ABSTRACTS:**

1. Banka VA, Bodenheimer MM, Ramanathan KB, Raina S, Levites R, Helfant RH: The relationship between progressive decreases in local coronary pressure and flow and

regional contractile abnormalities. *Clinical Research* 24:208A, 1976, Atlantic City, New Jersey.

2. Ramanathan KB, Raina S, Bodenheimer MM, Banka VS, Helfant RH: Contrasting effects of dopamine and isoproterenol on local ischemia. *Clinical Research* 24:236A, 1976. Presented at the American Federation for Clinical Research Meeting 1976, Atlantic City, NJ.
3. Ramanathan KB, Raina S, Bodenheimer MM, Banka VS, Helfant RH: The contrasting effects of nitroprusside and phentolamine on local contraction and degree of ischemia after coronary occlusion. *Clinical Research* 23:569A, 1976.
4. Banka VS, Bodenheimer MM, Ramanathan KB, Herman GA, Helfant RH: Progressive transmural electrographic, biochemical and ultrastructural changes as a function of time following acute coronary occlusion. *Clinical Research* 24:610A, 1976. Presented at the American Federation for Clinical Research Meeting (Eastern Section) in Boston, 1977.
5. Ramanathan KB, Banka VS, Bodenheimer MM, Helfant RH: Effects of vasodilator induced progressive decrease in perfusion pressure on regional coronary blood flow and myocardial contraction. *Clinical Research* 24:619A, 1976. Presented at the American Federation for Clinical Research (Eastern Section) in Boston, 1977.
6. Ramanathan KB, Bodenheimer MM, Banka VS, Helfant RH: Electrophysiological effects of partial coronary occlusion and reperfusion. *Clinical Research* 25:247A, 1977. Presented at the American Federation for Clinical research National Meeting, 1977, Washington, D. C.
7. Banka VS, Ramanathan KB, Bodenheimer MM, Helfant RH: Effects of reperfusion on contractile characteristics of ischemic myocardium following partial coronary occlusion. *Clinical Research* 25:207A, 1977. Presented at the American Federation for Clinical Research National Meeting, 1977, Washington, D.C.
8. Ramanathan KB, Walker BR, Shah RS, Vanov WK, Helfant RH: Comparison of Guanabenz and methyl dopa therapy on hypertension and cardiac performance. *Clinical Research* 25:274A, 1977.
9. Raina S, Banka VS, Ramanathan KB, Bodenheimer MM, Helfant RH: Beneficial effects of propranolol and digitalis on contraction and ST segments following acute coronary occlusion. *Circulation* 55-56:III-129, 1977. Presented at American Heart Association, 50th Scientific Sessions, Miami, Florida.
10. Ramanathan KB, Raina S, Banka VS, Bodenheimer MM, Helfant RH: Effects of vasodilators partially and unoccluded blood flow with direct administration to the

unoccluded vessel: Absence of a coronary steal. *Circulation* 55-56:III-129, 1977.  
Presented at the American Heart Association 50th Scientific Sessions, Miami, Florida.

11. Banka VS, Raina S, Bodenheimer MM, Ramanathan KB, Helfant RH: Enhanced ventriculographic demarcation of contractile and non-contractile zones with nitroglycerin ventriculogram. *Clinical Research* 26:217A, 1978.
12. Ramanathan KB, Bodenheimer MM, Helfant RH: The natural history of contractile abnormalities following acute myocardial infarction in man: Severity and reversibility of central and border zone as a function of time. *Clinical Research* 26:605A, 1978. Presented at the American Federation of Clinical Research (Eastern Section) Boston, MA.
13. Ramanathan KB, Bodenheimer MM, Helfant RH: The natural history of contractile abnormalities following acute myocardial infarction in man: Severity and reversibility of central and border zone as a function of time. *Circulation* 58:II-172, 1978. Presented at the 51st Session of American Heart Association, Dallas, TX 1978.
14. Ramanathan KB, Bodenheimer MM, Banka VS, Helfant RH: Contraction of the acutely injured left ventricular zone after acute myocardial infarction in man: Comparative effects of nitroglycerin and nitroprusside as a function of time. *Clinical Research* 27:568A, 1979. Presented at the American Federation for Clinical Research (Eastern Section) Boston, MA., 1979.
15. Ramanathan KB, Bodenheimer MM, Banka VS, Helfant RH: Effect of progressive pressure reduction with nitroprusside on regional and global left ventricular function following acute myocardial infarction in man - Determination of optional afterload. *Circulation* 60:II-71, 1979. Presented at the American Heart Association 52nd Scientific Session, Anaheim, CA., 1979.
16. Ramanathan KB, Bodenheimer MM, Banka VS, Helfant RH: Contraction of the acutely injured left ventricular zone after acute myocardial infarction in man: Comparative effects of nitroglycerin and nitroprusside as a function of time. *American Journal of Cardiology* 45:483, 1980. Presented at the 29th Annual Scientific Session of the American College of Cardiology, Houston, TX., 1980.
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21. Ramanathan KB, Kaiser G, Vanderzwaag R, Tribble R, Walker L, Mirvis D, Sullivan J: Prognostic value of pressure-volume ratio in patients with coronary artery disease. *Clinical Research* 33:869A, 1985.
22. Ramanathan K, Tayel M, Goodwin L, Griffin B, Ratts T, Sullivan J: Comparative effects of diltiazem and propranolol on left ventricular Research 33:869A, 1985.
23. Vanderzwaag R, Kaiser G, Ramanathan K, Tribble R, Mirvis D, Sullivan J: Effect of age of onset of coronary artery disease on long term survival following coronary artery bypass surgery (CABG). *Clinical Research* 34:207A, 1986.
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25. Lemp GF, Vanderzwaag R, Hughes JP, Maddock V, Ramanathan KB, Kroetz FW, Sullivan JM, Mirvis DM: A case-control study of association between diabetes mellitus and coronary atherosclerosis. *Clinical Research* 34:207A, 1986.
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32. Wilson JL, Ramanathan KB, Mirvis DM: Regional myocardial flows following occlusion and partial (50%) reperfusion of the left anterior descending artery. *Clinical Research* 34:947A, 1987.
33. Vander Zwaag R, Kaiser G, Ramanathan KB, Maddock V, Sullivan JM, Mirvis DM: Long term survival after coronary artery surgery: Interactive effects of age and smoking. *Clinical Research* 35:36A, 1987.
34. Mirvis DM, Ingram LA, Wilson JL, Ramanathan KB: Multivariate model for infarct size prediction after occlusion of the left circumflex artery in the dog. *Clinical Research* 35:574A, 1987.
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40. Vander Zwaag R, Ramanathan KB, Maddock V, Sullivan JM, Mirvis DM: Interdependence of risk factors on long-term survival following coronary bypass surgery. *Circulation* 78 (Suppl. II):II-282, 1988.

