

## CURRICULUM VITAE

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### EDUCATION AND TRAINING

Sep.,1986-July,1990 Department of Biology, Peking University, Beijing, China  
Sep.,1992-Dec.,1997 Department of Physiology and Biophysics, College of life Sciences, Peking University, Beijing, China  
April, 1997: National Cardiovascular Center Research Institute, Osaka, Japan.  
Training Course on Advanced Molecular and Cellular Biology  
Jan.,1999-Oct.,2003 Postdoctoral fellow and Research Associate  
National Institute on Aging, NIH, Baltimore, MD, USA

### PROFESSIONAL APPOINTMENTS

Aug.,1990-July,1994 Assistant Lecturer, Department of Biology, Peking University  
Aug.,1994-May,1999 Lecturer, College of Life Sciences, Peking University  
June,1999-July,2003 Associate Professor, College of Life Sciences, Peking University  
Aug.,2003-present Professor, College of Life Sciences, Peking University  
Jan.,2012-2017 Director, State Key Membrane Biology  
Sep.,2013-present Vice Dean, College of Life Sciences, Peking University

### PROFESSIONAL HONORS

1997 Winner, Zhang XiJun Prize, Chinese Association of Physiological Science  
2001 Finalist, Richard J. Bing Young Investigator Award, ISHR  
2002 Winner, L.N. and A.M. Katz Basic Science Research Prize for Young Investigators, AHA  
2003 Award for Outstanding Young Scientist, by China Ministry of Education  
2004 National Outstanding Young Scientist, National Natural Science Foundation of China  
2005 Cheung Kong Scholar Professor, China Ministry of Education.  
2011 Government Special Allowance, by the State Council of China  
2016 National Outstanding Scientist, by Chinese Association of Science and Technology  
2017 Natural Science Prize, Fist Class, by China Ministry of Education  
2018 National Natural Science Prize, by State Council of China  
2024 Achievement Prize for Education, Peking University

## EDITORIAL BOARD

2004-present, *Comparative Biochemistry and Physiology* (Elsevier)

2004-present, *Progress of Biochemistry and Biophysics*

2005-2008, *Journal of Molecular and Cellular Cardiology* (Elsevier)

2008-present, *Science China Life Sciences*

2009-2011, Associate Editor-in-Chief, *Frontiers of Biology*

2011-present, *Channels*

2018-present, *Pflügers Archiv - European Journal of Physiology*,

## PUBLICATIONS (SELECTED FROM 120)

(\* Corresponding Author)

