

Rengasayee Veeraraghavan
460 Medical Center Drive, Rm 415A • IBMR
Columbus, OH 43210.
Email: veeraraghavan.12@osu.edu

Assistant Professor
Dept. of Biomedical Engineering
The Ohio State University

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Anna University, Chennai, India	B.Tech	2001-2005	Chemical Engineering
University of Utah, Salt Lake City, UT.	Ph.D.	2005-2011	Bioengineering (Mentor: Dr. Steven Poelzing)
University of Utah, Salt Lake City, UT.	Postdoctoral Training	2011-2012	Math Biology (Mentor: Dr. James Keener)
Virginia Tech Carilion Research Institute, Roanoke, VA.	Postdoctoral Training	2012-2016	Connexin Biology (Mentor: Dr. Robert Gourdie)

A. POSITIONS AND HONORS

Positions and Employment

2017- Assistant Professor, Dept. of Biomedical Engineering, The Ohio State University, OH
2016-2017 Research Assistant Professor, The Virginia Tech Carilion Research Institute, VA
2014-2016 Research Associate, The Virginia Tech Carilion Research Institute, VA
2012-2014 Post-doctoral Research Associate, The Virginia Tech Carilion Research Institute, VA
2011-2012 Post-doctoral Research Fellow, University of Utah, UT
2005-2011 Graduate Research Assistant, University of Utah, UT
Fall 2007 Graduate Teaching Assistant (Physiology for Engineers, BE3202), University of Utah, UT
Fall 2008 Graduate Teaching Assistant (Physiology for Engineers, BE3202), University of Utah, UT
Fall 2009 Graduate Teaching Assistant (Physiology for Engineers, BE3202), University of Utah, UT

Awards & Honors

2005 Ranked eleventh among all graduates in the B.Tech, Chemical Engineering Program, Anna University, India.
2011 Travel Award, International Gap Junction Conference 2011.
2013 Travel Award, Gordon Research Conference on Cardiac Arrhythmia Mechanisms 2013
2013 The Clinical Research Award in Honor of Mark Josephson and Hein Wellens for 2013-14, Heart Rhythm Society (Declined)
2013 Postdoctoral Research Fellowship for 2013-15, American Heart Association
2013 Award for Best Oral Presentation, International Gap Junction Conference 2013
2015 Outstanding Postdoctoral Platform Presentation - Runner Up, 2015 VTCRI Annual Retreat
2015 BCVS Travel Grant, AHA Scientific Sessions 2015
2017 Young Investigator Award (Basic Science) from the Cardiac Electrophysiology Society
2017 George Palade Award for distinguished contributions to the field of microscopy and microanalysis in the life sciences, Microscopy Society of America

Professional Memberships

Heart Rhythm Society (since 2006).
American Heart Association (since 2006).
Cardiac Electrophysiology Society (2006)
Biophysical Society (since 2010)

Microscopy Society of America (since 2016)

B. PUBLICATIONS

Patents

Poelzing S, **Veeraraghavan R**, Smoot A, X-ray attenuating compositions and methods. U.S. Patent 8808668; filed April 2009.

Poelzing S, **Veeraraghavan R**, Raisch R. Automatic Centerline Isolation and Continuous Width Measurements Between Two Edges. U.S. Patent Application No: 62/405,554 filed 10/7/2016.

Gourdie RG, **Veeraraghavan R**, Poelzing S. Pharmacologic Targeting of Cell Adhesion to Modulate Conduction. U.S. Patent Application No: 62/299,817 filed 02/25/2016.

Veeraraghavan R, Gourdie RG. Two Novel Methods for the Assessment of Relative Protein Localization from Three Dimensional Single Molecule Localization Data. U.S. Patent Application No: 62/295,672 filed 02/16/2016.

Peer-reviewed Publications (h-index: 13, 557 citations)

Mezache L, Struckman HL, Greer-Short A, Baine S, Györke S, Radwański PB, Hund TJ, **Veeraraghavan R**. Vascular Endothelial Growth Factor Promotes Atrial Arrhythmias by Inducing Acute Intercalated Disk Remodeling. 2020 (Under review)

Baine S, Thomas J, Bonilla I, Ivanova M, Li J, **Veeraraghavan R**, Radwański PB, Carnes C, Györke S. Muscarinic-dependent PKG phosphorylation of the cardiac ryanodine receptor is mediated by PI3K/AKT/nNOS Signaling. J Biol Chem (In revision).

