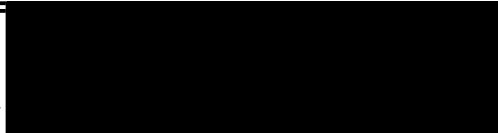


Committee on Energy and Commerce
U.S. House of Representatives
Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)(5)

1. Your Name: <p style="text-align: center;">Robert S. Kieval</p>		
2. Your Title: <p style="text-align: center;">Founder, Chief Development Officer, CVRx, Inc.</p>		
3. The Entity(ies) You are Representing: <p style="text-align: center;">CVRx, Inc. and The Medical Device Manufacturers Association</p>		
4. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No X
5. Please list any Federal grants or contracts, or contracts or payments originating with a foreign government, that you or the entity(ies) you represent have received on or after January 1, 2015. Only grants, contracts, or payments related to the subject matter of the hearing must be listed. None.		
6. Please attach your curriculum vitae to your completed disclosure form.		

Signature: _____



Date: March 26, 2017

CURRICULUM VITAE

ROBERT S. KIEVAL, V.M.D., Ph.D.

PERSONAL DATA

Present Position: Founder, Executive Vice President and Chief Development Officer
CVRx, Inc.

Address:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Date of Birth: November 30, 1960

Place of Birth: New York, New York

EDUCATION

1982 B.A., University of Pennsylvania, Philadelphia, PA
1987 V.M.D. *Summa Cum Laude*, University of Pennsylvania
1991 Ph.D., Physiology, University of Pennsylvania

ACADEMIC APPOINTMENTS

1991-1992 Research Associate
The University of Maryland School of Medicine
Baltimore, MD

SELECTED AWARDS AND HONORS

Twin Cities Business
2012 Minnesota's Top Inventors

Twin Cities Finance and Commerce
2006 Innovator of the Year

University of Pennsylvania School of Veterinary Medicine
1985 Phi Zeta Veterinary Honor Society
1987 V.M.D. *Summa Cum Laude*
1987 Valedictorian (1/115), Class of 1987
1987 J.B. Lippincott Prize for highest scholastic average
1987 Leonard Pearson Prize for greatest potential impact in veterinary
medicine

Robert S. Kieval, V.M.D., Ph.D.

BOARD SERVICE

2001 – 2016	CVRx, Inc., Minneapolis, MN
2007 – present	Medical Device Manufacturers Association, Washington, DC
2010 – present	Center for Large Landscape Conservation, Bozeman, MT
2011 – present	The Medical Alley Association, Minneapolis, MN
2014-2016	Board Chairman
2013-2014	Board Vice Chairman
2013 – present	The Bet Shalom Endowment, Minnetonka, MN

CONGRESSIONAL TESTIMONY AND BRIEFINGS

2014 Congressional Staff Briefing for Sens. Al Franken (D-MN) and Bob Corker (R-TN), “Local to Global Barriers to Innovation Facing the Medical Device Industry: A Discussion of Current Trends,” April 1, 2014

2013 Joint Economic Committee Hearing, “Reducing Unnecessary and Costly Red Tape through Smarter Regulations,” June 26, 2013

2009 Congressional Field Hearing chaired by Congressman Erik Paulsen (R-MN) concerning the proposed tax on medical devices in pending health care reform legislation, October 19, 2009

RECENT ADVISORY COMMITTEE ACTIVITY

2014, 2013 American Heart Association: Heart & Stroke Gala Executive Leadership Team

2014, 2013 & 2012 Minnesota High Technology Association: TEKNE Awards Judge

2014, 2013 & 2012 Sabes Jewish Community Center annual entrepreneurial celebration

2013 TPT (PBS) Bioscience and Health Strategic Council

2013, 2012, 2010 International Business Forum: Minnesota Venture Finance Conference

RECENT INVITED PUBLIC SPEAKING

2015

“The Critical Role of Patents in the Innovation Ecosystem,” Inventing America Conference, Washington, DC, March, 2015

2014

“Executive Roundtable” panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, November, 2014

“Barostim: Integrated Autonomic Modulation Therapy for Resistant Hypertension,” Jahrestagung Nephrologie & Hypertensiologie, Baden, Austria, September, 2014

2013

“Executive Roundtable” panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, September, 2013

Robert S. Kieval, V.M.D., Ph.D.

