SURESH GOVINDAN, M.Sc., PhD.,

PEER-REVIEWED PUBLICATIONS

1. David Y. Barefield, James W. McNamara, Thomas L. Lynch IV, Diederik W. D. Kuster, **Suresh Govindan**, Lauren Haar, Yang Wang, Erik N. Taylor, John N. Lorenz, Michelle L. Nieman, Guangshuo Zhu, Pradeep Luther, Andras Varró, Dobromir Dobrev, Xun Ai, Paul M.L. Janssen, David A. Kass, Walter Keith Jones, Richard J. Gilbert and Sakthivel Sadayappan, Ablation of the calpain-targeted site in cardiac myosin binding protein-C is cardioprotective during ischemia-reperfusion injury**,** *J Mol Cell Cardiol*. 2019, Volume 129, April 2019, Pages 236-246

2. Carl W. Tong,*, Giuseppina F. Dusio#, **Suresh Govindan**#, Dustin W. Johnson, David T.Kidwell, Lisa M. De La Rosa, Paola C. Rosas, Yang Liu, Elizabeth Ebert, M. Karen Newell-Rogers, Jeffrey B. Michel, Jerome P. Trzeciakowski, Sakthivel Sadayappan,*"Released Cardiac Myosin BindingProtein-C as a Predictor of Cardiovascular Events"**.** Am J Cardiol. 2017. Nov 1;120(9):1501-1507 doi: j.amjcard.2017.07.042**.*# Equal contribution**

3. Taylor EN, Hoffman MP, Barefield DY, Aninwene GE 2nd, Abrishamchi AD, Lynch TL 4th, **Govindan S**, Osinska H, Robbins J, Sadayappan S, Gilbert RJ.Alterations in Multi-Scale Cardiac Architecture in Association with Phosphorylation of Myosin Binding Protein-C.J Am Heart Assoc. 2016 Mar 15; 5(3):e002836. doi: 10.1161/JAHA.115.002836.

4. Thoonen R, Giovanni S, **Govindan S**, Lee DI, Wang GR, Calamaras TD, Takimoto E, Kass DA, Sadayappan S, Blanton RM.A Molecular Screen Identifies Cardiac Myosin Binding Protein-C as a ProteinKinaseGI Alpha Substrate.Circ. Heart Fail. 2015 Nov; 8(6):1115-22. doi: 10.1161/CIRCHEARTFAILURE.115.002308.

5. Kumar M, **Govindan S**, Zhang M, Khairallah R, Martin JL, Sadayappan S, de Tombe PP.Cardiac myosin binding protein C and Troponin-I phosphorylation independently modulate myofilament length dependent activation*J Biol Chem. 2015 VOL. 290, NO. 49, pp. 29241–29249.

6. Lynch T,Sivaguru M,Velayutham M,CardounelMAJ,Michels M,BarefieldD,**Govindan S**,Remedios CD,Velden JVR ,and Sadayappan S.,Oxidative Stress in Dilated Cardiomyopathy Caused by *MYBPC3* Mutation,Oxid Med Cell Longev. 2015:424751. doi: 10.1155/2015/424751

7. Kuster DW, **Govindan S**, Springer TI, Martin JL, Finley NL, Sadayappan S A hypertrophic cardiomyopathy-associated MYBPC3 mutation common in populations of South Asian descent causes contractile dysfunction.J Biol Chem. 2015 Feb 27;290(9):5855-67.

8. Witayavanitkul N, AitMou Y, KusterD W. Kuster, Khairallah RJ,Sarkey J**, Govindan S,** Chen X, Ge Y, Rajan S, Wieczorek DF,Irving T, Westfall MV, de Tombe PPand Sadayappan S Myocardial Infarction-induced N-terminal Fragment of cMyBP-C Impairs Myofilament Function in Human Myocardium.*J Biol Chem.* 2014 Mar 28; 289(13): 8818-27.

9. Kuster DWD, Barefield D, **Govindan S** and Sadayappan S, A sensitive and specific quantitation method for determination of serum cardiac myosin binding protein-C by electrochemiluminescence immunoassay. *J Vis. Exp.* (78), e50786, doi: 10.3791/50786 (2013).

10. Lin B, **Govindan S**, Lee K, Zhao P, Han R, Runte KE, Craig R, Palmer BM and Sadayappan S.Cardiac myosin binding protein-C plays no regulatory role in skeletal muscle structure and function.PLoS ONE 8(7): e69671. doi: 10.1371/journal.pone.0069671(2013)

11. **Govindan S**, Kuster DWD, Lin B, KahnDJ, Jeske WP, Walenga JM, Leya F, Hoppensteadt D, FareedJ, Sadayappan S.Increase in cardiac myosin binding protein-C plasma levels is a sensitive and cardiac-specific biomarker of myocardial infarction.*Am J Cardiovasc Dis* 2013; 3(2): 60-70.

12. **Govindan S**, Sarkey J, Ji X, SundaresanNR**,** Gupta MP, de Tombe PP and Sadayappan S.Pathogenic properties of N-terminal region of cardiac myosin binding protein-C *in vitro*. *Journal of Muscle Research and Cell Motility*, 2012; 33:17-30.

13. **Govindan S**, McElligott A, Muthusamy S, Nair N, Barefield D, Martin JL, Gongora E, Greis KD, Luther PK, Winegrad S, Henderson KK, Sadayappan S.Cardiac myosin binding protein-C is a potential diagnostic biomarker for myocardial infarction.*J Mol Cell Cardiol*. 2012; 52:154-164.

14. Shia CS [#], **Suresh G**[#], Hou YC, Lin YC, Chao PD, Juang SH. Suppression on Metastasis by Rhubarb through Modulation on MMP-2 and u-PA in Human A549 Lung Adenocarcinoma: an Ex-vivo Approach. *J. Ethanopharmocol* 2011; 133:426–433. **# Equal contribution**

15. **Govindan S**, Suguna S, ShanmugasundramSand ThangavelC.DNA Modification Profile of *Tolypothrix*and *Westiellopsis*Species.*Journal of Ecobiol.*2011; 29(3) 255-261.

16. **Govindan S**, Suguna S and Shanmugasundaram S (2010). Genetic Transformation of*Tolypothrix* Sp. MKU 696. *Indian Hydrobiology*. 2010:13(1): 53-57.

17. Chung KM, Hsu HH, **Govindan S**, Chang BY. Transcription regulation of ezrA and its effect on cell division of Bacillus subtilis. *J Bacteriol*. 2004; 186(17): 5926-32.

ORAL PRESENTATIONS:

1. **Govindan S**, AitMou Y, Lynch T de Tombe P and Sadayappan S. Protein kinase C-site phosphorylation of cardiac myosin binding protein-C decreases cross-bridge kinetics-Oral presentation Experimental Biology Meeting-2014, April 26-30,2014 San Diego, CA.

2. **Govindan S**, AitMou Y, Lynch T de Tombe P and Sadayappan S. Protein kinase C-site phosphorylation of cardiac myosin binding protein-C decreases cross-bridge kinetics-Oral presentation and **3rd prize** awarded for the best oral presentation in 34TH ANNUAL ST. ALBERT'S DAY, October 24th & 25th, 2013.Strich School of Medicine, Loyola University Chicago, Maywood IL.

3. **Govindan S**, Kahn Dj, Grassman ED, Sundrani R, Jeske WP, Hutchins M, Walenga JM, Leya F, Hoppensteadt D, Fareed J and Sadayappan S.Elevated levels of plasma cardiac myosin binding protein-C in acute coronary syndrome. **Oral presentations** on St. Albert's Day, Oct. 28th, 2011, Stritch School of Medicine, Loyola University Chicago, Maywood, IL.

National/International Conference Panel:

A. **10th International Conference of Academy of Cardiovascular Sciences,** organised by International Academy of Cardiovascular Sciences-India Section, February 08-10, 2018 Madurai Kamaraj University, Madurai, Tamil Nadu, India**-Deligate.**

B. **National Conference on Innovations in Biotechnology-2017,** December 14-15, 2017, School of Biotechnology Madurai Kamaraj University, Madurai, Tamil Nadu,India-**Chaired Poster session panel.**

ABSTRACT PRESENTATIONS

1. **Govindan S**, AitMou Y, Lynch T de Tombe P and Sadayappan S. Protein kinase C-site phosphorylation of cardiac myosin binding protein-C decreases cross-bridge kinetics.Chicago Research Network Symposium, Loyola University Chicago, Maywood, Chicago–September 20, 2013.

2. Kumar M,**Govindan S**, Sadayappan S and de Tombe P Cardiac myosin binding protein-C phosphorylation and sarcomere function. Chicago Research Network Symposium, Loyola University Chicago, Maywood, Chicago–September 20, 2013.

3. Witayavanitkul N, Sarkey J, AitmouY,Kuster DWD, **Govindan S**, Chen X, Ge Y Irving T, de Tombe P and SadayappanS.Myocardial infarction-induced N-terminal fragment of cardiac myosin binding protein-C impairs myofilament function.Chicago Research Network Symposium, Loyola University Chicago, Maywood, Chicago–September 20, 2013.

4. Jagadeesan A, Barefield A,Lynch T, **Govindan S**, Kuster DWD , and Sadayappan S Enzyme-linked immunosorbent assay is a viable method for quantifying the release kinetics of cardiac myosin binding protein-C following β- adrenergic agonist-induced cardiac injury. Chicago Research Network Symposium, Loyola University Chicago, Maywood, Chicago–September 20, 2013.

5. **Govindan S**, Chen X, Xu L, Davis RG, Ge Y and Sadayappan S. Proteomic Analysis of N'-region of cMyBP-C by High Resolution Top-down Mass SpectrometryMyofilament proteins as structural scaffolds and mediators of function Madison, Wisconsin, June 2-5,2012.

6. **Govindan S**, Kahn DJ, Grassman ED, Sundrani R, Jeske WP, Hutchins M, Walenga JM, Leya F, Hoppensteadt D, Fareed J and Sadayappan S. Cardiac myosin binding protein-C: a new biomarker in patients with acute coronary syndrome.American College of Cardiology 61st Annual Scientific Sessions ACC.12 and ACC-i2 with TCT ACC Moderated Poster, McCormick Place South, Hall A, Sunday, March 25, 2012, E404 JACC March 27, 2012 Volume 59, Issue 13,2012.

7. Cook Q, Lewis B, Sharain K, Hoppenstead D, Fareed J, Cunanan J, **Govidnan S**, and Sadayappan S. Cardiac myosin binding protein-C as a unique biomarker for ischemic heart disease and its relevance to other biomarkers as studied by immunoenzymatic and biochip array analysis. Poster presentation at the St. Albert's Day, Oct. 28th 2011,Stritch School of Medicine Loyola University Chicago, Maywood, IL.

8. Ji X, Aitmou Y, **Govindan S**, de Tombe PP and Sadayappan S. Ser-273 Phosphorylation Compensates the Ablation of Ser-282 Phosphorylation Motif in Cardiac Myosin Binding Protein-C for Normal Cardiac Function. Gordon Research Conference on Muscle & Molecular Motors, Colby-Sawyer College, July 10-15, 2011.

9. **Govindan S**, Kahn Dj, Grassman ED, Sundrani R, Jeske WP, Hutchins M, Walenga JM, Leya F, Hoppensteadt D, Fareed J and Sadayappan S.Elevated levels of cardiac myosin binding protein-C in acute coronary syndrome. Poster presentation at the Wisconsin human proteomics symposium: Proteomics technologies and applications to human disease on August 4, 2011, Madison, WI.

10. Suguna, S, **Govindan S**,Shanmugasundaram, S. DNA modification in Cyanobacteria. Poster presentation at the Gordon Research Conference on applied and environmental microbiology on July 3, 1999 in New London, CT, USA.

11. **Govindan S** and Shanmugasundaram, S. Carbonate uptake of *Westiellopsis sp.* MKU 118. Poster presentation at the Micon International - 94 & 35th annual conference of association of microbiologists of India on November 9, 1994 in Mysore, India.