Munger MA, Olğar Y, Koleske M, Struckman HL, Mandrolí J, Lou Q, Bonilla I, Kim K, Mondragon RR, Priori SG, Volpe P, Valdivia HH, Biskupiak J, Carnes CA, **Veeraraghavan R**, Györke S, Radwański PB. Tetrodotoxin-sensitive neuronal-type Na⁺ Channels: A Novel and Druggable Target for Prevention of Atrial Fibrillation. J Am Heart Assoc (Accepted).

Struckman HL, Baine S, Thomas J, Mezache L, Mykytyn K, Györke S, Radwański PB, **Veeraraghavan R**, Super-resolution Imaging Using Novel High Fidelity Antibody Reveals Close Association of Neuronal Sodium Channel Nav1.6 with Ryanodine Receptors in Cardiac Muscle. Microsc Microanal. 2020 Jan 14:1-9.

Bonilla IM, Belevych AE, Baine S, Stepanov A, Mezache L, Bodnar T, Liu B, Volpe P, Priori S, Weisleder N, Sakuta G, Carnes CA, Radwański PB, **Veeraraghavan R***, Györke S. Enhancement of Cardiac Store Operated Calcium Entry (SOCE) within Novel Intercalated Disk Microdomains in Arrhythmic Disease. Sci Rep. 2019 Jul 15;9(1):10179. *Co-corresponding author

Veeraraghavan R*, Hoeker GS, Alvarez-Laviada A, Hoagland D, Wan X, King DR, Sanchez-Alonso J, Chen C, Jourdan J, Isom LL, Deschenes I, Smyth J, Gorelik J, Poelzing S, Gourdie RG. The adhesion function of the sodium channel beta subunit (β 1) contributes to cardiac action potential propagation. Elife. 2018 Aug 14. *Co-corresponding author

Koleske M, Bonilla I, Thomas J, Zaman N, Baine S, Knollmann B, **Veeraraghavan R**, Györke S, Radwański PB, TTX-sensitive Nav Contribute to Early and Delayed Afterdepolarizations in Long QT Arrhythmia Models, J Gen Physiol. 2018 Jul 2;150(7):991-1002.

Raisch TB, Yanoff MS, Larsen TR, Farooqui MA, King DA, **Veeraraghavan R**, Gourdie RG, Baker JW, Arnold WS, AlMahameed ST, Poelzing S. Intercalated Disc Extracellular Nanodomain Expansion in Patients with Atrial Fibrillation. Front Physiol. 2018 May 4;9:398.

Veeraraghavan R*, Lin J, Keener JP, Gourdie RG, Poelzing S. Potassium Channels in the Cx43 Gap Junction Perinexus Modulate Ephaptic Coupling: An Experimental and Modeling Study, Pflugers Archiv. 2016. Aug 11. *Co-corresponding author

Veeraraghavan R*, Gourdie RG. Stochastic Optical Reconstruction Microscopy-based Relative Localization Analysis (STORM-RLA) for Quantitative Nanoscale Assessment of Spatial Protein Organization. Mol Biol Cell. 2016 Jun 15. *Co-corresponding author

Radwański PB, Ho HT, **Veeraraghavan R**, Brunello L, Liu B, Belevych AE, Unudurthi SD, Makara MA, Priori SG, Volpe P, Armondas AA, Dillmann WH, Knollmann BC, Mohler PJ, Hund TJ, Györke S. Neuronal Na⁺ Channels Are Integral Components of Pro-Arrhythmic Na⁺/Ca²⁺ Signaling Nanodomain That Promotes Cardiac Arrhythmias During β -Adrenergic Stimulation. JACC: Basic to Translational Science, 2016 May 25.

Veeraraghavan R, Lin J, Hoeker GS, Keener JP, Gourdie RG, Poelzing S. Sodium Channels in the Cx43 Gap Junction Perinexus May Constitute a Cardiac Ephapse: An Experimental and Modeling Study, Pflugers Archiv. 2015 Jan 13.