2012

"What Relevant Endpoints in Autonomic Nerve Modulation Therapy Trials?" Cardiovascular Clinical Trialists Forum, Paris, France, December, 2012

"How Much Could One Deviate From 'Randomized - Controlled' Trials?" Cardiovascular Clinical Trialists Forum, Paris, France, November, 2012

"Minnesota's Medical Device Future," LifeScience Alley Biosciences Summit, Minneapolis, MN, September, 2012

"Executive Roundtable" panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, October, 2012

2011

"Executive Roundtable" panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, March, 2011

2010

"Executive Roundtable" panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, April, 2011

2009

"Surviving & Thriving in Today's Market," LifeScience Alley Small Business Leaders Forum, Golden Valley, MN, October, 2009

CVRx and Industry Overview, University of Minnesota Medical Devices Center Innovation Fellowship Program, Minneapolis, MN, October, 2009

"Baroreflex Activation Therapy for the Treatment of Hypertension and Heart Failure," Transcatheter Cardiovascular Therapeutics 21st Annual Scientific Symposium, San Francisco, CA, September, 2009

"Due Diligence," *The Collaborative: The Economy Will Turn - Is Your Business Ready?* Minneapolis, MN, July, 2009

"Medical Technology and Venture Capital: A Fruitful Yet Fragile Ecosystem," Medical Device Manufacturers Association Annual Meeting, Washington DC, June, 2009

"Executive Roundtable" panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, April, 2009

"Systems Physiology, Are You Kidding Me?!" University of Pennsylvania Veterinary Medical Scientist Training Program 40th Anniversary Reunion, Philadelphia, PA, March, 2009

2008

"How Venture-backed Companies Navigate the Reimbursement Process," Medical Device Manufacturers Association Annual Reimbursement and Health Policy Conference, Washington, DC, November, 2008

"Venture Capital, Equity, and Start Ups" panel, University of Minnesota Carlson School of MN, MBA Course: Medical Device Industry - Business and Public Policy, Management, Minneapolis, February, 2008

2007

"Venture Capital, Equity, and Start Ups" panel, University of Minnesota Carlson School of Management, MBA Course: Medical Device Industry - Business and Public Policy, Minneapolis, MN, February, 2007

U.S. PATENTS ISSUED

1. 5,507,782 Method and apparatus for dual chamber cardiac pacing
2. 5,554,177 Method and apparatus to optimize pacing based on intensity of acoustic signal
3. 5,626,620 Dual chamber pacing system and method with continual adjustment of the AV escape interval so as to maintain optimized ventricular pacing for treating cardiomyopathy
4. 5,626,623 Method and apparatus for optimizing pacemaker AV delay
5. 5,716,383 Dual chamber pacing system and method with continual adjustment of the AV escape interval so as to maintain optimized ventricular pacing for treating cardiomyopathy
6. 5,749,906 Dual chamber pacing system and method with continual adjustment of the AV escape interval so as to maintain optimized ventricular pacing for treating cardiomyopathy
7. 5,800,464 System for providing hyperpolarization of cardiac cells to enhance cardiac function
8. 5,814,079 Cardiac arrhythmia management by application of anodal stimulation for hyperpolarization of myocardial cells
9. 6,073,048 Baroreflex modulation with carotid sinus nerve stimulation for the treatment of heart failure
10. 6,178,349 Drug delivery neural stimulation device for treatment of cardiovascular disorders

11. 6,190,324 Implantable medical device for tracking patient cardiac status
12. 6,522,926 Devices and methods for cardiovascular reflex control
13. 6,529,771 Implantable medical device for tracking patient cardiac status
14. 6,595,998 Tissue distraction device
15. 6,616,624 Systems and method for controlling renovascular perfusion
16. 6,850,801 Mapping methods for cardiovascular reflex control devices
17. 6,985,774 Stimulus regimens for cardiovascular reflex control
18. 7,153,305 Method for treating tibial plateau compression fractures
19. 7,158,832 Electrode designs and methods of use for cardiovascular reflex control devices
20. 7,311,713 Method of interbody fusion with stacked elements
21. 7,480,532 Baroreflex activation for pain control, sedation and sleep
22. 7,485,104 Systems and methods for controlling renovascular perfusion
23. 7,499,742 Electrode structures and methods for their use in cardiovascular reflex control
24. 7,499,747 External baroreflex activation
25. 7,502,650 Baroreceptor activation for epilepsy control
26. 7,616,997 Devices and methods for cardiovascular reflex control via coupled electrodes
27. 7,623,926 Stimulus regimens for cardiovascular reflex control
28. 7,744,637 Method for restoring vertebral body height
29. 7,749,255 Method for fusing adjacent bones
30. 7,780,707 Method for reducing a vertebra using stacked elements
31. 7,780,734 Tissue distraction device
32. 7,799,034 Tissue distraction device
33. 7,801,614 Stimulus regimens for cardiovascular reflex control