41. Ramanathan KB, Wilson JL, Ingram LA, Mirvis DM: Effect of PGE1 on transmural distribution of coronary and collateral flow - absence of coronary steal. *Clinical Research* 37:29A, 1989.
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Sematilide in CHF

Role of Digitalis in Long Term Survival of Patients with Congestive Heart Failure. VA-NIH Cooperative Study

Six Month Double-Blind, Placebo-Controlled, Multicenter Dose-Ranging Comparison of Oral Carvedilol b.i.d. In Patients With CHF, NYHA Class II-IV.

A Six-Month Double-Blind Multi-Center Comparison of Oral Carvedilol b.i.d. with Placebo in Patients with Mild Congestive Heart Failure, NYHA Class II.

A Twelve-Month Double-Blind Multi-Center Comparison of Oral Carvedilol b.i.d. with Mild CHF, NYHA Class II.

A Four Year Open-Label Multi-center Safety Study of Twice Daily Oral Carvedilol in Patients with NYHA Class I-IV CHF.

Multi-country, Randomized, Double-blind, Parallel, Placebo Controlled Trial to Assess the Effect of Valsartan on Morbidity and Mortality, Signs and Symptoms, and Quality of Life in Patients with Stable, Chronic Congestive Heart Failure (NYHA) Class II-IV).

Multi-country, Randomized, Double-Blind, Parallel, Placebo Controlled Trial to Assess the Effect of Valsartan on Morbidity and Mortality, Signs and Symptoms, and Quality of Life in Patients with Stable, Chronic Congestive Heart Failure (NYHA) Class II-IV). Six-Minute Walk Test Sub-Study/Phase III

A Multinational, Multicenter, Randomized, Double-Blind, Parallel Group Study to Determine the Effects of Carvedilol on Mortality in Patients with or without Left Ventricular Dysfunction, with or

without Clinical Evidence of Heart Failure, Post Myocardial Infarction.

A Multicenter Randomized Double-Blind, Placebo-Controlled Study to Determine the Effect of Carvedilol on Mortality in Patients With Severe Chronic Heart Failure

Beta-Blockers Evaluation of Survival Trial(BEST) - National Heart, Blood and Lung Institute - VA Cooperative Study

OVERTURE “Omipatrilat vs Enalapril Randomized Trial of Utility in Reducing Events”

CHARM “Candesartan Cilexetil in Heart Failure Assessment of Reduction in Mortality and Morbidity.

#0003-ace inhibitor intolerant

#0006-in conjunction with ace inhibitor

#0007-preserved LV systolic

ESSENTIAL “A Randomized, Double-Blind, Multicenter, Parallel Group, Placebo-Controlled Study of Oral Enoximone vs Placebo in Advanced Heart Failure”

Atrial Fibrillation:

Effect of Dofetilide on Maintenance of Sinus Rhythm Following Cardioversion in Atrial Fibrillation.

The Effects of Anti-arrhythmic Therapy in Maintaining Stability of Sinus Rhythm in Atrial Fibrillation - VA Cooperative Study

A Randomized, Double-Blind, Placebo-Controlled, Parallel Group Study of the Safety and Efficacy of SB 207266 in Patients with Symptomatic Persistent Atrial Fibrillation (AF)

Coronary Artery Disease:

Effect of Amlodipine on Regression of Coronary Atherosclerosis (CAMELOT/NORMALIZE)

Coronary Artery Revascularization Prophylactics -  
VA Cooperative Study

PREVENT: Prospective Randomized Evaluation of  
the Vascular Effects of Norvasc Trial - Pfizer  
Laboratories

COURAGE “Clinical Outcomes Utilizing  
Revascularization and Aggressive Drug Evaluation”

BARI-2D “Bypass Angioplasty Revascularization  
Investigation – Type 2 Diabetes” NIH