CURRICULUM VITAE
DAVID L. GEENEN, Ph.D.

CONTACT INFORMATION

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RESEARCH SYNOPSIS

My area of research includes the fields of cardiac muscle regenerative medicine and stem cell biology. My laboratory is particularly interested in the paracrine role of adult bone marrow derived stem cells in the preservation and recovery of cardiovascular tissue following ischemic damage. My laboratory studies the mechanisms of retention, migration and differentiation of mobilized and exogenously administered stem cells in the heart. We have established several preclinical models of cardiac ischemia and heart failure and assess the functional effect of stem cell integration using high-resolution ultrasound and cardiac catheterization.

EDUCATION

University of Michigan, Ann Arbor, Michigan; Ph.D., Department of Kinesiology, Area: Exercise Science, Cardiovascular Physiology — 1985

Calvin College, Grand Rapids, Michigan; BA, Department of Physical Education, Area: Exercise Science — 1978

PROFESSIONAL EXPERIENCE

Assistant Professor (Tenure track), Physician Assistant Studies Department, College of Health Professions, Grand Valley State University, Grand Rapids, Michigan — 2013-Present

Assistant Professor of Physiology in Medicine (Tenure-track), Section of Cardiology and Department of Physiology and Biophysics, University of Illinois at Chicago Chicago, Illinois — 2007-2013

Research Associate Professor of Medicine, Section of Cardiology and Department of Physiology and Biophysics (Affiliate) University of Illinois at Chicago, Chicago, Illinois — 1997-2007

Research Assistant Professor of Medicine, Division of Cardiology, Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, New York — 1989-1997

Instructor of Medicine, Division of Cardiology, Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, New York — 1987-1989

Postdoctoral Fellow, Division of Cardiology, Montefiore Medical Center and Albert Einstein College of Medicine, Bronx, New York — 1985-1987

HONORS AND AWARDS

Research Assistantship, Division of Cardiology, University of Michigan	1984 – 1985
University of Michigan Rackham Graduate School Dissertation Award	1983
Michigan Chapter of Sigma Chi Dissertation Award	1982
Research Assistantship, University of Michigan	1979-1983

CURRENT AND PAST GRANT SUPPORT

Grant Valley State University, Center for Scholarly and Creative Excellence: **The Role of Gap Junctions on Stem Cell Retention Following Myocardial Ischemia/ Reperfusion** 2014 -2016
P.I. David L. Geenen

NIH National Center for Research Resources: **Biomicroscopy in Murine Cardiovascular Research** P.I. David L. Geenen 2014 - 2015
Application funded ($500K) but subsequently relinquished to The University of Illinois at Chicago upon acceptance of faculty position at Grand Valley State University

NHLBI(P01): **Integrated Mechanisms of Cardiac Maladaptation** 2005 - 2014
P.I. R. John Solaro, Director of Animal Physiology Core: David L. Geenen, Ph.D.

NHLBI (R21) **Phosphoprotein Signaling in Experimental Cardiac Remodeling** 2011 - 2013
P.I., Danziger, Co-Investigator: David L. Geenen, Ph.D.)

NHLBI (P01):**Oxidative Stress and Left Ventricular Diastolic Function** 2009 - 2013
P.I.,Harrison (Vanderbilt), Co-Investigator: David L. Geenen, Ph.D.

DOD: **Cardioprotection from Hypoxic Injury and the Role of Compartmentalized Signaling** 2009 - 2012
P.I., O'Bryan, Co-Investigator: David L. Geenen, Ph.D, Collaborator

NHLBI (R21) **The Polycomb/Trithorax System in the Regulation of Cardiac Hypertrophy** 2009 - 2011
P.I., Wang, Co-Investigator: David L. Geenen, Ph.D.

NHLBI(R01): **Molecular Biology of Cardiac Valvuloseptal Morphogenesis** 2006 - 2011
P.I. David L. Geenen, Ph.D.

Illinois Regenerative Medicine Institute: **Cardiac Muscle Regeneration in Heart Failure** 2006 - 2008
P.I. Project 3: David L. Geenen, Ph.D.

UIC Office of the Vice Chancellor for Research - Clinical and Translational Research Initiative Pilot Grant: **Intracoronary Injection of Autologous Bone Marrow Derived Stem Cells for the Treatment of Ischemic Cardiomyopathy with or without Refractory Angina Pectoris** 2006 - 2008
P.I. David L. Geenen, Ph.D.

AMGEN: **Stem Cells in Cardiac Remodeling** 2005 - 2006
P.I. David L. Geenen, Ph.D.

UIC Campus Research Board (Intramural): **Stem Cells in Cardiac Remodeling** 2002 - 2003
P.I. David L. Geenen, Ph.D.

NHLBI(R03): **Stress-induced Desensitization of the Ischemic Heart** 1999 - 2002
P.I. David Geenen, Ph.D.

ADA Research Award: **Receptors for Activated C Kinase in Diabetes-Induced Cardiac Dysfunction** 1999 - 2001
P.I. David Geenen, Ph.D.

AHA-Chicago: **Receptors for Activated C Kinase and Cardiac Hypertrophy** 1998 - 2000
P.I. David Geenen, Ph.D.

NHLBI(R01): **Role of GLUT4 in Cardiac Metabolism and Physiology** 1997 - 1999
P.I. Maureen Charron, PhD; Co-Principal Investigator: David Geenen, PhD

NHLBI FIRST Award (R29): **Adaptations in the Rat Cardiac Isograft** 1992 - 1996
P.I. David Geenen, PhD

NHLBI: **The Effects of Physical Training on the Heart** 1987 - 1995
P.I. James Scheuer, MD; Co-Investigator: David Geenen, PhD

AHA: **Role of the Renin Angiotensin System in Cardiac Hypertrophy** 1991 - 1994
P.I. James Scheuer, MD; Co-Investigator: David Geenen, PhD

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Federation of American Societies for Experimental Biology	1999 - Present
American Physiological Society	1988 - Present
American Heart Association	1982 - Present

TEACHING ACTIVITIES

Grand Valley State University

PAS 521 Medical Physiology	2013 - Present
PAS 522-523 Clinical Pathophysiology	2015 - Present
PAS 572 Hospital and Clinical Experience	2014 - 2015
PAS 580 Evidence-Based Medicine	2014
PAS 582-584 (Course Series) Evidence-Based Medicine	2014 – Present
PAS 605 Research in Medicine	2014 - 2015
PAS 688 Physician Assistant Research	2015
PAS 689 Thesis	2015
AHS 301 Introduction to Research Methods	2013 - 2016
AHS 100 Medical Terminology	2014 - 2016

University of Illinois at Chicago

Physiology 552 (Translational and Applied Physiology)	2010 - 2013
PRCL 641 (Clinical Pathophysiology I, Aging and the Heart)	2006 - 2013
Graduate College Life Sciences 500 (Human Physiology, Respiratory Physiology)	2007 - 2013
Physiology 586 (Cell Physiology)	2008 - 2013
Physiology 518 (Molecular, Cellular and Integrative Cardiovascular Physiology)	2002 - 2013
Physiology 530 (Biology of Stem Cells)	2006 - 2008
Human Physiology 321 (Cardiovascular Section)	1998 - 2006
Human Physiology 341	1997 - 2006
Kinesiology 421 (Exercise Physiology)	2000