34. 7,811,331 Tissue distraction device
35. 7,813,812 Baroreflex stimulator with integrated pressure sensor
36. 7,840,271 Stimulus regimens for cardiovascular reflex control
37. 7,905,885 Reduction system for restoration of a vertebral body
38. 7,949,400 Devices and methods for cardiovascular reflex control via coupled electrodes
39. 8,060,206 Baroreflex modulation to gradually decrease blood pressure
40. 8,075,623 Apparatus and kit for distraction of tissue surfaces
41. 8,086,314 Devices and methods for cardiovascular reflex control
42. 8,116,873 Measurement of patient physiological parameters
43. 8,123,755 Tissue distraction device
44. 8,206,398 Apparatus for spinal fusion
45. 8,214,050 Method for monitoring physiological cycles of a patient to optimize patient therapy
46. 8,224,437 Baroreflex activation for sedation and sleep
47. 8,249,705 Devices, systems, and methods for improving left ventricular structure and function using baroreflex activation therapy
48. 8,290,595 Method and apparatus for stimulation of baroreceptors in pulmonary artery
49. 8,337,531 Method of supporting and distracting opposing vertebral bodies of a spine
50. 8,343,193 Method of supporting and distracting opposing vertebral bodies
51. 8,478,414 Baroreflex activation for pain control, sedation and sleep
52. 8,521,293 Measurement of patient physiological parameters
53. 8,535,353 Method of providing spinal interbody fusion
54. 8,560,076 Devices and methods for electrode implantation
55. 8,571,664 Measurement of patient physiological parameters

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56. 8,583,236 Devices and methods for cardiovascular reflex control
57. 8,594,794 Baroreflex activation therapy with incrementally changing intensity
58. 8,606,359 System and method for sustained baroreflex stimulation
59. 8,620,422 Electrode array structures and methods of use for cardiovascular reflex control
60. 8,712,531 Automatic baroreflex modulation responsive to adverse event
61. 8,718,789 Electrode structures and methods for their use in cardiovascular reflex control
62. 8,755,907 Devices and methods for electrode implantation
63. 8,838,246 Devices and methods for cardiovascular reflex treatments
64. 8,880,190 Electrode structures and methods for their use in cardiovascular reflex control
65. 8,974,464 Expansion member for insertion into a body tissue space
66. 9,044,609 Electrode structures and methods for their use in cardiovascular reflex control
67. 9,199,082 Devices and methods for improved placement of implantable medical devices
68. 9,414,760 Method for monitoring physiological cycles of a patient to optimize patient therapy
69. 9,427,583 Electrode structures and methods for their use in cardiovascular reflex control

PUBLICATIONS

BOOK CHAPTERS AND REVIEWS

1. Moore EN, Wetstein L, Harken AH, Michelson EL, **Kieval RS**, Callans DJ, Spear JF: Chemical homogeneous ablation of heterogeneous myocardial injury as a means of decreasing ventricular arrhythmogenesis. *New Trends in Arrhythmias* 6:341-345, 1990.
2. Moore EN, **Kieval RS**, Spear JF: Reentry in the atrioventricular node. In Rosen MR, Janse MJ, Wit AL (eds): *Cardiac Electrophysiology: A Textbook*. Mount Kisco NY, Futura, 1990, pp 589-601.
3. Moore EN, **Kieval RS**, Spear JF: Electrophysiologic Basis of Ventricular Tachyarrhythmias. *Cardiologia* 35(suppl 1):13-18, 1990.

4. Moore EN, Spear JF, **Kieval RS**: Comparative Cardiac Electrophysiology. In Janse MI, Meijler FL, van der Tweel LH (eds): *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen: Comparative Electrocardiology*. 93:469-476, 1991.
5. **Kieval RS**, Spear JF, Moore EN: Mechanisms of Arrhythmias and Basis of Antiarrhythmic Drug Action: The Role of Cell Coupling. In Horowitz LN (ed): *Current Management of Arrhythmias*. Philadelphia, B.C. Decker, 1991, pp 1-10.
6. Moore EN, Callans DJ, **Kieval RS**, Hook BG, Spear JF: Regional intracoronary infusion of heptanol increases susceptibility to inducible ventricular tachycardias while intracoronary infusion of potassium does not. *New Trends in Arrhythmias* 8:237-241, 1992.
7. Spear JF, **Kieval RS**, Moore EN: The role of myocardial anisotropy in arrhythmogenesis associated with myocardial ischemia and infarction. *Journal of Cardiovascular Electrophysiology* 3:579-588, 1992.
8. Moore EN, **Kieval RS**, Spear JF: Arrhythmia mechanisms in different stages of chronic heart disease. In Josephson ME, Wellens HJJ (eds): *Tachycardias: Mechanisms and Management*. Mount Kisco NY, Futura, 1993, pp 33-47.
9. Lederer WJ, He S, Luo S, duBell W, Kofuji P, **Kieval R**, Neubauer CF, Ruknudin A, Cheng H, Cannell MB, Rogers TB, Schulze DH: The molecular biology of the Na⁺-Ca²⁺ exchanger and its functional roles in heart, smooth muscle cells, neurons, glia, lymphocytes and nonexcitable cells. *Annals of the New York Academy of Sciences* 779:7-17, 1996.