Radwański PB, Brunello L, **Veeraraghavan R**, Ho H, Lou Q, Makara MA, Belevych AE, Angheliescu M, Priori SG, Volpe P, Hund TJ, Janssen PM, Mohler PJ, Bridge JH, Poelzing S, Györke S. Neuronal Na⁺ Channel Blockade Suppresses Arrhythmogenic Diastolic Ca²⁺ Release. Cardiovasc Res. 2014 Dec 23

Veeraraghavan R, Larsen AP, Torres NS, Grunnet M, Poelzing S. Potassium channel activators differentially modulate the effect of sodium channel blockade on cardiac conduction. Acta Physiologica. 2012 Aug 28.

Veeraraghavan R, Salama M, Poelzing S. Interstitial Volume Modulates the Conduction Velocity- Gap Junction Relationship. *Am J Physiol Heart Circ Physiol*. 2011 Oct 21.

Radwański P, **Veeraraghavan R**, Poelzing S. Cytosolic Calcium Accumulation and Delayed Repolarization Associated with Ventricular Arrhythmias in Guinea Pig Model of Andersen-Tawil Syndrome, *Heart Rhythm*. 2010 Oct;7(10):1428-1435. Epub 2010 Apr 7.

Poelzing S, Smoot A, **Veeraraghavan R**, Novel X-Ray Attenuation Mechanism: Role of Inter-Atomic Distance, *Med Phys*. 2008 Oct; 35(10):4386-4395.

Veeraraghavan R, Poelzing S. Mechanisms Underlying Increased Right Ventricular Conduction Sensitivity to Flecainide Challenge. *Cardiovasc. Res*. 2008 Mar 1;77(4):749-56. Epub 2007 Dec 4

Poelzing S, **Veeraraghavan R**. Heterogeneous Ventricular Chamber Response to Hypokalemia and Inward Rectifier Potassium Channel Blockade underlies Bifurcated T-wave in Guinea Pig, *Am J Physiol Heart Circ Physiol*, 2007 Jun;292(6):H3043-51. Epub 2007 Feb 16.

Book Chapter

Veeraraghavan, R., Hund, T.J. 2020. Oxidant-Induced Models of Vascular Leak. Pages (TBD), In: *Measuring Oxidants and Oxidative Stress in Biological Systems*. Editors: Berliner LJ and Parinandi NL. Springer Publishers, New York, New York.

Kodali, S.T., Kotha, S.R., Kufmann, P.A., Yenigalla, A., **Veeraraghavan, R.**, Pannu, S., Hund, T.J., Satoskar, A.R., McDaniel, J., Parinandi, N.L. 2020. Oxidative Lipidomics - Analysis of Oxidized Lipids and Lipid Peroxidation in Biological Systems with Relevance to Health & Disease. Pages (TBD), In: *Measuring Oxidants and Oxidative Stress in Biological Systems*. Editors: Berliner LJ and Parinandi NL. Springer Publishers, New York, New York.

Editorials & Reviews

Radwański PB, Johnson CN, Györke S, **Veeraraghavan R**. Cardiac Arrhythmias as Manifestations of Nanopathies: An Emerging View. *Front Physiol*. 2018 Sep 4;9:1228.

Veeraraghavan R*, Radwański P. Sodium channel clusters: harmonizing the cardiac conduction orchestra, *J Physiol*. 2018 Feb 15;596(4):549-550. *Corresponding author

Veeraraghavan R, Györke S, Radwański P. Neuronal Sodium Channels: Emerging Components of the Nano-machinery of Cardiac Calcium Cycling, *J Physiol*. 2017 Jun 15;595(12):3823-3834. Epub 2017 Mar 26.

Veeraraghavan R, Poelzing S, Gourdie RG. Novel ligands for zipping and unzipping the intercalated disk: today's experimental tools, tomorrow's therapies? *Cardiovasc Res*. 2014 Nov 1;104(2):229-30. Epub 2014 Oct 03.

Veeraraghavan R, Poelzing S, Gourdie RG. Intercellular electrical communication in the heart: a new, active role for the intercalated disk. *Cell Commun Adhes*. Epub 2014 Apr 15.