Albert Einstein College of Medicine and Graduate School

General Physiology, Membranes and Transport	1997
General Physiology, Cardiac/Smooth Muscle	1995 – 1997
Cardiovascular Physiology, Neurohumoral Control	1994 - 1997
Cardiovascular Physiology, Muscle Mechanics	1993

PEER REVIEWED ARTICLES (Chronological Order)

1. Gilliam, T.B., Freedson, P.S., MacConnie, S.E., **Geenen, D.L.,** and Pels, A.E. Comparison of blood lipids, lipoproteins, anthropometric measures, and resting and exercise cardiovascular responses in children, 6-7 years old. Preventive Medicine, 1981, 10,754-764.
2. Gilliam, T.B., Freedson, P.S., **Geenen, D.L.**, and Shahraray, B. Physical activity patterns as determined by heart rate monitoring in six to seven year old children. Medicine and Science in Sports and Exercise, 1981, 13 (1), 65-67.
3. Pels, A.E., Gilliam, T.B., Freedson, P.S., **Geenen, D.L.,** and MacConnie, S.E. Heart rate response to bicycle ergometer exercise in prepubertal children ages 6-7 years. Medicine and Science in Sports and Exercise, 1981, 13 (5), 299-302.
4. **Geenen, D.L.,** Gilliam, T.B., Crowley, D., Moorehead-Steffens, C., and Rosenthal, A. Echocardiographic measures in 6-7 year old children following an eight-month exercise program. American Journal of Cardiology, 1982, 49 (8), 1990-1995.
5. Gilliam, T.B., MacConnie, S.E., **Geenen, D.L.,** Pels, A.E., and Freedson, P.S. Exercise programs for children: A way to prevent heart disease? The Physician and Sports Medicine, 1982, 10 (9), 96-108.
6. MacConnie, S.E., Gilliam, T.B., **Geenen, D.L.,** and Pels, A.E. Daily physical activity patterns of prepubertal children involved in a vigorous exercise program. International Journal of Sports Medicine, 1982, 3 (4), 202-207.
7. **Geenen, D.L.,** White, T.P., and Lampman, R.M. Papillary mechanics and cardiac morphology of infarcted rat hearts after training. Journal of Applied Physiology, 1987, 63 (1), 92-96.
8. **Geenen, D.L.,** Buttrick, P., and Scheuer, J. Cardiovascular and hormonal responses to swimming and running in the rat. Journal of Applied Physiology, 1988, 65 (1), 116-123.
9. Buttrick, P.M., Malhotra, A., Factor, S., **Geenen, D.L.,** and Scheuer, J. The effects of chronic dobutamine administration on hearts of normal and hypertensive rats. Circulation Research, 1988, 63, 173-181.
10. **Geenen, D.L.,** Malhotra, A. and Scheuer, J. Regional variation in rat cardiac myosin isoenzymes and ATPase activity following infarction. American Journal of Physiology (Heart and Circulatory Physiology 25), 1989, 256, H745-H750.
11. Advani, S.V., **Geenen, D.L.,** Malhotra, A., Factor, S., and Scheuer, J. Myosin adaptations in the rat cardiac isograft. Circulation Research, 1990, 67, 780-783.
12. Buttrick, P.M., Perla, C., Malhotra, A., **Geenen, D.L.,** and Scheuer, J. The effects of chronic dobutamine treatment on cardiac mechanics and biochemistry after myocardial infarction in the rat. American Journal of Physiology (Heart and Circulatory Physiology 29), 1991, 260, H473-H479.
13. **Geenen, D.L.,** Malhotra, A., Liang, D., and Scheuer, J. Ventricular function and contractile proteins in the infarcted overloaded rat heart. Cardiovascular Research, 1991, 25, 330-336.
14. Buttrick, P.M., Malhotra, A., **Geenen, D.L.,** Factor, S., Leinwand, L., and Scheuer, J. The effect of aging and hypertension on cardiac biochemistry and molecular biology in the rat. Circulation Research, 1991, 68, 645-652.
15. **Geenen, D.L.,** Malhotra, A., Buttrick, P.M., and Scheuer, J. Increased heart rate prevents the isomyosin shift after cardiac transplantation in the rat. Circulation Research, 1992, 70, 554-558.
16. **Geenen, D.L.,** Malhotra, A., and Scheuer, J. Angiotensin II increases cardiac protein synthesis in the adult rat heart. American Journal of Physiology (Heart and Circulatory Physiology 34) , 1993, 260, H238-H243.

17. **Geenen, D.L.,** Malhotra, A., Buttrick, P.M., and Scheuer, J. Ventricular pacing attenuates but does not reverse cardiac atrophy and an isomyosin shift in the denervated rat heart. American Journal of Physiology (Heart and Circulatory Physiology 36), 1994, 267, H2149-H2154.
18. Kaplan, M.L., Cheslow, Y., Vikstrom, K., Malhotra, A., **Geenen, D.L.,** Nakouzi, A., Leinwand, L.A., and Buttrick, P.M. Cardiac adaptations to chronic exercise in mice. American Journal of Physiology (Heart and Circulatory Physiology 36), 1994, 267, H1167-H1173.
19. **Geenen, D.L.,** Malhotra, A., and Buttrick, P.M. Angiotensin receptor 1 blockade does not prevent physiological cardiac hypertrophy in the adult rat. Journal of Applied Physiology, 1996, 81, 816-821.
20. **Geenen, D.L.,** Malhotra, A., Scheuer, J., and Buttrick, P.M. Repeated catecholamine surges alter cardiac isomyosin expression but not protein synthesis in the rat heart. Journal of Molecular and Cellular Cardiology, 1997, 29(10), 2711-2716.
21. Malhotra, A., Reich, D., Reich, D., Nakouzi, A., Sanghi, V., **Geenen, D.L.,** and Buttrick, P.M. Diabetes is associated with functional activation of protein kinase C- in the heart which is prevented by angiotensin II receptor blockade. Circulation Research, 1997, 81, 1027-1033.
22. Bialik, S., **Geenen, D.L.,** Sasson, I.E., Cheng, R., Horner, J.W., Evans, S.M., Lord, E.M., Koch, C.J., and Kitsis, R.N. Myocyte apoptosis during acute myocardial infarction in the mouse localizes to hypoxic regions but occurs independently of p53. Journal of Clinical Investigation, 1997, 100(6), 1363-1372.
23. Evans S.M., Bergeron, M., Ferriero, D.M., Sharp, F.R., Hermeking, H., Kitsis, R.N., **Geenen, D.L.**, Bialik, S., Lord, E.M., Koch, C.J. Imaging hypoxia in diseased tissues. Advances in Experimental Medicine and Biology 1997, 428, 595-603
24. Bowman, J.C., Steinberg, S.F., Jiang, T., **Geenen, D.L.,** Fishman, G.I., and Buttrick, P.M. Expression of protein kinase C in the heart causes hypertrophy in adult mice and sudden death in neonates. Journal of Clinical Investigation, 1997,100(9), 2189-2195.
25. Stenbit, A.E., Tsao, T.S., Burcelin, R., Li, J., **Geenen, D.L.,** Factor, S.M., Brosius, F.C. III, Killen, P., Houseknecht, K., Katz, E.B., and Charron, M.J. GLUT4 Heterozygous knockout mice develop muscle insulin resistance and diabetes. Nature and Medicine, 1997, 3(10), 1096-1101.
26. Evans, S.M., Bergeron, M., Ferriero, D.M., Sharp, F.R., Hermeking, H., Kitsis, R.N., **Geenen, D.L.,** Bialik, S., Lord, E.M., Koch, C.J. Imaging hypoxia in diseased tissues. Advances in Experimental Biology, 1997, 428:595-603.
27. Shizukuda,Y., Buttrick, P.M., **Geenen, D.L.**, Borczuk, A.C., Kitsis, R.N., and Sonnenblick,E.H. β-Adrenergic stimulation causes cardiocyte apoptosis: influence of tachycardia and hypertrophy. American Journal of Physiology (Heart and Circulatory Physiology 44), 1998, H961-H968.
28. Takahashi, S., **Geenen, D.L**., Nieves, E., and Iwazumi, T. Collagenase degrades collagen *in vivo* in the ischemic heart. Biochemica et Biophysica Acta, 1999, 1428:251-9.
29. Stenbit, A.E., Katz, E.B., Chatham, J.C., **Geenen, D.L**., Factor, S.M., Weiss, R.G., Tsao, T.S., Malhotra, A., Chacko, V.P., Ocampo, C., Jelicks, L.A., Charron, M.J. Preservation of glucose metabolism in hypertrophic GLUT4 null hearts. American Journal of Physiology (Heart and Circulatory Physiology), 2000, 279, H313-H318.
30. Nwogu, J.I., **Geenen, D.L.**, Bean, M., Brenner, M.C., Huang, X., and Buttrick, P.M. Inhibition of collagen synthesis with prolyl-4-hydroxylase inhibitor (FG401) improves left ventricular function and decreases left ventricular dilatation after myocardial infarction. Circulation, 2001, 104:2216-2221.
31. Roman, B., **Geenen, D.L.,** Leitges, M., and Buttrick, P.M. PKC-β is not necessary for cardiac hypertrophy. American Journal of Physiology (Heart and Circulatory Physiology), 2001, 280(5), H2264-H2270.
32. Goldspink, P.H., McKinney, R.D., Kimball, V.A., **Geenen, D.L.**, and Buttrick, P.M. Angiotensin II induced cardiac hypertrophy *in vivo* is inhibited by cyclosporin A in adult rats. Journal of Cellular and Molecular Biochemistry, 2001, 226 (1-2): 83-88.
33. Farjah, M., Roxas, B.P., **Geenen, D.L.**, Danziger, R.S. Dietary salt regulates renal SGK1 abundance: relevance to salt sensitivity in the Dahl rat. Hypertension. 2003 Apr;41(4):874-8.

34. Ortiga-Carvalho, T.M., Hashimoto, K., Pazos-Moura, C.C., **Geenen, D.**, Cohen, R., Lang, R.M., Wondisford, F.E. Thyroid hormone resistance in the heart: role of the thyroid hormone receptor beta isoform. Endocrinology. 2004 Apr;145(4):1625-33.
35. Farjah, M., Washington, T.L., Roxas, B.P., **Geenen, D.L.**, Danziger, R.S. Dietary NaCl regulates renal aminopeptidase N: relevance to hypertension in the Dahl rat. Hypertension. 2004 Feb;43(2):282-5.
36. Roman, B.B., Goldspink, P.H., Spaite, E., Urboniene, D., McKinney, R., **Geenen, D.L.**, Solaro, R.J., Buttrick, P.M. Inhibition of PKC phosphorylation of cTnI improves cardiac performance in vivo. American Journal of Physiology (Heart and Circulatory Physiology) 2004 Jun;286(6):H2089-95.
37. Rundell, V.L., **Geenen, D.L.**, Buttrick, P.M., de Tombe, P.P. Depressed cardiac tension cost in experimental diabetes is due to altered myosin heavy chain isoform expression. American Journal of Physiology (Heart and Circulatory Physiology) 2004 Jul;287(1):H408-13.
38. Goldspink, P.H., Montgomery, D.E., Walker, L.A., Urboniene, D., McKinney, R.D., **Geenen, D.L.**, Solaro, R.J., Buttrick, P.M. Protein kinase C epsilon overexpression alters myofilament properties and composition during the progression of heart failure. Circulation Research, 2004 Aug 20;95(4):424-32.
39. Montgomery, D.E., Rundell, V.L., Goldspink, P.H., Urboniene, D., **Geenen, D.L.**, de Tombe, P.P., Buttrick, P.M. Protein Kinase C epsilon induces systolic cardiac failure marked by exhausted inotropic reserve and intact Frank-Starling mechanism. American Journal of Physiology (Heart and Circulatory Physiology) 2005 Nov, 289 (5):H1881-1888.
40. O'Donnell, J.M., Zampino, M., Alpert, N.M., Fasano, M.J., **Geenen, D.L.,** Lewandowski, E.D. Accelerated Triacylglycerol Turnover Kinetics in Hearts of Diabetic Rats Include Evidence for Compartmented Lipid Storage. American Journal of Physiology (Endocrinology and Metabolism), 2006 Mar;290(3);E448-455.
41. Zampino, M., Yuzhakova, M., Hansen, J., McKinney, R.D., Goldspink, P.H., **Geenen, D.L.**, Buttrick, P.M. Sex-related dimorphic response of HIF-1alpha expression in myocardial ischemia. American Journal of Physiology (Heart and Circulatory Physiology), 2006, Aug 291(2):H957-964.
42. Scruggs, S.B., Walker, L.A., Lyu, T., **Geenen, D.L.**, Solaro, R.J., Buttrick, P.M., Goldspink, P.H. Partial replacement of cardiac troponin I with a non-phosphorylatable mutant at serines 43/45 attenuates the contractile dysfunction associated with PKCepsilon. Journal of Molecular and Cellular Cardiology, 2006 Apr;40(4):465-473.
43. Belin, R.J., Sumandea, M.P., Kobayashi, T., Walker, L.A., Rundell, V.L., Urboniene, D., Yuzhakova, M., Ruch, S.H., **Geenen, D.L**., Solaro, R.J., de Tombe, P.P. Left ventricular myofilament dysfunction in rat experimental hypertrophy and congestive heart failure. American Journal of Physiology(Heart and Circulatory Physiology) 2006 Nov:291(5):H2344-2353.
44. Boomsma, R.A., Dominic Swaminathan, P., **Geenen, D.L.** Intravenously injected mesenchymal stem cells home to viable myocardium after coronary artery occlusion and preserve systolic function without altering infarct size. International Journal of Cardiology, 2007, Oct 31;122(1):17-28.
45. Boateng, S.Y.K., Belin, R.J., **Geenen, D.L.**, Margulies, K.B., Martin, J.L., Hoshijima, M., de Tombe, P.P., Russell, B. Cardiac dysfunction and heart failure are associated with abnormalities in the subcellular distribution and amounts of oligomeric muscle LIM protein. American Journal of Physiology (Heart and Circulatory Physiology), 2007 Jan;292(1):H259-269.
46. Piano, M. R., **Geenen, D.L**.,Schwertz, D.W., Chowdhury, S.A.K., Grachov, M. Long-term effects of alcohol consumption in male and female rats. Cardiovascular Toxicology, 2007 Sept; 7(4):247-254.
47. Shioura, K.M., **Geenen, D.L.**, Goldspink, P.H. Assessment of cardiac function with the pressure-volume conductance system following myocardial infarction in mice. American Journal of Physiology (Heart and Circulatory Physiology) 2007, Nov; 293(5):H2879-2877.
48. Nowak, G., Pena, J.R., Urboniene, D., **Geenen, D.L.,** Solaro, R.J., Wolska, B.M. Correlations between alterations in length-dependent calcium activation of cardiac myofilaments and the end-systolic pressure-volume relation. Journal of Muscle Research and Cell Motility 2007;28(7-8):415-419.

49. O'Donnell, J.M., Fields, A., Xu, X., Chowdhury, S.A., **Geenen, D.L.,** Bi, J. Limited functional and metabolic improvements in hypertrophic and healthy rat heart overexpressing the skeletal muscle isoform of SERCA1 by adenoviral gene transfer in vivo. American Journal of Physiology (Heart and Circulatory Physiology), 2008, Dec;295(6):H2483-94.
50. Cavallari, L.H., Fashingbauer, L.A., Camp, J.R., King, S.T., **Geenen, D.L.** Hypertension-Induced Renal Fibrosis and Spironolactone Response Vary by Rat Strain and Mineralocorticoid Receptor Gene Expression. Journal of the Renin-Angiotensin-Aldosterone System 2008, Sept; 9(4):146-153.
51. Gu, L., Pandey, V., **Geenen, D.L.**, Chowdhury, S.A., Piano, M.R. Cigarette smoke-induced left ventricular remodelling is associated with activation of mitogen-activated protein kinases. European Journal of Heart Failure 2008, Sept. 22 (Epub ahead of print).
52. Shioura, K.M., **Geenen, D.L.**, Goldspink, P.H. Sex-related changes in cardiac function following myocardial infarction in mice. Am J Physiology, Regulatory Integrative and Comparative Physiology 2008, Aug;295(2):R528-34.
53. Scruggs, S.B., Hinken, A.C., Thawornkaiwong, A., Robbins, J., Walker L.A., de Tombe, P.P., **Geenen, D.L.**, Buttrick, P.M., Solaro, R.J. Ablation of ventricular myosin regulatory light chain phosphorylation in mice causes cardiac dysfunction in situ and affects neighboring myofilament protein phosphorylation. Journal of Biological Chemistry, 2009 Feb; 284(8):5097-5106.
54. Baskind, H.A., Na, L., Quanhong, M., Patel, M.P., **Geenen, D.L.**, Wang, Q.T. Functional conservation of Asxl2, a murine homolog for the Drosophila enhancer of trithorax and polycomb group gene Asx. PLOS One, 2009 March; 4(3): 1-11.
55. Grajales, L., Banach, K., **Geenen, D.L.** Delayed enrichment of mesenchymal cells promotes cardiac lineage and calcium transient development. Journal of Molecular and Cellular Cardiology, 2010 48:735-745.
56. Dias, F.A., Urboniene, D., Yuzhakova, M.A., Biesiadecki, B.J., Pena, J.R., Goldspink P.H., **Geenen, D.L.,** Wolska, B.M. Ablation of iNOS delays cardiac contractile dysfunction in chronic hypertension. Frontiers in Bioscience, 2010, Jan; 1(2):312-324.
57. Warren, C.M., **Geenen, D.L.**, Helseth, Jr, D.L., Xu, H., Solaro, R.J. Sub-Proteomic fractionation, iTRAQ, and OFFGEL-LC-MS/MS approaches to cardiac proteomics. Journal of Proteomics. 2010 Jun 16;73(8):1551-61.
58. Shioura, K.M., Farjah, M., **Geenen, D.L.,** Solaro, R.J., Goldspink, P.H. Myofilament calcium sensitization delays decompensated hypertrophy differently between the sexes following myocardial infarction. American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology 2011 Feb;300(2):R361-8.
59. Belin, R.J., Sumandea, M.P., Sievert, G.A., Harvey, L.A., **Geenen, D.L.**, Solaro, R.J., de Tombe, P.P. Interventricular differences in myofilament function in experimental congestive heart failure. Pflugers Archive 2011 Dec; 462(6):795-809.
60. DeSantiago, J., Bare, D.J., Semenov, I., **Geenen, D.L.,** Wolska, B., Banach, K. Excitation contraction coupling in ventricular myocytes is enhanced by paracrine signaling from mesenchymal stem cells. Journal of Molecular and Cellular Cardiology, 2012 Jun;52(6):1249-56. Epub 2012 Mar 23.
61. Elsherif, L., Wang, Xuerong, Grachoff, M., Wolska, B., **Geenen, D.L.,** O'Bryan, J. Cardiac-specific expression of the tetracycline transactivator confers increased heart function and survival following ischemia reperfusion injury. PLoS One 2012;7(1):e30129.
62. Avner, B.S., Shioura, K.M., Scruggs, S.B., Grachoff, M., **Geenen, D.L.**, Helseth, D.L. Jr, Farjah, M., Goldspink, P.H., Solaro, R.J. Myocardial infarction in mice alters sarcomeric function via post-translational protein modification. Molecular and Cellular Biochemistry 2012 Apr; 363(1-2):203-215.
63. Boomsma, R.A., **Geenen, D.L.** Mesenchymal stem cells secrete paracrine factors that promote vascular differentiation and inhibit apoptosis *in vitro*. PLoS One, 2012;7(4):e35685. Epub 2012 Apr 25.
64. Grajales, L., Garcia, Jesus, G., **Geenen, D.L.** Induction of cardiac myogenic lineage development differs between mesenchymal and satellite cells and is accelerated by bone morphogenetic protein-4. Journal of Molecular and Cellular Cardiology 2012 Sep;53(3):382-91.