MANUSCRIPTS

1. Whitman G, **Kieval R**, Wetstein, L, Seeholzer S, MacDonald G, Simson M, Harken A: The relationship between global myocardial ischemia, left ventricular function, myocardial redox state, and high energy phosphate profile. *Journal of Surgical Research*, 35:332-339, 1983.
2. Whitman G, **Kieval R**, Seeholzer S, MacDonald G, Simson M, Harken A: Myocardial P-31 nuclear magnetic resonance and ventricular function following graded cardiac ischemia. *Current Surgery*, 41:90-91, 1984.
3. Whitman G, Robinson M, **Kieval R**, Baker D, Harken A: The influence of infused calcium on the post-ischemic myocardium. *Journal of Surgical Research*, 37:348-353, 1984.
4. Whitman GJR, **Kieval RS**, Seeholzer S, MacDonald G, Simson MB, Harken AH: Recovery of left ventricular function following graded cardiac ischemia as predicted by P-31 nuclear magnetic resonance. *Surgery*, 97:428-434, 1985.
5. Whitman GJR, **Kieval RS**, Roth RA, Harken AH: Evaluation of myocardial preservation using P-31 NMR. *Journal of Surgical Research*, 38:154-161, 1985.
6. Segal H, Katcher AH, **Kieval R**: Talking and blood pressure during dental treatment. *General Dentistry*, 33:336-337, 1985.

7. **Kieval RS**, Johnson NJ, Rosen MR: Triggered activity as a cause of bigeminy. *Journal of the American College of Cardiology*, 8:644-647, 1986.
8. **Kieval RS**, Butler VP, Derguini F, Bruening RC, Rosen MR: Cellular electrophysiologic effects of vertebrate digitalis-like substances. *Journal of the American College of Cardiology*, 11:637-643, 1988.
9. Whitman GJR, **Kieval RS**, Brown J, Banerjee A, Grosso MA, Harken AH: Optimal hypothermic preservation of arrested myocardium in isolated perfused rabbit hearts: A 31P NMR study. *Surgery*, 105:100-108, 1989.
10. **Kieval RS**, Dykes NL: Gastric torsion in a cat. *Journal of the American Veterinary Medical Association*, 194:819-820, 1989.
11. **Kieval RS**, Spear JF, Moore EN: Gap junctional conductance in ventricular myocyte pairs isolated from postischemic rabbit myocardium. *Circulation Research* 71:127-136, 1992.
12. Callans DJ, **Kieval RS**, Hook BG, Moore EN, Spear JF: The effect of coronary perfusion of potassium or heptanol on conduction and inducibility of ventricular arrhythmias in the dog. *American Journal of Physiology* 263(*Heart Circ. Physiol.* 32):H1382-H1389, 1992.
13. **Kieval RS**, Bloch RJ, Lindenmayer GE, Ambesi A, Lederer WJ: Immunofluorescence localization of the Na-Ca exchanger in heart cells. *American Journal of Physiology* 263(*Cell Physiol.* 32):C545-C550, 1992.
14. Kofuji P, Hadley RW, **Kieval RS**, Lederer WJ, Schulze DH: Expression of the Na-Ca exchanger in diverse tissues: a study using the cloned human cardiac Na-Ca exchanger. *American Journal of Physiology* 263(*Cell Physiol.* 32):C1241-C1249, 1992.
15. McDaniel LD, Lederer WJ, Kofuji P, **Kieval R**, Schulze DH, Schultz RA: Mapping of the human cardiac Na⁺/Ca²⁺ exchanger gene (NCX1) by fluorescent *in situ* hybridization to chromosome region 2p22-->p23. *Cytogenetics and Cell Genetics* 63:192-3, 1993.
16. Schulze D, Kofuji P, Hadley R, Kirby MS, **Kieval RS**, Doering A, Niggli E, Lederer WJ: Sodium/calcium exchanger in heart muscle: molecular biology, cellular function and its special role in excitation-contraction coupling. *Cardiovascular Research* 27:1726-1734, 1993.
17. Cicogna R, Mascioli G, Bonomi FG, **Kieval RS**, Bernabo MG, Turelli A, Odoardo V: Carotid sinus hypersensitivity and syndrome in patients with chronic atrial fibrillation. *PACE* 17:1635-1640, 1994.
18. Pak PH, Maughan WL, Baughman KL **Kieval RS**, Kass DA: Mechanism of acute mechanical benefit from VDD pacing in hypertrophied heart: Similarity of responses in hypertrophic cardiomyopathy and hypertensive heart disease. *Circulation* 98:242-248, 1998.

19. Maron BJ, Nishimura RA, McKenna WJ, Rakowski H, Josephson ME, **Kieval RS**: Assessment of dual chamber pacing as a treatment for drug-refractory symptomatic patients with obstructive hypertrophic cardiomyopathy: A randomized, double-blind crossover study (M-PATHY). *Circulation* 99:2927-2933, 1999.
20. Lohmeier TE, Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: Prolonged activation of the baroreflex produces sustained hypotension. *Hypertension* 43[part2]:306-311, 2004.
21. Lohmeier TE, Dwyer TM, Hildebrandt DA, Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: Influence of prolonged baroreflex activation on arterial pressure in angiotensin hypertension. *Hypertension* 46(5):1194-1200, 2005.
22. Illig KA, Levy M, Sanchez L, Trachiotis GD, Shanley C, Irwin E, Pertile T, **Kieval R**, Cody R: An implantable carotid sinus stimulator for drug-resistant hypertension: Surgical technique and short-term outcome from the multicenter phase II Rheos feasibility trial. *J Vasc Surg* 44:1213-1218, 2006.
23. Lohmeier TE, Hildebrandt DA, Dwyer TM, Barrett AM, Irwin ED, Rossing MA, **Kieval RS**: Renal denervation does not abolish sustained baroreflex-mediated reductions in arterial pressure. *Hypertension* 49:373-379, 2007.
24. Tordoir JHM, Scheffers I, Schmidli J, Savolainen H, Liebeskind U, Hansky B, Herold U, Irwin E, Kroon AA, de Leeuw P, Peters TK, **Kieval R**, Cody R: An implantable carotid sinus baroreflex activating system: Surgical technique and short-term outcome from a multi-center feasibility trial for the treatment of resistant hypertension. *Eur J Vasc Endovasc Surg* 33:414-421, 2007.
25. Lohmeier TE, Dwyer TM, Irwin ED, Rossing MA, **Kieval RS**: Prolonged activation of the baroreflex abolishes obesity-induced hypertension. *Hypertension* 49:1307-1314, 2007.
26. Schmidli J, Savolainen H, Eckstein F, Irwin I, Peters T, Martin R, **Kieval R**, Cody R, Carrel T: Acute device-based blood pressure reduction: Electrical activation of the carotid baroreflex in patients undergoing elective carotid surgery. *Vascular* 15(2): 63–69, 2007.
27. Zucker IH, Hackley JF, Cornish KG, Hiser BA, Anderson NR, **Kieval R**, Irwin ED, Serdar DJ, Peuler JD, Rossing MA: Chronic baroreceptor activation enhances survival in dogs with pacing-induced heart failure. *Hypertension* 50:904-910, 2007.
28. Sanchez LA, Illig K, Levy M, Jaff M, Trachiotis G, Shanley C, Irwin E, Jim J, Rossing R, **Kieval R**: Implantable carotid sinus stimulator for the treatment of resistant hypertension: Local effects on carotid artery morphology. *Ann Vasc Surg* 24(2):178-184, 2010
29. Sabbah HN, Gupta RC, Imai M, Irwin ED, Rastogi S, Rossing MA, **Kieval RS**: Chronic electrical stimulation of the carotid sinus baroreflex improves left ventricular function and

promotes reversal of ventricular remodeling in dogs with advanced heart failure. *Circ Heart Fail* 4(1):65-70, 2011.

30. Zannad F, Stough WG, Pina L, Mehran R, Abraham WT, Anker SD, De Ferrari GM, Farb A, Geller NL, **Kieval RS**, Linde C, Redberg RF, Stein K, Vincent A, Woehrle H, Pocock SJ: Current challenges for clinical trials of cardiovascular medical devices. *Int J Cardiol* 175(1):30-37, 2014.
31. Zannad F, Stough WG, Mahfoud F, Bakris G, Kjeldsen SE, **Kieval RS**, Haller H, Yared N, De Ferrari GM, Pina IL, Stein K, Azizi M: Design considerations for clinical trials of autonomic modulation therapies targeting hypertension and heart failure. *Hypertension* 65(1):5-15, 2015.

ABSTRACTS

1. Whitman G, **Kieval R**, Wetstein L, Seeholzer S, Williamson J, Harken A: The temporal relation between onset of global myocardial ischemia, contractile dysfunction, and high-energy phosphate concentration. *Association for Academic Surgery, 16th Annual Meeting* #71, 1982.
2. Whitman G, **Kieval R**, Seeholzer S, MacDonald G, Simson M, Harken A: Myocardial P-31 nuclear magnetic resonance and ventricular function following graded cardiac ischemia. *Journal of Magnetic Resonance Imaging* 1983.
3. Whitman G, **Kieval R**, Seeholzer S, MacDonald G, Simson M, Harken A: Recovery of left ventricular function following graded cardiac ischemia as predicted by P-31 nuclear magnetic resonance of the post-ischemic myocardium. *Journal of the American College of Cardiology* 1:1184, 1983.
4. Whitman G, Malamed S, **Kieval R**, Robinson M, Harken A: Ultrastructural confirmation of a narrow (<1mm) peri-ischemic "borderzone". *Clinical Research* 31:226A, 1983.
5. Whitman G, **Kieval R**, Haselgrove J, Seeholzer S, MacDonald G, Harken A, Simson M: Recovery of left ventricular contractile function following graded cardiac ischemia. *Federation Proceedings* 42: #2684, 1983.
6. Whitman GJR, **Kieval RS**, Simson MB, Harken AH: Prediction of post-ischemic left ventricular function by P-31 nuclear magnetic resonance. *Society of Magnetic Resonance in Medicine, Second Annual Meeting* #377, 1983.
7. Whitman GJR, **Kieval RS**, Simson MB, Harken AH: Optimal myocardial preservation as determined by P-31 nuclear magnetic resonance. *Association for Academic Surgery, 17th Annual Meeting* #61, 1983.

8. **Kieval R**, Butler V, Derguini F, Bruening R, Nakanishi K, Rosen M: Effects of vertebrate digitalis-like substances on the cellular electrophysiologic properties of Purkinje fibers. *Journal of the American College of Cardiology* 7:125A, 1986.
9. **Kieval RS**, Callans DJ, Spear JF, Moore EN: Gap junctional conductance in postischemic ventricular myocyte pairs. *Circulation* 82:III-451, 1990.
10. Callans DJ, **Kieval RS**, Moore EN, Spear JF: The intracoronary infusion of heptanol but not potassium increases susceptibility to inducible ventricular tachycardia in dogs. *Circulation* 82:III-647, 1990.
11. Callans DJ, Spear JF, Simson MB, **Kieval RS**, Moore EN: Relative decrease in QRS high frequency energy in dogs with inducible ventricular tachycardia after myocardial infarction. *Circulation* 82:III-752, 1990.
12. **Kieval RS**, Spear JF, Moore EN: Gap junctional conductance in ventricular myocyte pairs isolated from postischemic myocardium. *Biophysical Journal* 59:465a, 1991.
13. Lederer WJ, Kofuji P, Schulze D, Hadley R, **Kieval R**, Kirby MS, Niggli E: Molecular function of the sodium-calcium exchanger: Guinea-pig, rat and human. *Journal of Molecular and Cellular Cardiology* 24:S13, 1992.
14. O'Toole MF, Rauh RA, Fitts SM, Nora MO, **Kieval RS**, Silver MA: Short atrioventricular delay pacing improves symptoms in ischemic cardiomyopathy. *PACE* 19:567, 1996.
15. Gleva MJ, Poole JE, Reddy RK, Bardy GH, Fitts SM, **Kieval RS**: Long term evaluation of permanent short AV interval dual chamber pacing in idiopathic dilated cardiomyopathy. *First Annual Scientific Meeting of the Heart Failure Society of America*, September, 1997.
16. Kass DA, Chen CH, Talbot M, Nakayama M, **Kieval RS**, Lima J: Improved exercise performance and quality of life in patients with symptomatic hypertensive left ventricular hypertrophy by VDD pacing: A double-blind randomized cross-over trial. *Journal of the American College of Cardiology* 31:375A, 1998.
17. Maron BJ, Nishimura RA, McKenna WJ, Rakowski H, Josephson ME, **Kieval RS**: Assessment of dual chamber pacing as a treatment for drug-refractory patients with obstructive hypertrophic cardiomyopathy: A randomized, double-blind crossover study (M-PATHY). *Circulation* 98:I-506, 1998.
18. Lohmeier TE, Irwin ED, Rossing MA, Sedar DJ, **Kieval RS**: Prolonged Activation of the Baroreflex Produces Sustained Hypotension. *Hypertension* 43:306, 2004.
19. Lohmeier TE, Hildebrandt DA, Barrett AM, Irwin ED, Rossing MA, Sedar DJ, **Kieval RS**: Prolonged Baroreflex Activation Decreases Arterial Pressure Even in the Absence of Renal Innervation. *J Am Soc Nephrol* 15:201A, 2004.

20. Irwin ED, Lohmeier TE, Legris MJ, Rossing MA, Serdar DJ, **Kieval RS**: Acute Activation of the Carotid Baroreflex Produces No Clinically Significant Effects on Preload. *J Am Soc Nephrol* 15:202A, 2004.
21. Irwin ED, Serdar DJ, Persson B, Rossing MA, **Kieval RS**: Isoflurane Blunts the Systemic Response to Electrical Activation of the Carotid Baroreflex. *J Am Soc Nephrol* 15:825A-826A, 2004.
22. Schmidli J, Savolainen H, Irwin E, Peters T, Cain C, Martin R, **Kieval R**, Eckstein F, Carrel T: A completely new treatment for hypertension? *J Hypertension* 22(suppl 2):S252, 2004.
23. Schmidli J, Savolainen H, Irwin E, Peters T, Cain C, Martin R, **Kieval R**, Carrel T: Electrical activation of the baroreflex in man: A step toward a novel treatment for hypertension? *Vascular* 12:S95, 2004.
24. Lohmeier TE, Dwyer TM, Hildebrandt DA, Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: Suppression of the renin-angiotensin system contributes to the reduction in arterial pressure produced by prolonged baroreflex activation. *Hypertension* 44(4):500, 2004.
25. Lohmeier TE, Hildebrandt DA, Barrett AM, Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: The renal nerves are not essential for sustained baroreflex-mediated reductions in arterial pressure. *Am J Hypertension* 18(5 part 2):130A, 2005.
26. Sica DA, **Kieval RS**, Martin RC, Irwin ED: Baroreflex Hypertension Therapy for resistant hypertension. *Am J Hypertension* 18(5 part 2):213A, 2005.
27. Schmidli J, Mohaupt M, Savolainen H, Allemann Y, Irwin E, Peters T, Martin R, **Kieval R**, Carrell T: Response to acute electrical activation of the carotid baroreflex is maintained in drug refractory hypertension. *J Hypertension* 23(Suppl 2):S6, 2005.
28. Eberle E, Schmidli J, Zobrist C, Savolainen H, Irwin E, Peters T, Martin R, **Kieval R**, Carrel T: Evaluation of an anesthetic regimen for testing activation of the carotid baroreflex. *J Hypertension* 23(Suppl 2):S287, 2005.
29. Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: Hemodynamic response to electrical activation of the carotid baroreflex is preserved during administration of antihypertensive medications in canines. *J Am Soc Nephrol* 16:167A, 2005.
30. Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: Electrical activation of the carotid baroreflex induces central sympathoinhibition and enhances the antihypertensive effects of Beta-adrenergic blockade. *J Am Soc Nephrol* 16:174A, 2005.
31. Irwin ED, Rossing MA, Serdar DJ, **Kieval RS**: Electrical activation of the carotid baroreflex induces sympathoinhibition, a key element of a new treatment for hypertension. *J Am Soc Nephrol* 16:175A, 2005.