Veeraraghavan R, Poelzing S, Gourdie RG. Old Cogs, New Tricks: A Scaffolding Role For Connexin43 And A Junctional Role For Sodium Channels? *FEBS Lett*. Epub 2014 Jan 28.

Veeraraghavan R, Gourdie RG, Poelzing S. Mechanisms of Cardiac Conduction: A History of Revisions. *Am J Physiol Heart Circ Physiol*. 2014 Mar;306(5):H619-27. Epub 2014 Jan 10.

Rhett JM*, **Veeraraghavan R***, Poelzing S, Gourdie RG. The Perinexus: Sign-Post on the Path to a New Model of Cardiac Conduction? *Trends Cardiovasc. Med* 2013. Epub 2013 Mar 11.

Invited Presentations

Veeraraghavan R. Confocal Imaging to Characterize Local Calcium Entry Events, *Heart Rhythm* 2020.

Veeraraghavan R. Structural Changes in Sodium Channel-Rich Nanodomains Contribute to the Progression of Atrial Fibrillation, *Microscopy & Microanalysis* 2018.

Greert-Short A, Hund TJ, **Veeraraghavan R**. Structural Changes in Sodium Channel-Rich Nanodomains Contribute to the Progression of Atrial Fibrillation, *Microscopy & Microanalysis* 2018.

Veeraraghavan R, Hoeker GS, Alvarez-Laviada A, Wan X, Deschenes I, Smyth J, Gorelik J, Poelzing S, Gourdie RG. STORM and TEM Identify the Cardiac Ephapse: An Intercalated Disk Nanodomain with Previously Unanticipated Functions in Cardiac Conduction, *Microscopy & Microanalysis* 2017.

Veeraraghavan R. Integrating Imaging Tools From Single Molecule to Whole Organ Scales to Investigate the Heart's Structure and Function, *Microscopy & Microanalysis* 2017: Pre-Meeting Congress for Students and Early-Career Professionals.

Veeraraghavan R, Gourdie RG. STORM-based Quantitative Assessment of Sodium Channel Localization Relative to Junctional

Proteins within the Cardiac Intercalated Disk, Microscopy & Microanalysis 2016.

Veeraraghavan R, Gourdie RG. Spatial Organization of Proteins: Above and Below Abbe's Diffraction Limit, Heart Rhythm 2016.

Veeraraghavan R, Lin J, Keener JP, Poelzing S, Gourdie RG. Superresolution Studies of Sodium Channels Within Intercalated Disk Microdomains Suggest Novel Arrhythmia Mechanism, American Heart Association Scientific Sessions 2015.

Veeraraghavan R, Lin J, Keener JP, Poelzing S, Gourdie RG. Experimental Evidence that the Cx43 Gap Junction Perinexus Functions as a Cardiac Ephapse, International Gap Junction Conference, 2013.

Veeraraghavan R, Lin J, Keener JP, Poelzing S. A Novel Role for Ephaptic Coupling in Cardiac Conduction: An Experimental and Modeling Study, Biophysical Society 56th Annual Meeting 2012.

Veeraraghavan R, Poelzing S. Edema Increases Conduction Anisotropy Heterogeneously Between the Left and Right Ventricles, Annual Mountain West Biomedical Conference 2008.

Abstracts

Mezache L, Struckman HL, Phillips A, Baine S, Greer-Short A, Györke S, Radwański PB, Hund TJ, **Veeraraghavan R**. The Vascular Endothelial Barrier: A Novel Therapeutic Target For Preventing Atrial Fibrillation, Heart Rhythm 2020, Oral Presentation.

Struckman HL, Mezache L, Phillips A, Dagher C, Greer-Short A, Radwański PB, Hund TJ, **Veeraraghavan R**. Differential impact of selective de-adhesion within Nav1.5-rich intercalated disk nanodomains on atrial arrhythmia risk, Biophysical Society 64th Annual Meeting 2020, Poster.

Mezache L, Struckman HL, Phillips A, Baine S, Greer-Short A, Györke S, Radwański PB, Hund TJ, **Veeraraghavan R**. The Vascular Barrier Regulates Cardiac Nanodomains: Implications for the Genesis and Treatment of Atrial Fibrillation, Biophysical Society 64th Annual Meeting 2020, Poster.

Mezache L, Struckman HL, Greer-Short A, Hund TJ, **Veeraraghavan R**. Indirect CLEM Identifies Proarrhythmic Remodeling of Intercalated Disk Nanodomains in Murine Atria Following Acute VEGF Treatment. Microscopy & Microanalysis 2019, Oral Presentation.

Mezache L, Struckman H, Greer-Short A, Martinson A, Phillips A, Hund TJ, **Veeraraghavan R**. VEGF-induced vascular leak promotes atrial fibrillation by disrupting intercalated disc nanodomains. The First International Ephaptic Coupling Conference, 2019, Poster.

Struckman H, Mezache L, Greer-Short A, Phillips A, Hund TJ, **Veeraraghavan R**. Selective de-adhesion within intercalated disk nanodomains prompts proarrhythmic conduction slowing in the heart. The First International Ephaptic Coupling Conference, 2019, Poster.

Struckman H, Mezache L, Greer-Short A, Phillips A, Hund TJ, **Veeraraghavan R**. Selective de-adhesion within intercalated disk nanodomains prompts proarrhythmic conduction slowing in the heart. Engineering in Healthcare: Industry & Research Symposium, 2019, Oral Presentation.

Struckman H, Mezache L, Thomas J, Zhang R, **Veeraraghavan R**, Radwanski P. Development and validation of Nav1.6 Antibody for studies of structural arrhythmia underpinnings. Engineering in Healthcare: Industry & Research Symposium 2019, Poster.

Mezache L, Struckman H, Greer-Short A, Martinson A, Phillips A, Hund TJ, **Veeraraghavan R**. VEGF-induced vascular leak promotes atrial fibrillation by disrupting intercalated disc nanodomains. Engineering in Healthcare: Industry & Research Symposium 2019, Poster.

Struckman H, Mezache L, Greer-Short A, Hund TJ, **Veeraraghavan R**. Selective de-adhesion within intercalated disk nanodomains prompts proarrhythmic conduction slowing in the heart. Biophysical Society 63rd Annual Meeting 2019, Oral Presentation.

Mezache L, Struckman H, Greer-Short A, Thomas J, Phillips A, Martinson A, Radwański PB, Hund TJ, **Veeraraghavan R**. VEGF-induced vascular leak promotes atrial fibrillation by disrupting intercalated disc nanodomains. Biophysical Society 63rd Annual Meeting 2019, Oral Presentation.

Bonilla IM, Belevych A, Baine S, Bodnar T, Liu B, Radwański PB, **Veeraraghavan R**, Volpe P, Priori S, Weisleder N, Györke S. Cardiac Store Operated Calcium Entry (SOCE) is Compartmentalized at Intercalated Disks and Linked to Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT). Biophysical Society 63rd Annual Meeting 2019, Poster.

Radwański PB, Koleske M, **Veeraraghavan R**, Bonilla I, Carnes CA, Györke S. Effective prevention of atrial fibrillation in failing hearts by neuronal Na⁺ channel inhibition. Heart Rhythm, 2018, Poster.

Greer-Short A, Hund TJ, **Veeraraghavan R**. Vascular Endothelial Growth Factor Acutely Elevates Atrial Fibrillation Risk in the

Murine Heart, Heart Rhythm 2018, Poster.

Veeraraghavan R, Hoeker GS, Wan X, Deschenes I, Poelzing S, Gourdie RG. Sodium Channel Auxiliary Subunit $\beta 1$ -mediated Cell Adhesion: A Novel Target for Antiarrhythmic Therapy, Heart Rhythm 2017, Featured Poster.

Veeraraghavan R, Hoeker GS, Poelzing S, Gourdie RG. The Sodium Channel Auxiliary Subunit $\beta 1$ is Structurally Critical for Cardiac Conduction: Evidence from the Single Molecule Scale to the Whole Organ, Biophysical Society 61st Annual Meeting 2017, Poster.

Veeraraghavan R, Hoeker GS, Poelzing S, Gourdie RG. The Proarrhythmic Impact of Inhibiting the Cell Adhesion Functions of the Sodium Channel Auxiliary Subunit Nav $\beta 1$, Gordon Research Conference on Cardiac Arrhythmia Mechanisms 2017, Poster.

Veeraraghavan R, Gourdie RG. Novel STORM-based Quantitative Nanoscale Assessment Reveals Two Pools of Sodium Channels within the Cardiac Intercalated Disk, American Heart Association 2016 Scientific Sessions, Poster.

Veeraraghavan R, Hoeker GS, Poelzing S, Gourdie RG. Acute Inhibition of Sodium Channel Beta Subunit ($\beta 1$) -mediated Adhesion is Highly Proarrhythmic, American Heart Association 2016 Scientific Sessions, Poster.

Veeraraghavan R, Gourdie RG. Novel STORM-based Quantitative Assessment of Relative Protein Localization Reveals New Role for Sodium Channel $\beta 1$ Subunit in Cardiac Conduction, Biophysical Society 60th Annual Meeting 2016, Poster.

Veeraraghavan R, Ongstad E, Poelzing S, Gourdie RG. Superresolution Microscopic Localization of Scn5a and Scn1b Subunits of the Sodium Channel Complex Within Intercalated Disk Microdomains: Implications for Ephaptic Coupling, Gordon Research Conference on Cardiac Arrhythmia Mechanisms 2015, Poster.

Veeraraghavan R, Ongstad E, George S, Poelzing S, Gourdie RG. Can ephaptic coupling between fibroblasts and myocytes sustain conduction through a scar?, 2015 Keystone Symposium: Cell Biology of the Heart: Beyond the Myocyte-Centric View, Poster,

Veeraraghavan R, Lin J, Keener JP, Poelzing S, Gourdie RG. Superresolution Microscopy Reveals Sodium Channel Localization Within Intercalated Disk Microdomains: Implications for Ephaptic Coupling, Biophysical Society 59th Annual Meeting 2015, Poster.

Veeraraghavan R, Lin J, Keener JP, Gourdie RG, Poelzing SA Anisotropic Conduction Slowing During Sodium Channel Blockade: A Role For Ephaptic Coupling?, Cardiac Electrophysiology Society 2014 Annual Meeting, Poster.

Veeraraghavan R, Lin J, Keener JP, Gourdie RG, Poelzing SA Novel Role for Inward-rectifier Potassium Channels in Ephaptic Coupling, Heart Rhythm 2014, Featured Poster.

Veeraraghavan R, Lin J, Keener JP, Poelzing S, Gourdie RG. Sodium Channels in the Cx43 Gap Junction Perinexus May Constitute a Cardiac Ephapse: An Experimental and Modeling Study, Heart Rhythm 2014, Poster.

Veeraraghavan R, Lin J, Keener JP, Poelzing S, Gourdie RG. Experimental Evidence that the Cx43 Gap Junction Perinexus Functions as a Cardiac Ephapse, Biophysical Society 58th Annual Meeting 2014, Poster.

Veeraraghavan R, Lin J, Keener JP, Gourdie RG, Poelzing S. Sodium Channel Blockade Reveals Anisotropic Conduction Dependence on Ephaptic Coupling, Heart Rhythm 2013, Poster.

Veeraraghavan R, Lin J, Keener JP, Poelzing S, Gourdie RG. Arrhythmogenic conduction slowing during edema is associated with selective widening of the perinexal sites within the intercalated disk, Gordon Research Conference Conference on Cardiac Arrhythmia Mechanisms 2013, Poster.

Veeraraghavan R, Lin J, Keener JP, Poelzing S. Intercellular Uncoupling Unmasks Anisotropic Conduction Dependence on the Sodium Current, Heart Rhythm 2012, Poster.

Veeraraghavan R, Poelzing S. Myocardial Interstitial Volume Modulates the Cardiac Conduction Velocity- Gap Junction Relationship, International Gap Junction Conference 2011, Poster.

Veeraraghavan R, Larsen, AP, Poelzing S. Potassium channel activators modulate the effect of sodium channel blockade on cardiac conduction, Biophysical Society 55th Annual Meeting 2011, Poster.

Veeraraghavan R, Poelzing S. Gap Junctions and Cardiac Conduction: Is Edema the Missing Link?, Gordon Research Conference on Cardiac Arrhythmia Mechanisms 2011, Poster.

Veeraraghavan R, Poelzing S. Myocardial Edema Sensitizes Conduction to Gap Junction Uncoupling, Heart Rhythm 2010, Poster.

Veeraraghavan R, Poelzing S. Gap Junctions and Cardiac Conduction: Is Myocardial Edema the Missing Link?, Annual Mountain West Biomedical Conference 2010, Poster.

Veeraraghavan R, Poelzing S. Myocardial Edema: A missing link in the conduction velocity - gap junction relationship, Biophysical Society 54th Annual Meeting 2010, Poster.

Radwanski P, **Veeraraghavan R**, Poelzing S, Triggered Activity During Ca²⁺ Overload May Not Be Caused by Sarcoplasmic Reticular Ca²⁺ Load, American Heart Association Scientific Sessions 2009, Abstract.

Radwanski P, **Veeraraghavan R**, Poelzing S, Heterogeneous Ca²⁺ Cycling Underlies Bidirectional Ventricular Arrhythmias During Conditions of Ca²⁺ Overload, Heart Rhythm 2009, Poster.

Radwanski P, **Veeraraghavan R**, Poelzing S, Heterogeneous Calcium Handling Modulates Spatio-Temporal Initiation of Premature Beats During Conditions of Calcium Overload, American Heart Association Scientific Sessions 2008, Poster.

Veeraraghavan R, Poelzing S. Edema Increases Conduction Anisotropy Heterogeneously Between the Left and Right Ventricles, Heart Rhythm 2008, Poster.

Radwanski P, **Veeraraghavan R**, Poelzing S, Pinacidil Reduces Interventricular Heterogeneities and Arrhythmia Inducibility During Loss of Inward Rectifier Potassium Channel Function, 2008 ACCP Spring Practice and Research Forum, Poster.

Veeraraghavan R, Poelzing S. Heterogeneous Nav1.5 Distribution Between Ventricles Underlies Conduction Heterogeneities In the Brugada Syndrome, Annual Mountain West Biomedical Conference, 2007, Poster.

Poelzing S, **Veeraraghavan R**, Heterogeneous Ventricular Chamber Response to Gap Junction Blockade. Gap Junction Conference, Denmark 2007, Poster.

Veeraraghavan R, Poelzing S. Interventricular Nav1.5 Heterogeneities Underlie Conduction Heterogeneities In the Brugada Syndrome, Heart Rhythm 2007, Poster.

Veeraraghavan R, Poelzing S. Heterogeneous SCN5A Distribution Between Ventricles Underlies Conduction Heterogeneities In the Brugada Syndrome, Annual Mountain West Biomedical Conference 2006, Poster.

Poelzing S, **Veeraraghavan R**. Interventricular Heterogeneities Underlie Electrophysiologic Manifestations in Andersen-Tawil Syndrome (LQT7), American Heart Association Scientific Sessions 2006, Abstract.

C. RESEARCH SUPPORT

ONGOING:

Transformative Project Grant (Veeraraghavan, Co-I) 07/01/19-06/30/22
AHA
A novel therapeutic paradigm for arrhythmogenic calmodulinopathy

NIH R01 (Veeraraghavan, Co-I) 03/01/19-06/30/23
NIH-NHLBI
Controlled and uncontrollable calcium release in heart

Saving Tiny Hearts Grant (Veeraraghavan, Co-I) 07/01/19-06/30/20
Saving Tiny Hearts Foundation
A novel therapeutic paradigm for congenital arrhythmias

R01 (1R01HL141855-01) (Veeraraghavan, Subcontract) 07/01/18-06/30/22
NIH-NHLBI
The Role of the Sodium Channel Beta Subunit in Cardiac Conduction

COMPLETED:

Scientist Development Grant (Veeraraghavan, PI) 07/01/16-06/30/19
AHA
Modulation of cardiomyocyte ultrastructure by vascular barrier function - a novel mechanism for atrial arrhythmias

Post-Doctoral Fellowship (Veeraraghavan, PI) 07/01/13-06/30/15
AHA
The Role of the Perinexus in Ephaptic Coupling between Cardiac Myocytes.