65. Lai, H., Grachoff, M., Marion, A.L., Khan, F.F., Warren, C.M., Solaro, R.J., **Geenen, D.L.**, Wang, Q.T. Maintenance of adult cardiac function requires the chromatin factor Asx12. Journal of Molecular and Cellular Cardiology 2012 Nov 53(5):734-741.
66. Kotlo, K, Johnson, K.R., Grillon, J.M., **Geenen, D.L.**, Detombe, P., Danziger, R.S. Phosphoprotein abundance changes in hypertensive cardiac remodeling. Journal of Proteomics. 2012 Dec 21;77:1-13.
67. Zhao, Y.D., Cai. L., Mirza, M.K., Huang, X., **Geenen, D.L.**, Hofmann, F., Yuan, J.X., Zhao, Y.Y. Protein kinase G-I deficiency induces pulmonary hypertension through Rho A/Rho Kinase activation. American Journal of Pathology. 2012 Jun;180(6):2268-75.
68. Mureli, S., Gans, C., Bare, D., **Geenen, D.L.**, Kumar, N., Banach, K. Mesenchymal stem cells improve cardiac conduction up-regulation of connexin 43 through paracrine signaling. American Journal of Physiology:Heart and Circulatory Physiology 2013 Feb 15;304(4):H600-609.
69. Nagalingam, R.S., Sundaresan, N.R., Gupta, M.P., **Geenen, D.L.**, Solaro, R.J., and Gupta, M. A cardiac enriched microRNA, miR-378 blocks cardiac hypertrophy by targeting Ras-signaling. Journal of Biological Chemistry 2013 Apr 19;288(16):11216-11232.
70. Gu, L., Fink, A.M., Chowdhury, S.A., **Geenen, D.L.,** Piano, M.R. Cardiovascular responses and differential changes in mitogen-activated protein kinases following repeated episodes of binge drinking. Alcohol Alcohol. 2013 Mar-Apr; 48(2):131-137.
71. Koshman, Y.E., Chu, M., Kim, T., Kalmanson, O., Farjah, M., Kumar, M., Lewis, W., **Geenen, D.L.**, de Tombe, P., Goldspink, P.H., Solaro, R.J., and Samarel, A.M. Cardiomyocyte-specific expression of CRNK, the C-terminal domain of PYK2, maintains ventricular function and slows ventricular remodeling in a mouse model of dilated cardiomyopathy. Journal of Molecular and Cellular Cardiology, 2014 72:281-291.
72. Boomsma, R.A., **Geenen, D.L.** Evidence for Extracellular Vesicle Transfer of Membranes From Mesenchymal Stem Cells to HL-1 Cardiac Cells. Stem Cells International, 2014; 1-9..
73. Ramchandran, R., **Geenen, D.L.,** Sun, M., Raghavan, A., Bach, L., Yang, Q., Mendelsohn, M.E., and Raj, J.U. PKG1α leucine zipper domain defect increases pulmonary vascular tone: implications in hypoxic pulmonary hypertension, American Journal of Physiology – Lung Cellular and Molecular Physiology, 2014 October 1; 307(7):L537-544.
74. Grajales, L., Lach, L.E., Janisch, P., **Geenen, D.L.,** García, J. Temporal Expression of Calcium Channel Subunits in Satellite Cells and Bone Marrow Mesenchymal Cells. Stem Cell Review, 2015 June; 11(3):408-422.

BOOK CHAPTERS

1. Pels, A.E. and **Geenen, D.L.** Physical activity pattern assessment of second, fifth, and seventh grade children. In: Current Selected Research in Exercise Physiology, C.O. Dotson and J.H. Humphreys editors. New York AMS Press Inc., 1985.
2. Buttrick, P.M., **Geenen, D.L.,** Malhotra, A., and Scheuer, J. Rat heterotopic cardiac isograft model: What atrophy teaches us about hypertrophy. In: Heart Hypertrophy and Failure, N.S. Dhalla, G.N. Pierce, V. Panagia, and R.E. Beamish, editors. Kluwer Academic Publishers, 1995.
3. **Geenen, D.L.,** and Malhotra, A. Effects of diabetes on protein synthesis in the myocardium. In: The Heart in Diabetes, J. C. Chatham, and J.H. McNeill, editors. Kluwer Academic Publishers, Norwell, MA, USA, 1996.
4. Bialik, S., **Geenen, D.L.,** Bennett, M.R., Sivapalasingam, S., Frishman, W., Sonnenblick, E.H., and Kitsis, R.N. Cardiac myocyte apoptosis: A new therapeutic Target? In: Cardiovascular Therapeutics, W.H. Frishman and E.H. Sonnenblick, editors. New York: McGraw-Hill Publishers, 1997.

PUBLISHED PRESENTED ABSTRACTS (Chronological Order)

1. Gilliam, T.B., Freedson, P.S., MacConnie, S.E., and **Geenen, D.L.** Sex differences in anthropometric, blood lipids and lipoproteins and ergometric measures for 6-7 year old boys and girls. Medicine and Science in Sports and Exercise, 1980, 12 (2), 128.

2. Pels, A.E., Gilliam, T.B., MacConnie, S.E., and **Geenen, D.L.** Examination of sex differences during steady-rate treadmill exercise in children ages 6-8 years. Medicine and Science in Sports and Exercise, 1981, 13 (2), 75.
3. **Geenen, D.L.,** Gilliam, T.B., Crowley, D., Moorehead-Steffens, C., and Rosenthal, A. Effects of exercise on cardiac structure and function in prepubescent children. Medicine and Science in Sports and Exercise, 1981, 13 (2), 93.
4. Pels, A.E. Gilliam, T.B., MacConnie, S.E., and **Geenen, D.L.** Changes in blood lipid and lipoprotein values, dietary intake, and physical activity patterns over a 12-month period. Medicine and Science in Sports and Exercise, 1982, 14 (2), 103.
5. **Geenen, D.L.,** Pels, A.E., Kuntzleman, C., Dodson, D., Kuntzleman, B., and Gilliam, T.B. Effects of an exercise program on second grade children. Medicine and Science in Sports and Exercise, 1982, 14 (2), 171.
6. **Geenen, D.L.,** White, T.P., and Lampman, R.M. Cardiac structure and function in rats following coronary artery ligation. Medicine and Science in Sports and Exercise, 1985, 127 (2), 212.
7. Buttrick, P., Malhotra, A., Factor, S., **Geenen, D.L.,** and Scheuer, J. The effects of chronic dobutamine treatment on the normotensive and hypertensive heart. Journal of the American College of Cardiology, 1987, 9, 37A.
8. **Geenen, D.L.,** Malhotra, A., and Scheuer, J. Regional myocardial ATPase activity and isoenzyme following infarction in rats. Federation Proceedings, 1987, 46, 1404.
9. **Geenen, D.L.,** Buttrick, P.M., and Scheuer, J. Cardiovascular and hormonal response to exercise in the rat. Circulation, 1987, 76, 538.
10. Perla, C., Lahorra, M., Malhotra, A., **Geenen D.L.,** Scheuer, J., and Buttrick, P. Effects of chronic myocardial infarction in rats. Journal of Molecular and Cellular Cardiology, 1988, 20, S26.
11. **Geenen, D.L.,** Malhotra, A., Liang, D., and Scheuer, J. Adaptations in the infarcted rat heart to increased systolic pressure. Federation Proceedings, 1989, 3, A690.
12. Buttrick, P., **Geenen, D.L.,** Leinwand, L., and Scheuer, J. Adaptation of the aged rat heart to chronic pressure overload. Clinical Research, 1989, 37, 591A.
13. Advani, S.V., Malhotra, A., Liang, D., **Geenen, D.L.,** Buttrick, P.M., and Scheuer, J. Swimming attenuates the shift in myosin isoenzymes in the rat heterotopic cardiac isograft. Circulation, 1989, 80, II-297.
14. Priest, S., **Geenen, D.L.,** Scheuer, J., and Buttrick, P.M. Effects of chronic exercise and dobutamine on the heart and exercise capacity in rats. Circulation, 1989, 80, II-297.
15. Buttrick, P.M., Malhotra, A., **Geenen, D.L.,** Scheuer, J., and Leinwand, L. Adaptation of the aged rat heart to chronic pressure. Circulation, 1989, 80, II-456.
16. **Geenen, D.L.,** Liang, D., Buttrick, P.M., and Scheuer, J. Continuous pacing in the rat cardiac isograft attenuates atrophy. Circulation, 1990, 82, III-112.
17. **Geenen, D.L.,** Liang, D., and Scheuer, J. Hemodynamic response of the rat heterotopic cardiac transplant to increases in systemic pressure. Federation Proceedings, 1991, 5, A1396.
18. Malhotra, A., **Geenen, D.L.,** Liang, D., Buttrick, P.M., and Scheuer, J. Ventricular pacing alters myosin isoenzyme distribution in the heterotopic heart transplant. Clinical Research, 1991, 39, 158A.
19. **Geenen, D.L.,** Liang, D., and Scheuer, J. Chronic pacing reverses cardiac atrophy in the rat heterotopic isograft. Circulation, 1991, 84, II-738.
20. Buttrick, P.M., **Geenen, D.L.,** Malhotra, A., and Scheuer, J. Strain differences among rats in the cardiovascular responses to aging and hypertension. Circulation, 1991, 84, II-735.
21. **Geenen, D.L.,** Malhotra, A., Liang, D., Yarlagadda, A., and Scheuer, J. Angiotensin II is a direct growth factor for adult rat heart. Clinical Research, 1992, 40, 202A.
22. **Geenen, D.L.,** Malhotra, A., Liang, D., Yarlagadda, A., and Scheuer, J. Angiotensin II increases protein synthesis in the rat heart. Journal of Molecular and Cellular Cardiology, 1992, 24, Supplement III, S.29.
23. **Geenen, D.L.,** Malhotra, A., and Scheuer, J. Angiotensin II directly Increases protein synthesis in the adult rat heart. Circulation, 1992, 86, I-839.
24. **Geenen, D.L.,** Malhotra, A., Liang, D., Cheng, R., and Scheuer, J. Cardiac pacing increases protein synthesis in the denervated rat heart. Biophysical Journal, 1993, 64, A255.

25. **Geenen, D.L.,** Malhotra, A., Cheng, R., Buttrick, P.M., and Scheuer, J. Intermittent catecholamine surges attenuate the isomyosin shift but not cardiac atrophy in the denervated rat heart. Circulation, 1993, 88, I-245.
26. Cheslow, Y.R., Kaplan, M., Vikstrom, K.L., **Geenen, D.L.,** Buttrick, P.M., and Leinwand, L. Murine model of exercise conditioning. Cell Biology, 1993,
27. **Geenen, D.L.,** Buttrick, P.M., Malhotra, A., and Scheuer, J. Protein kinase C- translocates in response to both angiotensin II and swimming in the adult rat heart. The Physiologist, 1994, 37, A-8.
28. Malhotra, A., Nakouzi, A.S., **Geenen, D.L.,** and Buttrick, P.M. Transcriptional alterations in myosin heavy chain gene expression are an early response to hyperglycemia in rats. Biophysical Journal, 1995, 68, A64.
29. **Geenen, D.L.,** Vikstrom, K.L., Cheng, R., Dansky, H., and Leinwand, L.A. Systolic gradients in transgenic murine cardiomyopathy are independent of hypertrophy. Circulation, 1995, 92, I-658.
30. **Geenen, D.L.,** Malhotra, A., and Buttrick, P.M. C-fos expression and protein kinase C translocation is mediated by -agonist but not by angiotensin II stimulation in vivo. FASEB Journal, 1996, 10, A310.
31. **Geenen, D.L.,** Malhotra, A., Cheng, R., Stenbit, A.E., Katz, E.B., Burcelin, R., Tsao, T., and Charron, M.J. Disruption of the murine GLUT4 glucose transporter induces cardiac hypertrophy without altering alpha myosin heavy chain protein. Circulation, 1996, 94, I-429.
32. Malhotra, A.M., **Geenen, D.L.,** Reich, D., Reich, D., and Buttrick, P.M. Cardiac myocytes from diabetic animals display persistant translocation of protein kinase C epsilon and phosphorylation of troponin I: Role of angiotensin receptor blockade. Circulation, 1996, 94, I-307.
33. Bialik, S., **Geenen, D.L.,** Sasson, I., Evans, S., Horner, J., Koch, C., and Kitsis, R. Genetic regulation of cardiomyocyte apoptosis during myocardial infarction. (Keystone Meetings).
34. Buttrick, P.M., Bowman, J.C., **Geenen, D.L.,** and Fishman, G.I. Conditional expression of protein kinase C in the mouse heart causes death in neonates and hypertrophy in adults. Circulation, 1996, 94, I-408.
35. Shizukuda, Y., Buttrick, P.M., **Geenen, D.L.,** Borczuk, A.C., Kitsis, R.N., and Sonnenblick, E.S. Continuous beta-adrenergic stimulation induces apoptosis in rat myocardium. Circulation, 1997, 96, I-743.
36. Bialik, S., **Geenen, D.L.,** Sasson, I.E., Valentino, K.L., Fritz, L.C., and Kitsis, R.N. The caspase family of cysteine proteases mediate cardiac myocyte apoptosis during myocardial infarction. Circulation, 1997, 96, I-552.
37. Shizukuda, Y., Sonnenblick, E.H., **Geenen, D.L.,** Borczuk, A.C., Kitsis, R.N., and Buttrick, P.M. Chronic pressure overload is associated with cardiocyte apoptosis, but does not increase vulnerability to β-adrenergic mediated cardiocyte apoptosis. Journal of the American College of Cardiology, 1998, 31 (Suppl. A): 176A.
38. Shizukuda, Y., Sonnenblick, E.H., **Geenen, D.L.,** Borczuk, A.C., Kitsis, R.N., and Buttrick, P.M. β-Adrenergic stimulation induces cardiocyte apoptosis which is not mediated by an increase in heart rate. Journal of the American College of Cardiology, 1998, 31 (Suppl. A), 177A.
39. **Geenen, D.L**., Buttrick, P.M. Chronic cardiac hypertrophy increases expression of an intracellular anchoring protein for activated protein kinase C. Circulation, 1998, 98: I697.
40. Nwogu, J.I., **Geenen, D.L.,** Bean, M., Brenner, M., Huang, X., Buttrick, P.M. Inhibition of collagen synthesis improves left ventricular function after myocardial infarction. Circulation, 1999, 100: I564.
41. McKinney, R.D., Goldspink, P.H., Lupa-Kimball, V.A., **Geenen, D.L.,** Buttrick, P.M. Angiotensin II induced cardiac hypertrophy in rats is not blocked by cyclosporine. Circulation, 1999, 100: I127.
42. Roman, B.B., **Geenen, D.L.,** Leitges, M., Buttrick, P.M. Targeted disruption of PKC-β in the mouse heart does not prevent pressure overload hypertrophy. Circulation, 1999, 100: I53.
43. Rundell, V.L.M., **Geenen, D.L.,** Buttrick, P.M., de Tombe, P.P. Early diabetes is not associated with altered length dependent activation. Biophysical Journal, (Submitted) 2000.
44. Shizukuda, Y., Naya, T., **Geenen, D.L**., Buttrick, P.M. Protein kinase C is involved in cardiomyocyte apoptosis induced by beta-adrenergic stimulation. FASEB Journal, 2000, 14: A583.