1. **Wang SQ**, Song LS, Lakatta EG, Cheng H\* (2001).  $\text{Ca}^{2+}$  signaling between single L-type  $\text{Ca}^{2+}$  channels and ryanodine receptors in heart cells. *Nature*, 410: 592-596
2. **Wang SQ**, Song LS, Xu L, Meissner G, Lakatta EG, Rios E, Stern MD, Cheng H\* (2002). Thermodynamically irreversible gating of ryanodine receptors *in situ* revealed by stereotyped duration of release in  $\text{Ca}^{2+}$  sparks. *Biophys. J.*, 83: 242-251
3. **Wang SQ**, Wei CL, Zhao GL, Brochet DXP, Shen JX, *et al* (2004) Imaging microdomain  $\text{Ca}^{2+}$  in muscle cells. *Circ. Res.* 94: 1011-1022
4. **Wang SQ**, Stern MD, Ríos E, Cheng H (2004) The quantal nature of  $\text{Ca}^{2+}$  sparks and *in situ* operation of the ryanodine receptor array. *Proc. Natl. Acad. Sci. U. S. A.* 101: 3979-3984.
5. Fu Y, Zhang GQ, Hao XM, Wu CH, Chai Z, **Wang SQ\*** (2005) Temperature dependence and thermodynamic properties of Ca sparks in rat cardiomyocytes. *Biophys. J.* 89: 2533-2541
6. Xu M, Zhou P, Xu SM, Liu Y, Feng XH, Bai SH, Bai Y, Hao XM, Han QD, Zhang YY, **Wang SQ\*** (2007) intermolecular Failure of L-type  $\text{Ca}^{2+}$  Channel and Ryanodine Receptor Signaling in Hypertrophy. *PLoS Biol.* 5: e21,0203-0211
7. Zhou P, Zhao YT, Guo YB, Xu SM, Bai SH, Lakatta EG, Cheng H, Hao XM, **Wang SQ\*** (2009)  $\beta$ -Adrenergic signaling accelerates and synchronizes cardiac ryanodine receptor response to a single L-type  $\text{Ca}^{2+}$  channel. *Proc. Natl. Acad. Sci. U. S. A.* 106: 18028-18033.
8. Wu HD, Xu M, Li RC, Guo L, Lai YS, Xu SM, Li ll, Lü QL, Zhang HB, Zhang YY, Zhang CM and **Wang SQ\*** (2012) Ultrastructural Remodeling of  $\text{Ca}^{2+}$  Signaling Apparatus in Failing Heart Cells. *Cardiov. Res.* 95:430-438 (Highlighted with editorial)
9. Xu M, Wu HD, Li RC, Zhang HB, Wang M, Tao J, Feng XH, Guo YB, Li SF, Lai ST, Zhou P, Li LL, Yang HQ, Luo GZ, Bai Y, Xi JZ J., Gao W, Han QD, Zhang YY, Wang XJ, Meng X, and **Wang SQ\*** (2012) MiR-24 regulates junctophilin-2 expression in cardiomyocytes. *Circ. Res.* 111:837– 841.
10. Zhang HB, Li RC, Xu M, Xu SM, Lai YS, Wu HD, Xie XJ, Gao W, Ye H, Zhang YY, Meng X, **Wang SQ\*** (2013) Ultrastructural Uncoupling between T-tubules and Sarcoplasmic

Reticulum in Human Heart Failure. *Cardiovasc. Res.* 98:269-276

11. Li RC, Tao J, Guo YB, Wu HD, Liu RF, Bai Y, Lv ZZ, Luo GZ, Li LL, Wang M, Yang HQ, Gao W, Han QD, Zhang YY, Wang XJ, Xu M\*, **Wang SQ\*** (2013) In Vivo Suppression of MicroRNA-24 Prevents the Transition Toward Decompensated Hypertrophy in Aortic-Constricted Mice. *Circ. Res.* 112 (4): 601-605.
12. Shang W, Lu F, Sun T, Xu J, Li LL, Wang Y, Wang G, Chen L, Wang X, Cannell MB, **Wang SQ\***, Cheng H\* (2014) Imaging Ca<sup>2+</sup> Nanosparks in Heart with a New Targeted Biosensor, *Circ. Res.* 114: 412-420
13. Xiao E, Yang H, Gan YH, Duan DH, He LH, Guo Y, **Wang SQ\***, Zhang Y\* (2015) TRPM7 Senses Mechanical Stimulation Inducing Osteogenesis in Human Bone Marrow Mesenchymal Stem Cells. *Stem Cells*, 33(2):615-21
14. Zhao YT, Guo YB, Gu L, Fan XX, Yang HQ, Chen Z, Zhou P, Yuan Q, Ji G, Wang SQ (2017) Sensitized signaling between L-type Ca<sup>2+</sup> channels and ryanodine receptors in the absence or inhibition of FKBP12.6 in cardiomyocytes. *Cardiov. Res.*, 113(3):332-342.
15. Yang HQ, Wang LP, Gong Y, Fan XX, Zhu SY, Wang XT, Wang YP, Li LL, Xing X, Liu XX, Ji GS, Hou T, Zhang Y, Xiao RP, **Wang SQ\*** (2019)β<sub>2</sub>-Adrenergic Stimulation Compartmentalizes β<sub>1</sub> Signaling into Nanoscale Local Domains by Targeting the C-Terminus of β<sub>1</sub>-Adrenoceptors. *Circ Res.* 124(9):1350-1359.
16. Li LL, Guo QJ, Lou HY, Liang JH, Yang Y, Xing X, Li HT, Han J, Shen S, Li H, Ye H, Di Wu H, Cui B, **Wang SQ\*** (2020) