

CURRICULUM VITAE

DAVID S. ROSENBAUM, M.D

DEMOGRAPHIC INFORMATION:

Title	Administrative	Chief, Division of Cardiology Director, Heart & Vascular Research Center MetroHealth Campus, Case Western Reserve University
		Director, Heart & Vascular Center for The MetroHealth System
	Academic	Associate Professor of Medicine, Biomedical Engineering, Developmental Biology, Physiology & Biophysics Case Western Reserve University

Address	Office	Heart & Vascular Research Center MetroHealth Campus, Case Western Reserve University 2500 MetroHealth Drive, Hamman 330 Cleveland, OH 44109-1998
		Phone: (216) 778-2005 Email: drosenbaum@metrohealth.org

Research Interest	Mechanisms of cardiac arrhythmias. Areas of special interest include; application of novel imaging technologies (e.g. voltage-sensitive dyes) to investigations of molecular and cellular bases for electrical heterogeneities in the heart, cardiac repolarization, electrophysiological characterization of genetically engineered mice, electrophysiology of failing and remodeled myocardium, computer modeling of electrical properties in the heart, mechanisms of electrical alternans and arrhythmogenesis, and prediction and prevention of sudden cardiac death.
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ACADEMIC APPOINTMENTS:

7/98 - present	Associate Professor of Medicine, Biomedical Engineering, Physiology & Biophysics, and Developmental Biology , Case Western Reserve University, Cleveland, OH
7/91 – 6/98	Assistant Professor of Medicine and Biomedical Engineering , Case Western Reserve University, Cleveland, OH
6/96 – 6/98	Assistant Professor of Physiology & Biophysics , Case Western Reserve University, Cleveland, OH
11/93 – 5/91	Research Affiliate , Massachusetts Institute of Technology, Cambridge, MA
7/90 – 6/91	Instructor in Medicine and Cardiology , Harvard Medical School, Boston, MA

7/90 – 6/91 **Research Scientist**, Massachusetts Institute of Technology,
Cambridge, MA

ADMINISTRATIVE/HOSPITAL APPOINTMENTS:

9/04 – present **Director, Heart & Vascular Center for The MetroHealth System, and Chief, Division of Cardiology**, MetroHealth Campus of Case Western Reserve University.

7/02 - present **Director, Physician Scientist Pathway Program**, Department of Medicine, MetroHealth Campus of Case Western Reserve University.

10/02 – 8/04 **Interim Director, Heart & Vascular Center**, MetroHealth Medical Center, Case Western Reserve University

8/99 - present **Director, Heart & Vascular Research Center**, MetroHealth Medical Center, Case Western Reserve University Cleveland, OH

8/99 – 8/04 **Chief, Cardiac Arrhythmia Service**, MetroHealth Medical Center, Case Western Reserve University, Cleveland, OH

8/99 – 10/02 **Co-Director, Heart & Vascular Center**, MetroHealth Medical Center, Case Western Reserve University, Cleveland, OH

12/97 - 7/99 **Director Cardiac Electrophysiology Fellowship Training Program**, University Hospitals of Cleveland, OH

7/91 - 7/99 **Chief, Cardiac Electrophysiology Service**, Veterans Affairs Medical Center, Cleveland, OH

Staff Cardiologist, University Hospitals of Cleveland, OH

7/90-6/91 **Clinical Assistant, Cardiac Unit**, Massachusetts General Hospital, Boston, MA

POST-DOCTORAL TRAINING

1986 - 1990 **Clinical and Research Fellow in Medicine (Cardiology), Cardiac Unit and Cardiac Electrophysiology**, Massachusetts General Hospital and Harvard Medical School, Boston, MA

Research Scientist, Massachusetts Institute of Technology -Harvard Division of Health Sciences and Technology, Post-doctoral research in laboratory of Richard J. Cohen, M.D., Ph.D., Cambridge, MA

1984 - 1986 **Resident in Medicine**, Barnes Hospital, Washington University School of Medicine, St. Louis, MO

1983 - 1984 **Intern in Medicine**, Barnes Hospital, Washington University School of Medicine, St. Louis, MO

EDUCATION

1979 - 1983	M.D., University of Illinois, Chicago, James Scholar Research Graduate, Research Thesis: <i>Ischemia mediated platelet deposition during reperfusion.</i>
1975 - 1979	B.S., General Engineering, University of Illinois at Urbana, Graduated with Honors. Senior Research Thesis: <i>Modeling of joint biomechanics.</i>

LICENSURE AND CERTIFICATION

1991	Ohio License Registration #35-06-1198
1990	American Board of Internal Medicine, Cardiovascular Boards #108258
1987	American Board of Internal Medicine, Internal Medicine Boards #108258
1985	Massachusetts License Registration #55149
1983	Missouri License Registration #R9E69

PROFESSIONAL SOCIETIES

2003	American Association for the Advancement of Science
1999	International Society for Heart Research
1997	Central Society for Clinical Research
1994	Cardiac Electrophysiology Society
1994	International Society For Holter & Noninvasive Electrocardiology
1993	North American Society of Pacing & Electrophysiology #2044
1992	AHA Council on Clinical Cardiology Membership Number #86002777
1991	Northeast Ohio Society of Pacing and Electrophysiology
1990	Engineering in Medicine & Biology Society of IEEE
1988	American Federation of Clinical Research, Associate
1988	Fellow American College of Cardiology
1986	Paul Dudley White Society
1986	Massachusetts Medical Society
1985	American College of Physicians
1980	Illinois State Medical Society
1980	American Medical Association
1978	Illinois Society of Professional Engineers

HONORS AND AWARDS

2004	Mentor to Chester Scholar Award recipient Andrea Todaro
2004	Invited Lecturer to The Royal Society of Medicine, London.
2004	Mentor to NASPE Michael Billich Fellowship Award recipient, Steven Poelzing
2003	Mentor to MetroHealth Fellow Research Award first prize recipient, Mehdi Pajouh
2002	Mentor to AHA Pre-Doctoral Fellowship Award recipient, Benjamin Eloff
2002	Mentor to AHA Pre-Doctoral Fellowship Award recipient, Steven Poelzing
2001	Mentor to NASPE Michael Billich Fellowship Award recipient, Mariah Walker
2001	Mentor to Chester Scholar Award recipient, Alvera Baron
2001	Mentor to AHA Pre-Doctoral Fellowship Award recipient, Imad Libbus
1999	Recipient of Northern Ohio Live Magazine Award of Achievement in Health and Medicine
1998	Mentor to Central Society for Clinical Research Young Investigator Award finalist, Fadi Akar

1998	Mentor to NASPE Full Year Fellowship Award winner Thomas Chuck
1997	NASPE Searl Traveling Award
1997	Mentor to Howard Hughes Medical Student Research Fellowship recipient, Manish Shah
1996	Mentor to NASPE Young Investigator Award first prize winner Ken R. Laurita
1995	NHLBI-NIH FIRST AWARD
1995	Mentor to NASPE Young Investigator Award first prize winner Steven D. Girouard
1995	NASPE Traveling Award
1994	American College of Cardiology / European Society of Cardiology International Academic Exchange Program
1993	Fellow of the American College of Cardiology
1991	Samuel A. Levine Young Investigator Award of The American Heart Association
1990	Michael Billich Fellow of the North American Society of Pacing and Electrophysiology
1990	American College of Cardiology/Bristol Laboratories Traveling Award
1989	North American Society of Pacing and Electrophysiology Young Investigator Awards - Finalist (Toronto)
1983	Alpha Omega Alpha
1983	University of Illinois College of Medicine Twenty First Annual Honors Day Research Award
1981	Medical Student Research Forum - First Award
1980	James Scholar Honor Society
1977	Tau Beta Pi National Engineering Honors
1975	Michael Reese Hospital and Medical Center Research Fellowship

RESEARCH TRAINEES

Trainee	Training Position	Dates	Subsequent position
Kenneth R. Laurita	Doctoral research, Biomedical Engineering	7/91 - 5/96	Assistant Professor, Case Western Univ.
Steven D. Girouard	Masters research, Biomedical Engineering	7/91 - 12/93	Director, Heart Failure Research Program, Guidant Inc.
	Doctoral research, Biomedical Engineering	12/93 - 12/96	
	Post-doctoral Fellow	1/97 - 7/97	
Xiaohua Fang	Masters research, Biomedical Engineering	12/92 - 7/94	Stanford Univ. PhD student
Prakash Mandgi	Masters research, Biomedical Engineering	9/92 - 7/95	
David Freeman	Research fellowship, Pediatric Cardiology	7/94 - 6/95	
Judith Mackall	Research fellowship, Cardiology	7/92 - 6/93	Assistant Professor, Case Western Univ.
Priyanka Somani	Work Study Student	1/93 - 12/94	
Joseph Pastore	Masters research, Biomedical Engineering	4/94 - 12/96	Research Scientist, Guidant Inc.
	Doctoral research, Biomedical Engineering	12/96 - 12/99	
Birendra Julka	Masters research, Biomedical Engineering	6/94 - 7/97	

HunDae Hong	Post-Doctoral fellow, Biomedical Engineering	8/94 - 9/95	
Fadi G. Akar	Masters research, Biomedical Engineering	1/95 - 12/96	Post-doctoral research, Johns Hopkins Univ.
	Doctoral research, Biomedical Engineering	12/96 – 12/01	
Thomas Chuck	Doctoral research, Genetics & Pediatrics	7/94 - 6/98	Post-doctoral research, Duke Univ.
	Post-Doctoral research, NIH Post-Doctoral Fellowship	7/98 – 6/01	
Imad Libbus	Masters research, Biomedical Engineering	7/95 - 6/97	Research Scientist, Guidant Inc.
	Doctoral research, Biomedical Engineering. AHA Pre-Doctoral Fellowship	7/97 – 1/03	
Toby Weingarten	Senior research project, Biomedical Engineering	8/95 - 5/96	
Steven Bibeovski	Laboratory rotation, Physiology & Biophysics	5/96 - 7/96	Medical Student, Case Western Reserve Univ.
Daniel Haithcock	NIH Summer Research Program For Minorities	5/96 - 8/96	
Colleen Clancy	Laboratory rotation, Physiology & Biophysics	7/96 - 9/96	Assistant Professor, Columbia University
Manish Shah	Medical student research, Howard Hughes Foundation	8/94 - 9/95	Cardiology Fellow, Johns Hopkins School of Medicine
Benjamin Eloff	Masters research, Biomedical Engineering	5/97 – 10/00	
	Doctoral research, Biomedical Engineering	10/00 - present	
Eran Gilat	Post-doctoral fellowship	7/01 – 7/03	Senior Scientist, Israel Institute for Biological Research
Steven Poelzing	Masters research, Biomedical Engineering	9/97 – 6/03	Post-doctoral fellow, Case Western Res. University
	Doctoral Research, Biomedical Engineering	6/03 - Present	
Mariah Louise Walker	Post Doctoral Fellow, Heart and Vascular Research Center. NASPE Fellowship Award	1/00 – present	
Elvera Baron	Chester Scholar student, Heart and Vascular Research Center	6/01 – 8/01	MD, PhD. Student. Albert Einstein School of Medicine
Etienne Pruvot	Post Doctoral Fellow, Heart and Vascular Research Center. Swiss National Foundation	10/01 – 9/03	Research Scientist, University Hospital, Lucerne, Switzerland

Michael Sikora	Chester Scholar student, Heart and Vascular Research Center	7/02-8/02	Ph.D. Student, Xavier University, Cincinnati, OH
Anne Louise Kjoelbe	Visiting Research Fellow, Heart & Vascular Research Center	8/02 – 12/02	Research Scientist, Zealand Pharmaceuticals
Maria Dikshteyn	Masters Research, Biomedical Engineering	10/02 - present	
Florence Rothenberg	Post-doctoral Research Fellow, Heart & Vascular Research Center	7/02 – 5/03	Instructor, Duke University Medical Center
Brian R. Kelly	Chester Scholar student, Heart and Vascular Research Center	6/03 – 8/03	
Toshiyuki Oya	Post Doctoral Fellow, Heart and Vascular Research Center	6/03 – present	
Darwin Jeyaraj	Post-doctoral Fellow, Physician Scientist Pathway	7/02 – present	

TRAINING GRANTS

Biomed. Engineering Systems & Integrative Biol., NIH T32 GM07535-19, PI: Gerald Saidel, Ph.D.
 Cell Physiology Training Program NIH T32 HL-07653, PI: Nanduri Probakar, Ph.D.
 Normal & Abnormal Development, T32 HD07104-23, PI: Peter Harte, Ph.D.

THESIS COMMITTEES

Kenneth R. Laurita	Ph.D, Biomedical Engineering
Steven D. Girouard	Ph.D., Biomedical Engineering
Xiaohua Fang	M.S., Biomedical Engineering
Prakash Mandgi	M.S., Biomedical Engineering
Joseph Pastore	Ph.D., Biomedical Engineering
Birendra Julka	M.S., Biomedical Engineering
Fadi G. Akar	Ph.D., Biomedical Engineering
Thomas Chuck	Ph.D., Genetics
Imad Libbus	M.S., Biomedical Engineering
Steven Bibevski	Ph.D., Physiology & Biophysics
Colleen Clancy	Ph.D., Physiology & Biophysics
Robin Shaw	Ph.D., Biomedical Engineering
J. Zeng	Ph.D. Biomedical Engineering
Alison Graves	Ph.D. Biomedical Engineering
Bill Baxter	Ph.D. Pharmacology (SUNY)
John Burns	Ph.D. Biomedical Engineering
Thomas Lund	Ph.D. Biomedical Engineering
Ashish Singal	M.S. Biomedical Engineering
Rodolphe Kantra	M.S. Biomedical Engineering

Benjamin Eloff	M.S. Biomedical Engineering
Benjamin Eloff	Ph.D. Biomedical Engineering
Imad Libbus	M.S. Biomedical Engineering
Steven Poelzing	Ph.D. Biomedical Engineering

STUDY SECTIONS

PPG Review consultant, NIH-NHLBI, 2004
NIH-NHLBI ad hoc reviewer, 2001
Central Society For Clinical Research, Merck Young Investigator Award Committee, 2000
NIH-NHLBI Extramural Grant Review, 2000
VA Merit Review Committee for Cardiovascular Studies, 1994
N.I.H. Program Project Grant, Mock Study Section for Dr. Jose Jalife, 1994
American Heart Association, Northeast Ohio Affiliate, 1995-1997
VA Merit Review, Ad Hoc Reviewer
NIH Multi-disciplinary Sciences Special Emphasis Panel, Ad Hoc Reviewer, 1995
NASPE Young Investigator Awards Committee, 1995 - 1998
American Heart Association, National Center, 1997
American Heart Association, Mid-American Research Consortium, Chairman (alternate), 1998
American College of Cardiology, Abstract grader, 1997 – present
North American Society of Pacing and Electrophysiology, Abstract grader, 2000 - present

SCIENTIFIC REVIEWER

New England Journal of Medicine, Heart Rhythm Journal, Acta Physiologica Scandinavica, Journal of Cardiovascular Research, Journal of Molecular and Cellular Cardiology, Journal of Clinical Investigation, Biophysical Journal, American Journal of Physiology, Circulation Research, Circulation, Journal of Applied Physiology, Journal of Cardiovascular Electrophysiology, Journal of the American College of Cardiology, Journal of Pacing & Clinical Electrophysiology, IEEE Transactions In Biomedical Engineering, Journal of Laboratory & Clinical Medicine, Comparative Biochemistry and Physiology, Physiological Genomics

EDITORIAL BOARDS

Section Editor-Heart Rhythm Journal, Journal of Interventional Cardiac Electrophysiology, Journal of Molecular and Cellular Cardiology, Section Editor, Journal of Cardiovascular Electrophysiology (Images From Cell to Bedside), International Society for Heart Research, Journal of Cardiovascular Electrophysiology, Cardiology Journal Club Journal

COMMITTEES

- Chairman from Ohio, Physician Advisory Board to NRCC, United States Congress, 2004
- Board of Directors, Cleveland Chapter FIDF, 2004
- American College of Cardiology Clinical Electrophysiology Committee, 2004 - 2007
- Chairman, Committee for Physician Scientist Pathway, MetroHealth Campus, MetroHealth Campus, Case Western Reserve University. July, 2002 - present
- North American Society of Pacing & Electrophysiology Awards Subcommittee of Governance, 2002-
- Vice-chairman, North American Society of Pacing & Electrophysiology Training & Fellowship Committee, 2002 – 2004
- Co-chairman, NASPE Web-Technology Task Force, 2002
- NASPE Liaison to International Dead Sea Arrhythmia Symposium, 2002
- Chester Summer Scholars Committee, MetroHealth Medical Center, 2002

- NASPE Futures Committee, NASPE, 2001
- General Clinical Research Center Scientific Advisory Committee, MetroHealth Medical Center, 2001 -
- Chairman, North American Society of Pacing & Electrophysiology Fellowship Committee, 2001 – present
- Budget & Finance Committee, North Am. Soc. of Pacing & Electrophysiology (ex-officio member)
- Biomedical American-Israeli Committee
- Chairman, Cardiology Grand Rounds Committee, Heart & Vascular Center, MetroHealth Medical Center, Case Western Reserve University, August 1999 - present
- Chairman, Grievance Committee, Rammelkamp Center for Education & Research, 2000 - present
- Executive Steering Committee, Rammelkamp Center for Education & Research, 1999 – 2002
- Chairman, Web Site Committee, Rammelkamp Center for Education & Research, 2000 – 2003
- Chairman, Steering Committee, ABCD Trial, 1999 – present
- Chairman, Computer Committee, Heart & Vascular Center
- Co-director, Clinical Trials Committee, Heart & Vascular Research Center, 1999 - present
- Fellowship Committee, NASPE, 1999-2002
- Scientific Advisory Board, 9th Congress of the International Society for Holter and Noninvasive Electrocardiology, Istanbul - Turkey, 2000
- Committee for Promotion of Basic Science, North American Society of Pacing & Electrophysiology, 1998 - 2000
- Scientific Advisory Board, 4th International Dead Sea Symposium, 1998 - present
- Young Investigator Committee, North American Society of Pacing & Electrophysiology, 1996 - 1998
- Publications Committee, North American Society of Pacing and Electrophysiology, 1995-1998
- Computer Committee, Case Western Reserve University, 1994 - 1999
- Medical Student Advisory Program, Case Western Reserve University
- Organizing committee, International Congress of Computers in Cardiology, 1998
- Steering committee, Cardiovascular Research Institute, Case Western Reserve University
- Executive Steering committee, Cardiology Division, University Hospitals of Cleveland

UNIVERSITY COURSES

- PHOL 514 (Introduction to Cardiopulmonary Physiology): Course Director, 2001, 2002, 2003
- PHOL 518 (Integrative Approaches to Cardiovascular Research): 1995 - 2000
- PHOL 480 (Cardiovascular Physiology): 2000
- EBME 105 (Introduction to Biomedical Engineering): 1992 - 1997
- EBME 313/314 (Methods in Biomedical Engineering): 1995 – 1997, 2000, 2001, 2003
- EBME-452 (Biomedical Engineering); 1992
- Monthly University Hospital/VA House staff ECG conference
- NIH-HLB Summer Research Program for Minorities: 1996

LECTURES

1. Mechanism of QT prolongation induced arrhythmias. Novartis Foundation and The Royal Society of Medicine invited lecture. London, May 2004
2. Cellular Mechanisms of Torsades de Points. Novartis Foundation Symposium. The hERG cardiac potassium channel. London, May 2004
3. Calcium handling in cardiac myocytes. Electrophysiology seminar. University Hospitals of Cleveland. April, 2004
4. Nature and significance of electrophysiological heterogeneities in the heart. Invited lecture. Experimental Biology Annual Scientific Sessions. Special session American Association of Anatomist. Washington DC, April 2004
5. Primary prevention of sudden cardiac death in heart failure: Which patients are appropriate? Symposium on heart failure and arrhythmias. Tempe, February, 2004

6. Cell to cell communication in the beating heart. Cardiac Bioelectricity Research & Training Center Seminar, Case Western Reserve University. February, 2004
7. Using T wave alternans to prevent sudden cardiac death. Cardiology Grand Rounds. Brookdale University Hospital. New York. February, 2004.
8. Cell to cell communication in the beating heart. Rammelkamp Research Seminar, MetroHealth Campus, Case Western Reserve University. January, 2004
9. Advanced electrocardiographic monitoring in space. Johnson Space Center. Houston, December, 2003.
10. Cardiac alternans. Special Symposium of the American Heart Association, 2003 Scientific Sessions. Orlando, November, 2003.
11. Ventricular arrhythmias, putting the pieces together. Invited lecture, Kavli Institution for Theoretical Physics, University of California – Santa Barbara, October, 2003
12. Detection and prediction of arrhythmias during space flight. Invited speaker, 23rd GLITeC Advisory Board Meeting, NASA Glenn Research Center. Cleveland. October, 2003
13. Noninvasive risk assessment for sudden cardiac death. Invited speaker, Northeast Ohio Society of Pacing and Electrophysiology, Sixteenth Annual sessions. Cleveland. September, 2003
14. Mechanisms for generating and maintaining electrophysiological heterogeneities in the heart. Invited speaker, Gordon Research Conference. New London, August, 2003
15. The science and practice of predicting and preventing sudden cardiac death. The Israel Working Group on Pacing and Electrophysiology. Tel Aviv, Israel. July, 2003
16. The nature and significance of electrophysiological heterogeneities in the heart. Rappaport Institute for Biological Research research seminar. Haifa, Israel. July, 2003
17. The genetically engineered biological pacemaker. Saw Mill Creek Great Lakes Arrhythmia Symposium. Sandusky. May, 2003.
18. NASPE Core Curricula lecture. Abnormal repolarization: Development and interventions in animal models. Transmural gradients of action potentials and conduction. NASPE, 2003. Washington DC.
19. Mechanisms and management of sudden cardiac death. Invited Lecture. Cleveland Clinic Foundation Electrophysiology Conference. April, 2003
20. Sudden Cardiac Death. American College of Cardiology Symposium. Co-chaired with Michael Cain, M.D., Chicago, April, 2003
21. The science and practice of predicting and preventing sudden cardiac death. Cardiology Grand Rounds, Cardiac Unit, Massachusetts General Hospital, Harvard Medical School, Boston, March, 2003
22. Newer diagnostic and prognostic modalities. 2nd Annual The ABCs of Heart Failure: From diagnosis to prognosis. Cleveland, Ohio. February, 2003
23. Can sudden and unexpected death be predicted and prevented? Medical Grand Rounds. MetroHealth Campus, Case Western Reserve University. Cleveland, Ohio. December, 2002.
24. Prediction and prevention of sudden cardiac death: The MetroHealth initiative. Cardiology Grand Rounds, Heart & Vascular Center, MetroHealth campus, Case Western Reserve University. Cleveland, Ohio. October, 2002.
25. Arrhythmic Mechanisms and Failing Myocardium. Cardiology Grand Rounds, University Hospitals of Cleveland. Cleveland, Ohio. September, 2002.
26. New and evolving paradigms for prediction and prevention of sudden cardiac death. Cardiology Grand Rounds, California Pacific Medical Center. San Francisco, June, 2002.
27. New and evolving paradigms for prediction and prevention of sudden cardiac death. Cardiology Grand Rounds, University of California San Francisco. San Francisco, June, 2002.

28. Sudden Cardiac Death: Mechanism and management. Bay Area Electrophysiology Society Lecture. San Francisco, June, 2002.
29. Use of innovative mapping techniques to better understand arrhythmias. University of California San Francisco Fellows Conference. San Francisco, June, 2002.
30. New paradigms for primary prevention of sudden cardiac death. Sawmill Creek Regional Electrophysiology Symposium. Huron, May, 2002
31. Electrophysiological heterogeneities in the heart: Is variety the spice of life, or death? Rammelkamp Research Seminar, Cleveland, May, 2002.
32. Noninvasive testing, lessons learned from clinical trials. Core Curriculum Lecture. NASPE. San Diego, May, 2002
33. Impact of noninvasive testing on the management of patients. Core Curriculum Lecture. NASPE. San Diego, May 2002
34. Stratification approach to life-threatening arrhythmias: From genome to three-dimensional mapping. Invited Lecture, Japanese Circulation Society, Sapporo, Japan, April, 2002
35. Electrophysiological Heterogeneities in the heart. Keynote Lecture, Japanese Circulation Society, Sapporo, Japan, April, 2002.
36. Prediction and prevention of sudden cardiac death. Annual Symposium Shinshu University School of Medicine. Matsumoto, Japan. April, 2002
37. New and evolving paradigms for prediction and prevention of sudden cardiac death. Cardiology Grand Rounds, Krannert Institute of Cardiology, Indiana University School of Medicine. Indianapolis. April 8, 2002.
38. The nature and significance of electrophysiological heterogeneities in the heart. Cardiac Electrophysiology Research Seminar. Indiana University School of Medicine. Indianapolis, April 9, 2002.
39. Sudden Cardiac Death. Mid-American Heart Institute, Kansas City, April, 2002.
40. Novel mechanisms for triggering sudden death. Special symposium on sudden death. 6th International Symposium on Advances in Diagnosis and Treatment of Cardiac Arrhythmias. Tel Aviv, Israel. March, 2002.
41. New approaches for prediction and prevention of sudden death. Special Symposium on the Open Artery and electrical stability after MI. 6th International Symposium on Advances in Diagnosis and Treatment of Cardiac Arrhythmias. Tel Aviv, Israel. March, 2002.
42. Electrophysiological heterogeneities in the heart: Is variety the spice of life, or death? Cardiac Electrophysiology Symposium, Mayo Clinic, Rochester, MN. February, 2002.
43. Optical imaging sheds new light on prediction and prevention of sudden cardiac death. Cardiology Grand Rounds. Vanderbilt University School of Medicine. Nashville, January, 2002.
44. Nature and significance of electrical heterogeneities in the heart. Vanderbilt University, Department of Pharmacology. Nashville, January, 2002
45. Ventricular arrhythmias in heart failure: From cell to bedside. Fourteenth Annual NEOSPE meeting. Cleveland, December, 2001.
46. Can sudden death be predicted and prevented? Special Symposium. Good Samaritan Hospital. Los Angeles, November, 2001.
47. Predicting and preventing sudden cardiac death. Cardiology Grand Rounds. Northwestern University, Chicago, October, 2001
48. Can sudden cardiac death be predicted and prevented? Cardiology Grand Rounds. Lankenau Medical Center, Philadelphia, October, 2001
49. Optical imaging of electrical activity in the heart: Is variety the spice of life, or death? Research Seminar. Department of Biomedical Engineering, Case Western Reserve University, Cleveland, September, 2001

50. Novel insights to prediction and prevention of arrhythmias from voltage-sensitive dye studies in the heart. Guidant Research Seminar. Minneapolis, July, 2001
51. Risk stratification and mechanisms of sudden cardiac death. Tampa Electrophysiology Society. Tampa, May, 2001
52. Electrocardiographic and electrophysiological basis for Microvolt T-wave alternans. NASPE Symposium on Microvolt T-Wave alternans: an essential diagnostic tool for the prevention of SCD. Boston, May, 2001
53. T-wave alternans: an emerging tool for risk stratification. Clinical Tutorial, North American Society of Pacing and Electrophysiology. Boston, MA, May 2001
54. Preclinical models of anti-arrhythmic and pro-arrhythmic drug effects. Current Regulatory Topics in Preclinical Drug Development symposium, Experimental Biology, Orlando, April, 2001
55. Electrophysiological and electrocardiographic basis of T wave alternans. Satellite symposium, American College of Cardiology, Orlando, March, 2001
56. Electrophysiological basis and clinical significance of T wave alternans. Satellite symposium, American Heart Association, New Orleans, November, 2000
57. Prediction and Prevention of Sudden Cardiac Death. New York University Cardiology Grand Rounds. New York, November, 2000
58. T wave Alternans: Mechanism and Measurement. 9th Congress of the International Society of Holter and Non-invasive Electrocardiology. Istanbul, Turkey, September, 2000
59. Primary Prevention of Sudden Cardiac Death: A New Approach to an Old Problem. Invited State of The Art Lecture, Central Society For Clinical Research. Chicago, September, 2000
60. What the Fellow Should Know About the Cellular and Ionic Basis for Arrhythmias in LQTS. Core Curriculum, North American Society of Pacing and Electrophysiology. Washington, D.C., May 2000
61. Taming Reentry: Role of Repolarization. Clinical Tutorial, North American Society of Pacing and Electrophysiology. Washington, D.C., May 2000
62. Mechanisms Underlying T wave Alternans. Satellite Symposium, North American Society of pacing and Electrophysiology. Washington, D.C., May 2000
63. Noninvasive Detection of Electrophysiological Substrates for VT/VF: Derangements of Repolarization. Mini Course, North American Society of Pacing and Electrophysiology. Washington, D.C., May 2000
64. Cellular and Ionic Mechanisms Responsible for Long QT Intervals and Torsade de Points. The International Society for Computerized Electrocardiology. Yosemite, California, May, 2000
65. T wave Alternans. 2000 Future of Arrhythmology. Maastricht, Netherlands, April, 2000
66. Prediction, Prevention, and Mechanisms of Sudden Cardiac Death. Cardiology Grand Rounds, University of Wisconsin Medical School. Madison, Wisconsin. March, 2000
67. Chair, Special Training Symposium on T wave Alternans. American College of Cardiology. Anaheim, March, 2000
68. Primary Prevention of Sudden Cardiac Death. Japanese High Resolution Electrocardiography Society. Tokyo, February, 2000
69. T wave Alternans: Mechanism and Clinical Applications. Nihon University Department of Internal Medicine. Tokyo, Japan, February, 2000
70. Spatial Heterogeneity and Arrhythmias. Special session on electrophysiological basic of cardiac arrhythmia, 5th International Dead Sea Symposium. Israel, March, 2000
71. Shedding New Light on TWA as a Novel Mechanism of SD: Insights from Cardiac Optical Mapping. Invited lecture and chairman. 5th International Dead Sea Symposium. Israel, March, 2000

72. Novel Insights into Arrhythmia Mechanisms Derived from High-resolution Optical Mapping. Cornell Medical School Cardiovascular Seminar. New York, New York, December, 1999
73. Is Sudden Cardiac Death Preventable? Strategies for the Next Millennium. CWRU Medicine Grand Rounds, CME Program. MetroHealth Medical Center. Cleveland, Ohio, November, 1999
74. Causes and Consequences of Cardiac Proarrhythmia. CWRU Cardiology Grand Rounds, CME Program. MetroHealth Medical Center. Cleveland, Ohio, October, 1999
75. Mechanisms of Cardiac Defibrillation. Cardiac Electrophysiology Didactic Lecture. University Hospitals of Cleveland. Cleveland, Ohio, September, 1999
76. Can non-invasive Evaluation Predict Who is at Risk for Sudden Cardiac Death?" Twelfth Annual Heartbeats Fast and Slow. Invited lecture, CME program. NEOSPE. September, 1999
77. Electrical Heterogeneities in the Heart as a Mechanism of Cardiac Arrhythmias. CWRU Rammelkamp Research Lecture. MetroHealth Medical Center. Cleveland, Ohio, August, 1999
78. Mechanisms of Proarrhythmia. Cardiac Electrophysiology Didactic Lecture. University Hospitals of Cleveland. Cleveland, Ohio, August, 1999
79. Primary Prevention of Sudden Cardiac Death: A New Approach to an Old Problem. Invited lecture, CME program. Spokane Heart Institute. Spokane, Washington, June, 1999
80. Molecular and Ionic basis of Arrhythmias in LQTS. Tapes, CME Program. NASPE. May, 1999
81. Cellular Basis of Arrhythmias of LQTS. Core Curriculum, CME Program. NASPE. May, 1999
82. The Odyssey of a Young Investigator. From Trainee to Mentor, CME Program. NASPE
83. Electrical Heterogeneities. Cardiac Electrophysiology Didactic Lecture, University Hospitals of Cleveland. May, 1999
84. Repolarization, Refractoriness. Cardiac Electrophysiology Didactic Lecture. University Hospitals of Cleveland. Cleveland, Ohio, April, 1999
85. Fundamental Principles and Practical Uses for T-Wave Alternans. Invited lecture. Cambridge Heart. New York, New York, April, 1999
86. Primary Prevention of Sudden Death: A New Approach To an old Problem. Invited Lecture, CME program. Guidant Intermedics, New York, New York, April, 1999
87. Noninvasive Methods in Electrophysiology. Didactic Lecture. University Hospitals of Cleveland. Cleveland, Ohio, February, 1999
88. Mechanisms of Cardiac Repolarization. Invited lecture. Masonic Medical Research Institute. February, 1999
89. Mechanisms of Impulse Propagation and Antiarrhythmic Drug Action-New Insights from Optical Mapping Studies and Implications for Atrial Fibrillation. Invited Lecture, CME Program. Harvard Medical School. Boston, Massachusetts, January, 1999
90. Antiarrhythmic Drug Therapy and Mechanisms: The Good, the Bad, and the Ugly. Cardiology Grand Rounds, CME Program. University Hospitals of Cleveland. Cleveland, Ohio, November, 1998
91. Electrophysiological Mechanisms Underlying Torsade de Point in the Intact Heart. Invited Lecture. Cardiac Electrophysiology Society Dallas. November, 1998
92. Role of Repolarization in Reentry. Satellite symposium, Invited Lecture. American Heart Association. Dallas, Texas, November, 1998
93. Mechanisms Linking T wave Alternans to the Genesis of Cardiac Fibrillation. American Heart Association. Dallas, Texas, November, 1998
94. Primary Prevention of Sudden Cardiac Death: A New Approach to an Old Problem. Medical Grand Rounds, CME Program. University Hospitals of Cleveland. Cleveland, Ohio, October, 1998
95. The Several Mechanisms of Atrial Fibrillation. A Day of Updating Atrial Fibrillation Symposium. Invited lecture, CME Program. Cleveland, Ohio, October, 1998

96. Novel Insights to Arrhythmia Mechanisms Derived from High-resolution Optical Mapping. Research Seminar. Invited lecture. Washington University School of Medicine. St. Louis, Missouri, October, 1998
97. Noninvasive Risk Stratification. Biomedical Engineering Society. Invited lecture, special symposium, CME credits. Cleveland, Ohio, October, 1998
98. Primary Prevention of Sudden Cardiac Death: A New Approach to an Old Problem. Medicine Grand Round, CME Program. University Hospitals of Cleveland. Cleveland, Ohio, October, 1998
99. Guidant Grand Rounds. Invited Lecture. Minneapolis, Minnesota, December, 1998
100. Mechanisms Linking T wave Alternans to Sudden Death. Invited Lecture, Satellite Symposium. NASPE. San Diego, California, May, 1998
101. Mechanisms of Repolarization, Restitution, and Refractoriness. Invited Lecture, Satellite Symposium. NASPE. San Diego, California, 1998
102. Mechanisms of T wave Alternans. Invited lecture, Arrhythmia Research Laboratories. University of Alabama. Birmingham, Alabama, April, 1998
103. Optical Mapping of Cardiac Excitation and Arrhythmias. Modulation of Arrhythmia Substrates, special symposium. Scottsdale, Arizona, April, 1998
104. Noninvasive Assessment of Risk of Sudden Cardiac Death. Luncheon session. American College of Cardiology. March, 1998
105. Predicting Sudden Cardiac Death from T wave Alternans. Invited lecture. Japanese Circulation Society. Tokyo, Japan, March, 1998
106. Arrhythmia Mechanisms Derived from High-resolution Optical Mapping. Invited lecture. Israel Institute for Biological Research. Rehovot, Israel, March, 1998
107. Is There an Electrocardiographic Fingerprint for Sudden Cardiac Death? Cardiology Grand Rounds, CME Program. University Hospitals of Cleveland. Cleveland, Ohio, January, 1998
108. Are the Mysteries of Sudden Death Buried in the T wave? Cardiology Grand Rounds, CME Program. University Hospitals of Cleveland. Cleveland, Ohio, January, 1998
109. Noninvasive Prediction of Sudden Cardiac Death Using T wave Alternans. 4th International Dead Sea Arrhythmia Symposium. Israel, 1998
110. Electrical Heterogeneities Across the Heart: What Does Dispersion of Repolarization Really Mean? 4th International Dead Sea Arrhythmia Symposium. Israel, 1998
111. New Insights to Antiarrhythmic Actions Derived from High-resolution Optical Mapping. 4th International Dead Sea Arrhythmia Symposium. Israel, 1998
112. Indices of Cardiac Repolarization and Risk Stratification. Clinical Tutorial, Scientific Sessions. NASPE. San Diego, California, 1998
113. Microvolt T wave Alternans, Measurement and Mechanisms. Invited lecture. International Society of Noninvasive Electrophysiology. Ulm, Germany, 1998
114. Noninvasive Assessment of Risk of Sudden Cardiac Death. Invited speaker. American College of Cardiology Scientific Sessions. Atlanta, Georgia, 1998
115. Role of T wave Alternans in the Genesis of Reentrant Ventricular Arrhythmias. Invited speaker, T wave Alternans: Clinical Role in Risk Stratification for Sudden Cardiac Death. American Heart Association. November, 1997
116. Risk Stratification for Sudden Cardiac Death. Invited lecture; XIV Brazilian Congress on Arrhythmias & Brazilian Symposium of Non-invasive Electrocardiology. November, 1997
117. Noninvasive Arrhythmia Risk Assessment: Implications in the Prophylactic ICD Era. 10th Annual NEOSPE Sessions, CME program. Cleveland, Ohio, September, 1997.
118. T wave Alternans: A New Approach for Identifying the Patient at Risk for Sudden Cardiac Death. Invited Co-chair & speaker, special program. NASPE. New Orleans, Louisiana, 1997

119. Assessing Cardiac Risk from the T wave. Medical Grand Rounds, CME program. McNeal Hospital. Chicago, Illinois, May, 1997
120. Novel Insights to Tachycardia, Fibrillation, and Defibrillation Derived from High-resolution Optical Cardiac Mapping. Invited speaker, special session, CME Program. NASPE. New Orleans, Louisiana, 1997
121. QT Prolongation, QT Dispersion, QT Alternans: Different Aspects of the Same Pathophysiology? Invited speaker, CME Program. NASPE. New Orleans, Louisiana, 1997.
122. Mechanistic Relation Between T wave Alternans and Sudden Cardiac Death. Invited lecture, Cardiology Grand Rounds, CME Program. University of Chicago. April, 1997
123. Predicting Sudden Cardiac Death from the ECG: Every Other Beat Counts. Cardiology Grand Rounds. St. Vincent's Hospital. Sydney, Australia, 1997
124. Can Sudden Cardiac Death be Predicted from the T wave? Invited lecture, Cardiology Grand Rounds. SUNY Health Science Center. Syracuse, New York, February, 1997
125. Predicting Sudden Death from the T wave. Cardiology Grand Rounds, CME Program. University Hospitals of Cleveland. Cleveland, Ohio, December, 1996
126. Invited Chair, Cardiac Electrophysiology Society Annual Meeting. American Heart Association. November, 1996
127. Implications of Ion Channel Diversity to Ventricular Repolarization and Arrhythmogenesis: Insights from High-resolution Optical Mapping. Invited Lecture, Electrical Responses and Pharmacology of Mammalian A-V node and Atrium. Banff, Canada, November, 1996
128. Invited Lecture: Symposium on Diagnostic Tools for Evaluating Risk of Sudden Cardiac Death, Computers in Cardiology. Indianapolis, Indiana, September, 1996
129. Invited Lecture: History and Mechanisms of T wave Alternans. XXIIIth Congress of the European Society of Cardiology. Birmingham, United Kingdom, August, 1996
130. Unique Insights to Arrhythmia Mechanisms from Voltage-sensitive Dyes. Metro Medical Center, Department of Molecular Physiology Seminar. July, 1996
131. Optical Mapping of Electrical Heterogeneities in Ventricular Myocardium. University of Rochester, Strong Memorial Hospital, School of Medicine Seminar. June, 1996
132. New Insights to Reentry Mechanisms from Voltage-sensitive Dye Studies, Department of Biomedical Engineering Seminar. Johns Hopkins University School of Medicine.
133. Cardiac Arrhythmias: From Cell to Bedside. AHA Presidents Reception. Cleveland, 1996
134. Can Sudden Cardiac Death be Predicted from the Surface Electrocardiogram. Cardiology Grand Rounds. University of Maryland. May, 1996
135. Optical Mapping and Mechanisms of Arrhythmias. Cardiac Bioelectricity Research & Training Center Annual Retreat. May, 1996
136. Regional Repolarization Heterogeneity in the Genesis of T wave Alternans. Invited Lecture, Symposium T wave alternans and the Assessment of Arrhythmic Risk, CME Program. Sponsored by the University of Rochester. American Heart Association. New Orleans, Louisiana, 1996.
137. Noninvasive Evaluation of Arrhythmia Vulnerability, Cardiology Core Curriculum. December, 1995
138. Prediction of Arrhythmia Risk Potential. Cardiology Subspecialty Conference, CME Program. The Toledo Hospital. November, 1995
139. Non-invasive Assessment of Risk for Sudden Cardiac Death Lecture. NEOSPE. September, 1995
140. Management of Supraventricular Tachycardia. Primary Care Residents Lecture. July, 1995
141. Cardiac Arrhythmias: Diagnosis and Treatment. Anesthesia Scientific Series. Trumbull Memorial Hospital. Warren, Ohio, June, 1995

142. Dispersion of Repolarization Versus Early After Depolarizations. Core Curriculum in Basic Electrophysiology. North American Society of Pacing and Electrophysiology. Boston, Massachusetts, 1995
143. Non-invasive Prediction of Sudden Cardiac Death: Role of T wave Alternans. Cardiology Grand Rounds. University of California (Mofit Hospital). San Francisco, California, May, 1995
144. New Insights to Cellular Mechanisms of Reentry from Voltage-sensitive Dyes. Bay Area Electrophysiology Conference. San Francisco, California, May, 1995
145. New Views on Antiarrhythmic Drugs. Medical Grand Rounds. University Hospitals of Cleveland, Ohio, December, 1994
146. Insights to Arrhythmia Mechanisms Using Optical Mapping. San Raffaele Hospital. Milan, Italy. September, 1994
147. Prediction of Sudden Cardiac Death from the Surface ECG. University of Louvain. Brussels, Belgium, September, 1994
148. High-resolution Electrical Mapping Studies of the Heart. Karolinska Institute. Stockholm, Sweden, September, 1994
149. Supraventricular Tachycardia in Ambulatory Patients. Primary Care Residents Lecture Series. July, 1994
150. Cardiac Repolarization: Ionic Mechanisms and Clinical Implications. Cardiology Grand Rounds. University Hospitals of Cleveland. Cleveland, Ohio, May, 1994
151. Use of high-dose epinephrine and magnesium in adult cardiac arrest. American Heart Association - Northeast Ohio Affiliate, Cleveland. April 27, 1994
152. Arrhythmias in hypertrophic cardiomyopathy. Cardiology Fellows Conference. February 2, 1994
153. Cardiac Optical Mapping. Invited symposium chair. International Society of Biomedical Optics. January, 1994
154. T wave Alternans as an Accurate Predictor of Arrhythmia Vulnerability. Special Seminar. American Heart Association. Dallas, November, 1994
155. Advances in Cardiopulmonary Medicine. Management of Supraventricular Tachycardia. VA Symposium. September, 1993
156. Medicine Clinical Conference for the Primary Practitioner. Review of the ESVEM Trial. September, 1993
157. Signal Average ECG and Heart Rate Variability: What are They all About and How Do They Help in Patient Management? NEOSPE lecture. September, 1993
158. Narrow Complex Reentry. Cardiology fellows lecture. August, 1993
159. Electrical Alternans as a Noninvasive Marker of Arrhythmia Vulnerability: Possible Relation to the Signal Averaged Late Potential.. Invited lecture: Fifth World Congress of the European Society for Noninvasive Cardiovascular Dynamics. Rutgers University. Piscataway, New Jersey, May, 1993
160. Non-pharmacological Therapy of Supraventricular Tachycardia. Medical Grand Rounds. University Hospitals of Cleveland. Cleveland, Ohio, January, 1993
161. Electrophysiology Review. Heartbeats Fast & Slow Meeting. Cleveland, Ohio, October, 1992
162. Signal Average Electrocardiography: Basic Principles and Clinical Uses. Medical Grand Rounds. St. Elizabeth's Hospital Medical Center. Youngstown, Ohio, October, 1992
163. Action Potential Oscillations in Relation to Normal and Pathologic Cardiac Function. Invited lecture, Universitats-Institut Fur Medizinische Physik und Biophysik, Graz, Austria, October, 1992
164. Case Presentations of the Wolff Parkinson White Syndrome. Cardiology Catheterization Conference. May, 1992

165. Signal Average Electrocardiography: Physiological Basis and Clinical Uses. Cardiology Grand Rounds. University Hospitals of Cleveland. Cleveland, Ohio, March, 1992
166. The Clinical Evaluation of Supraventricular Tachycardias. Morbidity & Mortality Conference. Wade Park VA Hospital. Cleveland, Ohio, February, 1992
167. Use of Optical Mapping for Investigations of Ventricular Fibrillation and Defibrillation. Intermedics Seminar. December, 1991
168. Probing Dynamics of the Cardiac Syncytium Using Voltage-sensitive Dyes. Biomedical Engineering Departmental Research Seminar. Case Western Reserve University. October, 1991
169. Arrhythmogenic Cardiac Oscillations: Observations from the Tissue Bath and the Bedside. Cardiology Grand Rounds, University Hospitals of Cleveland. Cleveland, Ohio, October, 1991

PUBLISHED MANUSCRIPTS

1. Gard JJ, Green KG, Eloff, BC, **Rosenbaum DS**, Wang X, Robbins J, Schuessler RB, Yamada KA, Saffitz JE. Remodeling of gap junctions and slow conduction in a mouse model of desmin-related cardiomyopathy. *In Review*
2. Walker M, **Rosenbaum DS**. Mechanism of arrhythmogenic discordant alternans: Experimental evidence for dual role of conduction and repolarization. *In Review*
3. Poelzing S, Roth BJ, **Rosenbaum DS**. Optical measurements reveal nature of intercellular coupling across the transmural wall. *In Review*
4. Wan X, Laurita KR, Pruvot E, **Rosenbaum DS**. Molecular basis for spatially heterogeneous repolarization alternans across the heart. *In Review*
5. Pajouh M, Wilson LD, Poelzing S, Johnson NJ, **Rosenbaum DS**. IKs blockade reduces dispersion of repolarization in heart failure. *In Review*
6. Pastore JM, Laurita KR, **Rosenbaum DS**. Role of cellular restitution in mechanism of arrhythmogenic discordant alternans. *In Review*
7. Poelzing S, **Rosenbaum DS**. Altered connexin43 expression in failing myocardium produces electrical uncoupling across the left ventricular wall. *Am J Physiol. In Press*
8. Poelzing S, **Rosenbaum DS**. Nature, significance, and mechanisms of electrical heterogeneities in ventricle. *American Association of Anatomist. In Press*
9. Liszka, K., York, D., **Rosenbaum, DS.**, Mackin, M., and Lichter, M., "Remote Monitoring of a Heterogeneous Sensor Network for Biomedical Research in Space," Proceedings of the International Conference on Pervasive Computing and Communications (PCC'04), June 2004, pp. 829-833.
10. Watanabe M, Chuck ET, Rothenberg F, **Rosenbaum DS**. Developmental transitions in cardiac conduction. *In Press*
11. Pruvot EJ, Katra RP, **Rosenbaum DS**, Laurita KR. Role of calcium cycling versus restitution in mechanism of repolarization alternans. *Circulation Research* 2004;84:1083-1090
12. Poelzing S, Akar FG, Baron E, Roth BJ, **Rosenbaum DS**. Heterogeneous connexin43 expression produces electrophysiological heterogeneities across the ventricular wall. *American Journal Physiology* May 2004;286(5)H2001-9
13. Petrich BG, Eloff BC, Lerner DL, Kovacs A, Saffitz JE, **Rosenbaum DS**, Wang Y. Targeted activation of JNK in ventricular myocytes *in vivo* induces cardiomyopathy and myocardial remodeling. *J Biological Chemistry* 2004;279:15330-15338
14. Libbus I, Wan X, **Rosenbaum DS**. Electrotonic load triggers remodeling of repolarizing currents in ventricle. *American Journal Physiology* 2004;286:H1901-H1909