32. Zucker IH, Cornish KG, Hiser BA, **Kieval R**, Irwin ED, Serdar DJ, Rossing MA: Chronic baroreceptor activation enhances survival in dogs with pacing-induced heart failure. *Circulation* 112(17 Suppl II):II-155, 2005.
33. Sabbah HN, Imai M, Irwin ED, Serdar DJ, Sharov VG, Rossing MA, **Kieval RS**: Chronic electrical activation of the carotid baroreflex improves left ventricular systolic and diastolic function in dogs with advanced heart failure. *Circulation* 112(17 Suppl II):II-557, 2005.
34. Bisognano J, Sloand J, Papademetriou V, Rothstein M, Sica D, Flack J, Pertile T, Jarvis G, **Kieval R**, Cody R: Baroreflex hypertension therapy with a chronically implanted system: Early results from the Rheos feasibility trial in patients with resistant hypertension. *J Clinical Hypertension* 8(5 Suppl A):A43, 2006.
35. Hildebrandt DA, Lohmeier TE, Irwin ED, Rossing MA, Cody RJ, **Kieval RS**: The blood pressure lowering effects of prolonged baroreflex activation are not salt sensitive. *J Clinical Hypertension* 8(5 Suppl A):A207, 2006.
36. Irwin ED, Rossing MA, Cody RJ, **Kieval RS**: Sympathoinhibition induced by electrical activation of the carotid baroreflex is preserved during administration of antihypertensive medications in canines. *J Clinical Hypertension* 8(5 Suppl A):A210, 2006.
37. Irwin ED, Rossing MA, Hagen JJ, Cody RJ, **Kieval RS**: Electrical activation of the carotid baroreflex enhances the antihypertensive effects of β -Adrenergic blockade and induces central sympathoinhibition in canines. *J Clinical Hypertension* 8(5 Suppl A):A211, 2006.
38. Irwin ED, Rossing MA, Lohmeier TE, Cody RJ, **Kieval RS**: Central sympathoinhibition: A key element of blood pressure reduction with an implantable baroreflex activation system. *J Clinical Hypertension* 8(5 Suppl A):A211, 2006.
39. Irwin ED, Rossing MA, Cody RJ, Serdar DJ, Hagen JJ, **Kieval RS**: Hemodynamic response to electrical activation of the carotid baroreflex is maintained during administration of antihypertensive medications in normotensive canines. *J Clinical Hypertension* 8(5 Suppl A):A211, 2006.
40. Illig K, Levy M, Sanchez L, Trachiotis G, Shanley C, Irwin E, Pertile T, **Kieval R**, Cody R: An implantable carotid sinus baroreflex activating system for drug-resistant hypertension: Surgical technique and short-term outcome from the multi-center Rheos feasibility trial. *Society for Vascular Surgery Annual Meeting*, Abstract S25, June, 2006.
41. de Leeuw PW, Kroon AA, Scheffers I, Tordoir J, Schmidli J, Mohaupt M, Allemann Y, Jordan J, Engeli S, Liebeskind U, Luft FC, Eckert S, Hansky B, **Kieval R**, Cody R, Rossing M, Irwin E, Peters T: Baroreflex Hypertension Therapy with a chronically implanted system: Preliminary efficacy and safety results from the Rheos DEBuT-HT study in patients with resistant hypertension. *J Hypertension* 24(suppl 4):S300, 2006.

42. Tordoir JHM, Scheffers I, Schmidli J, Savolainen H, Irwin E, Kroon AA, de Leeuw P, Peters TK, **Kieval R**, Cody R: An implantable carotid sinus baroreflex activating system: Surgical technique and short-term outcome from a multi-centre feasibility trial for the treatment of resistant hypertension. *European Society of Vascular Surgery*, Abstract 23, September, 2006.
43. Schmidli J, Savolainen H, Tordoir J, Liebeskind U, Hansky B, Herold U, Irwin E, Peters T, **Kieval R**, Cody R: Implantable carotid sinus electrical stimulation with the Rheos System for treatment of drug resistant hypertension: Early clinical demonstration of safety and effectiveness from a multicenter trial. *Vascular* 2006.
44. Bisognano J, Sloand J, Papademetriou V, Rothstein M, Sica D, Flack J, Pertile T, **Kieval R**, Cody R: An implantable carotid sinus Baroreflex Activating System for drug-resistant hypertension: Interim chronic efficacy results from the multi-center Rheos Feasibility Trial. *Circulation* 114(Suppl II):II-575, 2006.
45. Sanchez L, Illig K, Levy M, Jaff M, Trachiotis G, Shanley C, Irwin E, Rossing M, **Kieval R**, Cody R: Implantable carotid sinus stimulator for the treatment of resistant hypertension: local effects on carotid artery morphology. *Soc Clinical Vasc Surgery* 2007.
46. Rothstein M, Bisognano J, Sloand J, Pertile TL, **Kieval R**, Cody RJ: Chronic therapy with an implantable baroreflex activation system does not produce orthostatic hypotension. *J Clinical Hypertension* 9(5 suppl A):A39, 2007.
47. Sabbah HN, Gupta RC, Irwin ED, Rossing MA, **Kieval RS**: Baroreflex activation therapy with the Rheos System for the treatment of chronic heart failure. *J Coronary Artery Dis* 7:166, 2007.
48. Lohmeier TE, Hildebrandt DA, Dwyer TM, Irwin ED, Rossing MA, **Kieval RS**: Prolonged activation of the baroreflex abolishes reduced kidney mass, salt-induced hypertension. *Hypertension* 50:e85, 2007.