45. Sareh, S., Rieger, B.S., **Geenen, D.L.** Expression of the intracellular anchoring protein (RACK1) is upregulated by hypertrophic stimuli in the adult rat cardiocyte. FASEB Journal, 2000, 14: A589.
46. Rieger, B.S., Reed, E.B., **Geenen, D.L.** A receptor for activated C kinase is upregulated by angiotensin II and colocalizes with protein kinase C β in adult cardiac myocytes. Circulation, 2000, 102: II-70.
47. Goldspink, P.H., Montgomery, D.E., Ping, P., **Geenen, D.L.**, Solaro, R.J., Buttrick, P.M. Cardiac expression of PKC, alters the activity of the myofilaments and increases fetal gene expression before the onset of cardiac hypertrophy. Circulation, 2000, 102: II-159.
48. Nwogu, J.I., Bean, M., **Geenen, D.L.**, De, A., Brenner M., Buttrick, P.M. Inhibition of myocardial fibrosis improves survival and prevents progression of heart failure after myocardial infarction. Circulation, 2000, 102: II-291.
49. Vijayan, K., Wolska, B.M., Buttrick, P.M., **Geenen, D.L.** Unloaded cardiac muscle exhibits cardiac dysfunction characteristic of the hypertrophic phenotype. FASEB Journal, 2001, 15: A479.
50. Vijayan, K., Reed, E.B., Urboniene, D., Yuzhakova, M.A., Wolska, B.M., Garcia, J., **Geenen, D.L.** Cardiac-specific expression of the receptor for activated C kinase (RACK1) alters muscle mechanics in the absence of hypertrophy. Circulation, 2001, 104: II-198.
51. Nowak, G., Pena, J.R., Artega, G.M., **Geenen, D.L.,** Pieples, K., Wieczorek, D.F., Solaro, R.J., Wolska, B.M. Correlations between alterations in length-dependent Ca^{2+} activation of cardiac myofilaments and the end systolic pressure-volume relation. Circulation, 2001, 104: II-313.
52. Farjah M., Couget J., Li C., Wong, **Geenen D.,** Danziger R.S., Computational analysis and transcriptional profiling for identification of candidate genes in the kidney for salt adaptation. Cell signaling, transcription and translation as therapeutic targets. International Signaling Conference, Luxemburg, 2002.
53. Farjah M., Couget J., Li C., Wong, **Geenen D.**, Danziger R.S., Identification of Salt-sensitivity Genes by Transcriptional Profling, Experimental Biology, 2002.
54. Couget J, Farjah M, Li C, Wong, Geenen D, Danziger RS, Computational analysis and transcriptional profiling for identification of candidate genes in the brain for salt adaptation. International Society of Hypertension, 2002.
55. Sareh, S., Gandhi, S., Pop, A., Urboniene, D., Briddell, R., Hoffman, R., Buttrick, P.M., **Geenen, D.L.** Mobilization of hematopoietic stem cells following infarction improves ventricular performance. Circulation, 2003. 108:IV-137.
56. Yuzhakova, M.A., Goldspink, P.H., **Geenen, D.L.** Overexpression of the receptor for activated C kinase results in pronounced contractile dysfunction in the aged heart. Circulation, 2003, 108:IV-154.
57. Zampino, M., Yuzhakova, M.A., Goldspink, P.H., **Geenen, D.L.**, Buttrick, P.M. Gender dimorphic response of HIF-1α expression in myocardial ischemia. Circulation, 2003, 108:IV-273.
58. O'Donnell, J.M., Alpert, N., Zampino, M., **Geenen, D.L.**, Lewandowski, E.D. Myocardial triglyceride pool kinetics from 13C NMR of intact diabetic rat heart demonstrate faster turnover rates and altered compartmentation versus healthy controls. Circulation, 2003, 108:IV-61.
59. Goldspink, P.H., **Geenen, D.L.**, Buttrick, P.M. Hemodynamic load accelerates the transition from a compensated state to failure in a PKC-ε over-expression mouse. Circulation, 2003, 108:IV-14.
60. Wang, H., **Geenen, D.L.**, Pyle, W.G., Solaro, R.J. Deficiency in the actin capping protein alters the hemodynamic response to alpha-adrenergic stimulation *in vivo*. Circulation, 2003, 108:IV-247.
61. Belin, R.J., Sumandea, M.P., Urboniene, D., Yuzhakova, M., **Geenen, D.L.**, Solaro, R.J., de Tombe, P.P. Molecular mechanism of depressed myofilament function in congestive heart failure secondary to chronic myocardial infarction. Circulation, 2003, 108:IV-190.
62. Dias, F.A., Urboniene, D., Dandekar, V, Goldspink, P.H., **Geenen, D.L.**, Wolska, B.M. Ablation of iNOS delays cardiac contractile dysfunction and attenuates hypertrophy gene expression by chronic pressure overload. Circulation, 2004.
63. Shioura, K.M., Los, T., **Geenen, D.L.,** Goldspink, G., Goldspink, P. The unique E-domain of an IGF-I isoform expressed in muscle preserves cardiac function and prevents apoptosis following myocardial infarction. Circulation, 2006, 114:II-232.

64. Boateng, S.Y.K., R.J. Belin, R.J., **Geenen, D.L.,** Margulies, K.B., Martin, J.L., Hoshijima, M., de Tombe, P.P., Russell, B. Cardiac Dysfunction and Heart Failure are Associated with Decreased Levels of Non-Nuclear Oligomeric Muscle LIM Protein. Circulation, 2006, 114:II-138.
65. Shioura, K.M., Farjah, M., **Geenen, D.L.**, Solaro, R.J., Goldspink, P.H. Re-expression of slow skeletal troponin I prevents hypertrophic remodeling during ischemic heart failure. Circulation 2007, 116:II-302**.**
66. Yuzhakova, M.,**Geenen, D.L.,**Goldspink, P.H. Expression of Activated PKCε Accelerates the Transition to Heart Failure in Response to Increased Hemodynamic Load. Circulation 2008, 118, S276.
67. Chatchavalvanich, S., **Geenen, D.L.** Early cell-cell coupling contributes to loss of transplanted stem cell retention and efficacy. AHA: Basic Cardiovascular Science, 2012.

NON-PEER REVIEWED PRESENTED ABSTRACTS (Chronological Order)

1. Myaard, M., Melucci A., Stumpo R., Smith, J., and **Geenen, D.L.** Emerging Healthcare Population's Perception of the Physician Assistant, Michigan Academy of Physician Assistants (MAPA) Fall Conference, October 9, 2015.
2. Howard, M., Kassis, F., Miller, R., Schmidt, A., Webb, N., and **Geenen, D.L.** Evaluation of the Use of Gastric pH Altering Medications among Spectrum Health Internal Medicine Patients as a Risk Factor For Clostridium Difficile Infection: A Retrospective Chart Review, Michigan Academy of Physician Assistants (MAPA) Fall Conference, October 9, 2015.
3. Lozon, T., Darling, K., **Geenen, D.L.** The Effect of Accessing Health Information Websites on Patients' Decisions to Seek Healthcare, Michigan Academy of Physician Assistants (MAPA) Fall Conference October 9, 2015.
4. Kuiper, K., Rahmani, D., Wiest, E., **Geenen, D.L.** Health Literacy: Effective Screening Tools to Improve Acute Care Evaluation. Michigan Interprofessional, Practice, Education, and Research Center (MIPERC) Conference, September 22, 2015.
5. Chatchavalvanitch, S., **Geenen, D.L.** Early Cell-Cell Coupling Impairs Transplanted Stem Cell Retention and Efficacy in the Ischemic Cardiomyocyte and Murine Heart, Research Symposium, Spectrum Health System, May 20, 2015.
6. **Geenen, D.L.** Facilitating Peer-to-Peer Interaction in a Distant Learning Program Using Interactive Television, American Physiological Society Institute on Teaching and Learning Conference, June 20-24, 2016.

POSTDOCTORAL AND GRADUATE STUDENT MENTORSHIPS

Graduate Students, University of Illinois at Chicago (1997-2013)

Sathya Subramanian (2012 - 2013)
University of Illinois at Chicago
Department of Bioengineering (Master's Student)
Master's Thesis Title: Speckle Tracking Based Ultrasound Imaging Detects Strain Changes in the Murine Heart during Acute Ischemia-Reperfusion

Santipongse Chatchavalvanich (2007- 2012)
University of Illinois at Chicago
Department of Physiology and Biophysics (Doctoral Student)
Awarded 2009 AHA Pre-doctoral Fellowship
Awarded Third Prize: (Abstract) UIC Stem Cell and Regenerative Medicine Conference (2011)
Doctoral Thesis Title: Effects of a Gap Junction Inhibitor on Stem Cell Retention and Efficacy During Early Myocardial Ischemia

Present Position: Department of Physiology, Faculty of Medicine Siriraj Hospital, 2 Prannok Road, Siriraj Bangkok-Noi, Bangkok 10700,Thailand

Liliana Grajales (2006-2008)
University of Illinois at Chicago (Master's Student)
Department of Physiology and Biophysics
Awarded 2008 AHA CVD Student Scholarship
Master's Thesis Title: Passage Number and C-kit Expression Determine Bone Marrow-Derived Cell Differentiation

Present Position: Engineer, John Deere Corp., Waterloo, IA

Medical Residents, University of Illinois at Chicago (1997-2013)

Paari Dominic Swaminathan, MD (2005-2007)
Present Position: Assistant Professor and Director of Cardiac Electrophysiology at Louisiana State University, Shreveport, LA

Boomsma, R.A., Dominic Swaminathan, P., **Geenen, D.L.** Intravenously injected mesenchymal stem cells home to viable myocardium after coronary artery occlusion and preserve systolic function without altering infarct size. International Journal of Cardiology, 2007, Oct 31;122(1):17-28.

Manuela Zampino, MD (2003-2006)
Present Position: Private Practice (Pediatrics) Chicago, IL

Zampino, M., Yuzhakova, M., Hansen, J., McKinney, R.D., Goldspink, P.H., **Geenen, D.L.,** Buttrick, P.M. Sex-related dimorphic response of HIF-1alpha expression in myocardial ischemia. American Journal of Physiology (Heart and Circulatory Physiology), 2006, Aug 291(2):H957-964.

O'Donnell, J.M., Zampino, M., Alpert, N.M., Fasano, M.J., **Geenen, D.L.,** Lewandowski, E.D. Accelerated Triacylglycerol Turnover Kinetics in Hearts of Diabetic Rats Include Evidence for Compartmented Lipid Storage. American Journal of Physiology (Endocrinology and Metabolism), 2006 Mar;290(3);E448-455.

Zampino, M., Yuzhakova, M.A., Goldspink, P.H., **Geenen, D.L.,** Buttrick, P.M. Gender dimorphic response of HIF-1α expression in myocardial ischemia. Circulation, 2003, 108:IV-273.

O'Donnell, J.M., Alpert, N., Zampino, M., **Geenen, D.L.,** Lewandowski, E.D. Myocardial triglyceride pool kinetics from 13C NMR of intact diabetic rat heart demonstrate faster turnover rates and altered compartmentation versus healthy controls. Circulation, 2003, 108:IV-61.

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Present Position: Medical Writer at MedLogix Communications, Chicago, IL

Vijayan, K., Wolska, B.M., Buttrick, P.M., **Geenen, D.L.** Unloaded cardiac muscle exhibits cardiac dysfunction characteristic of the hypertrophic phenotype. FASEB Journal, 2001, 15: A479.

Vijayan, K., Reed, E.B., Urboniene, D., Yuzhakova, M.A., Wolska, B.M., Garcia, J., **Geenen, D.L.** Cardiac-specific expression of the receptor for activated C kinase (RACK1) alters muscle mechanics in the absence of hypertrophy. Circulation, 2001, 104: II-198.

Cardiology Fellowships (Research Rotations), University of Illinois at Chicago, Chicago, IL (1997 - 2013)

Christopher Gans, MD (2008 - 2010)
Present Position: Assistant Professor of Clinical Medicine at University of Illinois Hospital and Health Sciences System, Chicago, IL

Mureli, S., Gans, C., Bare, D., **Geenen, D.L.**, Kumar, N., Banach, K. Mesenchymal stem cells improve cardiac conduction up-regulation of connexin 43 through paracrine signaling. American Journal of Physiology:Cell Physiology 2012 (In Review).

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Present Position: Cardiovascular Associates SC, Elk Grove Village, IL 60007

Sareh, S., Gandhi, S., Pop, A., Urboniene, D., Briddell, R., Hoffman, R., Buttrick, P.M., **Geenen, D.L.** Mobilization of hematopoietic stem cells following infarction improves ventricular performance. Circulation, 2003. 108:IV-137.

Sam Sareh, MD, FACC (2000-2003)
Present Position: Private Practice, 333 NW 70th Ave, Plantation, FL 33317

Sareh, S., Rieger, B.S., **Geenen, D.L.** Expression of the intracellular anchoring protein (RACK1) is upregulated by hypertrophic stimuli in the adult rat cardiocytes. FASEB Journal, 2000, 14: A589.

Sareh, S., Gandhi, S., Pop, A., Urboniene, D., Briddell, R., Hoffman, R., Buttrick, P.M., **Geenen, D.L.** Mobilization of hematopoietic stem cells following infarction improves ventricular performance. Circulation, 2003. 108:IV-137.

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Sareh, S., Gandhi, S., Pop, A., Urboniene, D., Briddell, R., Hoffman, R., Buttrick, P.M., **Geenen, D.L.** Mobilization of hematopoietic stem cells following infarction improves ventricular performance. Circulation, 2003. 108:IV-137.

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Present Position: Anniston Cardiology Associates, Anniston, AL

Nwogu, J.I., **Geenen, D.L.,** Bean, M., Brenner, M.C., Huang, X., and Buttrick, P.M. Inhibition of collagen synthesis with prolyl-4-hydroxylase inhibitor (FG401) improves left ventricular function and decreases left ventricular dilatation after myocardial infarction. Circulation, 2001, 104:2216-2221.

Nwogu, J.I., Bean, M., **Geenen, D.L**., De, A., Brenner M., Buttrick, P.M. Inhibition of myocardial fibrosis improves survival and prevents progression of heart failure after myocardial infarction. Circulation, 2000, 102: II-291.

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Perla, C., Lahorra, M., Malhotra, A., Geenen D.L., Scheuer, J., and Buttrick, P. Effects of chronic myocardial infarction in rats. Journal of Molecular and Cellular Cardiology, 1988, 20, S26.

Buttrick, P.M., Perla, C., Malhotra, A., Geenen, D.L., and Scheuer, J. The effects of chronic dobutamine treatment on cardiac mechanics and biochemistry after myocardial infarction in the rat. American Journal of Physiology (Heart and Circulatory Physiology 29), 1991, 260, H473-H479.