15. Tian XL, Yong SL, Wan X, Wu L, Chung MK, Tchou PJ, **Rosenbaum DS**, van Wagoner DR, Kirsch GE, Wang Q. Mechanisms by which SCN5A mutation N1325S causes cardiac arrhythmias and sudden death in vivo. *Cardiovascular Research*. 2004;61:256-267
16. Pham Q, Quan KJ, **Rosenbaum DS**. T wave alternans: Marker, mechanism, and methodology for predicting sudden cardiac death. *J Electrocardiology*, 2004;36:75-81
17. Eloff BC, Gilat E, Wan X, **Rosenbaum DS**. Pharmacological modification of cardiac gap junctions to enhance cardiac conduction: Evidence supporting a novel target for antiarrhythmic therapy. *Circulation* 2003;108:3157-3163
18. Walker ML, Wan X, Kirsch GE, **Rosenbaum DS**. Hysteresis effect implicates calcium cycling as a mechanism of repolarization alternans. *Circulation* 2003;108:2704-2709
19. Akar FG, Rosenbaum DS. Transmural electrophysiological heterogeneities underlying arrhythmogenesis in heart failure. *Circulation Research* 2003;93:638-645
20. Pruvot E, **Rosenbaum DS**. T-wave Alternans for Risk Stratification and Prevention of Sudden Cardiac Death. *Current Cardiology Reports* 2003;5:350-357
21. Libbus I, **Rosenbaum DS**. Transmural action potential changes underlying ventricular electrical remodeling. *J Cardiovasc Electrophysiology*, 2003;14:394-402
22. Laurita KR, Chuck ET, Yang T, Dong WQ, Kuryshev YA, Brittenham GM, **Rosenbaum DS**, Brown AM. Optical mapping reveals conduction slowing and impulse block in iron-overload cardiomyopathy. *J Lab Clin Med*. 2003 Aug;142(2):83-9.
23. Walker ML, **Rosenbaum DS**. Repolarization alternans: Implications for mechanism and prevention of sudden cardiac death. *Cardiovascular Research* 2003;57:599-614
24. Libbus I, **Rosenbaum DS**. Remodeling of cardiac repolarization: Mechanisms and implications to memory. *Cardiac Electrophysiology Review* 2002;6:302-310
25. Idriss SF, Van Hare GF, Fink D, **Rosenbaum DS**. Microvolt T wave alternans inducibility in normal newborn puppies: Effects of development. *J Cardiovasc Electrophysiol* 2002;13:593-598
26. Akar F, Yan G, Antzelevitch C, **Rosenbaum DS**. Unique topographical distribution of M-Cells underlies reentrant mechanism of Torsade de Points in the long QT Syndrome. *Circulation* 2002;105:1247-1253
27. **Rosenbaum DS**. T-wave alternans: a mechanism of arrhythmogenesis comes of age after 100 years. *J Cardiovasc Electrophysiol* 2001;12:207-209
28. Eloff BC, Lerner DL, Yamada KA, Schuessler RB, Saffitz JE, **Rosenbaum DS**. High resolution optical mapping reveals conduction slowing in connexin43 deficient mice. *Cardiovascular Research* 2001;51:681-690
29. Akar FG, Roth BJ, **Rosenbaum DS**. Optical Measurement of Cell-to-Cell Coupling in the Intact Heart Using Subthreshold Electrical Stimulation. *American Journal of Physiology* 2001;281:H533-H542
30. Girouard SD, **Rosenbaum DS**. Role of wavelength adaptation in the initiation, maintenance, and pharmacologic suppression of reentry. *J Cardiovasc Electrophysiol* 2001;12:697-707
31. Kaufman ES, Priori SG, Napolitano C, Schwartz PJ, Iyengar S, Elston RC, Schnell AH, Gorodeski EZ, Rammohan G, Bahhur NO, Connuck D, Verrilli L, **Rosenbaum DS**, Brown AM. Electrocardiographic Prediction of Abnormal Genotype in Congenital Long QT Syndrome: Experience in 101 Related Family Members. *J Cardiovasc Electrophysiology* 2001;12:455-461
32. Akar F, Laurita Kenneth, **Rosenbaum DS**. Cellular basis for dispersion of repolarization underlying reentrant arrhythmias. *Journal of Electrocardiology* 2000;33:23-31
33. Pastore JM, **Rosenbaum DS**. Role of structural barriers in the mechanism of alternans-induced reentry. *Circulation Research* 2000;87:1157-1163

34. Gold MR, Bloomfield DM, Anderson KP, El-Sherif NE, Wilber DJ, Groh WJ, Estes M, Kaufman ES, Greenberg ML, **Rosenbaum DS**. A Comparison of T-Wave Alternans, Signal Averaged Electrocardiography and Programmed Ventricular Stimulation For Arrhythmia Risk Stratification. *J Am Col Cardiology*. 2000;36:2247-2253
35. Laurita KR, **Rosenbaum DS**. The interdependence of modulated dispersion and tissue structure in the mechanism of unidirectional block. *Circulation Research*. 2000;87:922-928
36. Costantini, O, Drabek C, **Rosenbaum DS**. Can sudden cardiac death be predicted from the T wave of the ECG? A critical examination of T wave alternans and QT interval dispersion. *PACE* 2000;23:1407-1416
37. Kaufman ES, Mackall JA, Julka B, Drabek C, **Rosenbaum DS**. Influence of heart rate and sympathetic stimulation on arrhythmogenic T wave alternans. *Am J Physiol* 2000;279:H1248-H1255
38. Drabek CA, **Rosenbaum DS**, Quan K: Images in electrophysiology: From bench to bedside: spontaneous inversion of an implanted defibrillator: *J Cardiovasc Electrophys* 1999;10:124
39. Pastore JM, Girouard SD, Laurita KR, Akar FG, **Rosenbaum DS**. Mechanism linking T wave alternans to the genesis of cardiac fibrillation. *Circulation* 1999;99:1385-1394
40. Laurita R KL, Girouard S, Akar FG, **Rosenbaum DS**. Modulated dispersion explains changes in arrhythmia vulnerability during premature stimulation of the heart *Circulation* 1998;98:2774-2780
41. Esperer HD, Armoundas AA, **Rosenbaum DS**, Klein HU, Cohen RJ: Specificity of T wave alternans in individuals without organic heart disease who are not inducible during ventricular programmed stimulation. *J Ital Cardiol* 1998;28:95-97
42. Armoundas AA, **Rosenbaum DS**, Ruskin JN, Garan H, Cohen RJ: Prognostic significance of electrical alternans versus signal averaged electrocardiography in predicting the outcome of electrophysiological testing and arrhythmia-free survival. *Heart* 1998;80:251-256
43. Armoundas AA, Osaka M, Mela T, **Rosenbaum DS**, Ruskin JN, Garan H, Cohen RJ. T wave alternans and dispersion of the QT interval as risk stratification markers in patients susceptible to sustained ventricular arrhythmias. *Am J Cardiol* 1998;82:23-25
44. Gilat E, Girouard SD, Pastore JM, Laurita KR, **Rosenbaum DS**. Does angiotensin converting enzyme inhibition produce electrophysiological and antiarrhythmic effects in the intact heart? *J Cardiovasc Pharmacol* 1998;31:734-740
45. Salama G, Kanai T, Huang D, Efimov I, Girouard SD, **Rosenbaum DS**. Hypoxia and hypothermia enhance spatial heterogeneities of repolarization in guinea pig hearts: Analysis of spatial autocorrelation of optically recorded action potential durations. *J Cardiovasc. Electrophys* 1998;9:164-183
46. Chuck ET, Freeman DM, Watanabe M, **Rosenbaum DS**. Changing activation sequence in the embryonic chick heart: Implications for the development of the His-Purkinje system. *Circulation Research* 1997;81:470-476
47. Estes MNA, Zipes DA, El-Sherif N, Venditti FJ, **Rosenbaum DS**, Albrecht P, Wang PJ, Drause PC, Cohen RJ. Electrical alternans during rest and exercise as predictors of vulnerability to ventricular arrhythmias. *Am J Cardiol* 1997;80:1314-1318
48. Laurita KR, Girouard SD, Rudy Y, **Rosenbaum DS**. Role of passive electrical properties during action potential restitution in the intact heart. *Am J Physiol* 1997;273:H1205-H1214
49. **Rosenbaum DS**. Analysis of the T wave in assessing Cardiac Risk. *Cardiol In Review* 1997;5:152-160
50. Laurita KR, **Rosenbaum DS**. Implications of ion channel diversity to ventricular repolarization and arrhythmogenesis: Insights from high-resolution optical mapping. *Can J Cardiol*. 1997;13:1069-1076
51. Girouard SD, Laurita KR, **Rosenbaum DS**. Unique properties of cardiac action potentials recorded with voltage-sensitive dyes. *J Cardiovasc Electrophys* 1996;7:1024-1038

52. **Rosenbaum DS**, Albrecht P, Cohen RJ. Predicting sudden cardiac death from T wave alternans of the surface electrocardiogram: Promise and pitfalls. *J Cardiovasc Electrophys* 1996;7:1095-1111
53. Laurita KR, Girouard SD, **Rosenbaum DS**. Modulation of ventricular repolarization by a premature stimulus: Role of epicardial dispersion of restitution kinetics demonstrated by optical mapping of the intact guinea pig heart. *Circulation Research* 1996;79:493-503
54. Girouard SD, Pastore JM, Laurita KR, Gregory KW, **Rosenbaum DS**. Optical mapping in a new guinea pig model of ventricular tachycardia reveals mechanisms for multiple wavelengths in a single reentrant circuit. *Circulation*, 1996;93:603-613
55. Platt SB, Vijgen JM, Albrecht P, Van Hare GF, Carlson MD, **Rosenbaum DS**. Occult T wave alternans in long QT syndrome. *J Cardiovasc Electrophys* 1996;7:144-148
56. Calkins H, Prystowsky E, Berger RD, Saul JP, Klein LS, Liem LB, Huang SKS, Gillette P, Yong P, Carlson M, Kay GN, Dailey S, Epstein A, Plumb V, Wharton JM, Kanter R, Sorrentino R, Greenfield RA, Walsh E, Waldo A, Biblo L, Johnson N, Lieberman R, **Rosenbaum DS**. Recurrence of conduction following radiofrequency catheter ablation procedures: Relationship to ablation target and electrode temperature. *J Cardiovasc Electrophys* 1996;7:704-712
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58. Girouard SD, Laurita KR, **Rosenbaum DS**. Unique characteristics of optically recorded action potentials. *SPIE* 1994;2132:347-357
59. **Rosenbaum DS**, Jackson LE, Smith JM, Garan H, Ruskin JN, Cohen RJ: Electrical alternans and vulnerability to ventricular arrhythmias. *N Engl J Med* 1994;330:235-241
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61. **Rosenbaum DS**, Girouard SD, Laurita KR. High-resolution cardiac mapping with voltage-sensitive dyes. *IEEE-EMBS* 1992;14:1995-1996
62. Raeder EA, **Rosenbaum DS**, Bhasin R, Cohen RJ. Alternating morphology of the QRST complex preceding sudden death. *N Engl J Med* 1992;326:271-272
63. **Rosenbaum DS**, Wilber DJ, Smith JM, Du D, Garan H, Ruskin JN. Local activation variability during reentrant monomorphic ventricular tachycardia in the dog. *Cardiovasc Res* 1992;26:237-243
64. **Rosenbaum DS**, Kaplan DT, Kanai A, Jackson L, Cohen RJ, Garan H, Salama G. Repolarization inhomogeneities in ventricular myocardium change dynamically with abrupt cycle length shortening. *Circulation* 1991;84:1333-1345
65. **Rosenbaum DS**, Cohen RJ: Frequency based measures of atrial fibrillation in man. *IEEE-EMBS* 1990;12:582-583
66. **Rosenbaum DS**, Kaplan DT, Wilber DJ, Saul JP, Ruskin JN, Garan H. The precision of electrophysiological mapping: localizing depolarizing wavefronts from digitized extracellular electrograms and the role of data sampling rate. *J Cardiovasc Electrophysiol* 1990;1:2-14
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68. Kuchar D, **Rosenbaum DS**. Noninvasive recording of late potentials: Current state of the art. *J Pacing & Clinical Electrophysiol* 1989;12:1538-1551
69. **Rosenbaum DS**, Kaplan DT. Measuring spatial inhomogeneities in action potential duration and repolarization using optical transmembrane potentials. *IEEE-EMBS* 1989;11:222-223
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71. Smith JM, **Rosenbaum DS**, Cohen RJ: Variability in surface ECG morphology: Signal or Noise? *Proceedings of IEEE/EMBS*, Paris 1992
72. Feinberg H, **Rosenbaum DS**, Levitsky S, et al. Platelet deposition after surgically induced myocardial ischemia: An etiologic factor for reperfusion injury. *J Thorac Cardiovasc Surg* 1982;84:815
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BOOK CHAPTERS/EDITORIALS

1. Poelzing S, **Rosenbaum DS**. Cellular mechanisms of Torsade de Points. Novartis, In Review
2. Laurita KR, **Rosenbaum DS**. Restitution, repolarization, and alternans form arrhythmogenic substrates. In: Zipes D & Jalife J (eds): *Cardiac Electrophysiology: From Cell to Bedside*. Forth Edition. W.B. Saunders Co., Inc., Philadelphia, 2004, pp. 232-241
3. Walker ML, **Rosenbaum DS**. Ventricular Fibrillation: basic aspects. In: Saksena S & Camm Aj (eds): *Electrophysiological disorders of the heart*. Harcourt Health Sciences, New York, NY, In Press
4. Quan KJ, **Rosenbaum DS**. Ventricular Fibrillation: clinical aspects. In: Saksena S & Camm Aj (eds): *Electrophysiological disorders of the heart*. Harcourt Health Sciences, New York, NY, In Press
5. Laurita KR, **Rosenbaum DS**. Optical mapping of cellular repolarization in the intact heart. In: Shenasa M, Borggreffe M, Breithardt G (eds): *Cardiac Mapping*, 2nd edition, Blackwell Publishing Inc., Elmsford, NY, 2003, pp. 709-727
6. Pruvot E, **Rosenbaum DS**. T wave alternans: Mechanisms, relevance, and clinical implications. In: Gussak I & Antzelevitch C (eds): *Cardiac repolarization: Bridging basis and clinical science*. The Humana Press, Totowa, NJ, 2003, pp. 507-530
7. *Quantitative Cardiac Electrophysiology*. Cabo C., **Rosenbaum DS** (ed). Marcel Dekker Inc, N.Y., 2002
8. **Rosenbaum DS**, Akar FG. The Electrophysiologic Substrate for Reentry: Unique Insights From High-Resolution Optical Mapping With Voltage-Sensitive Dyes. In: Cabo C & Rosenbaum DS (eds): *Quantitative Cardiac Electrophysiology*. Marcel Dekker Inc, New York, NY, 2002, pp. 555-582
9. Eloff BC, **Rosenbaum DS**. Electrophysiological characterization of the mouse heart using voltage-sensitive dyes. In: Walsh R & Hoit B (eds): *Cardiovascular Physiology in the Genetically Engineered Mouse*. Kluwer Academic Publishers, Norwell, MA, 2001, pp.165-176
10. *Optical Mapping of Cardiac Excitation and Arrhythmias*. **Rosenbaum DS**, Jalife J (ed). Futura Publishing Company, Armonk, N.Y., 2001
11. **Rosenbaum DS**. Optical mapping of cardiac excitation and arrhythmias: A Primer. In: Rosenbaum DS & Jalife J (eds): *Optical Mapping of Cardiac Excitation and Arrhythmias*. Futura Publishing, Armonk, N.Y., 2001, pp. 2-9
12. **Rosenbaum DS**. Unique role of optical mapping in the study of propagation and repolarization. In: Rosenbaum DS & Jalife J (eds): *Optical Mapping of Cardiac Excitation and Arrhythmias*. Futura Publishing, Armonk, N.Y., 2001, pp. 94-96
13. Laurita KR, Pastore J, **Rosenbaum DS**. Mapping arrhythmia substrates related to repolarization 1: Dispersion of repolarization. In: Rosenbaum DS & Jalife J (eds): *Optical Mapping of Cardiac Excitation and Arrhythmias*. Futura Publishing, Armonk, N.Y., 2001, pp. 205-226
14. Girouard SD, **Rosenbaum DS**. Mapping arrhythmia substrates related to repolarization 2: Cardiac wavelength. In: Rosenbaum DS & Jalife J (eds): *Optical Mapping of Cardiac Excitation and Arrhythmias*. Futura Publishing, Armonk, N.Y., 2001, pp. 227-244

15. **Rosenbaum DS.** T wave alternans: A Mechanism of arrhythmogenesis comes of age after 100 years (Editorial) *J Cardiovascular Electrophysiology* 2001;12:207-209
16. Walker ML, **Rosenbaum DS.** Detection of T wave alternans and its relationship to cardiac arrhythmogenesis. In: *Myocardial repolarization: From Gene to Bedside.* Oto A (ed) In Press
17. Watanabe M, **Rosenbaum DS,** Libbus I, Chuck ET. The form and function of the developing cardiac conduction system. In: Clark EB, Nakazawa M, Takao A (eds): *Etiology and morphogenesis of congenital heart disease.* Futura Publishing Inc. Armonk, New York, 2000, pp257-264
18. Libbus I, Laurita KR, **Rosenbaum DS.** High-Resolution Measurement of Ventricular Repolarization Using Voltage-Sensitive Dyes. In: Franz M (ed): *Monophasic Action Potentials.* Futura Publishing Company, Armonk, New York, 2000, pp.291-306
19. **Rosenbaum DS,** Libbus I. Optical Mapping, submitted for Encyclopedia of Life Sciences, Nature Publishing Group, London, www.els.net
20. Pastore JM, **Rosenbaum DS.** The relationship Between T-Wave Alternans and Cardiac Arrhythmogenesis as Elucidated by Optical Mapping. In: Ovsyshcher IE (ed): *Cardiac Arrhythmias and Device Therapy: Results and Perspectives for the New Century.* Futura Publishing Company, Inc., Armonk, New York, 2000, pp. 11 -21
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ABSTRACTS

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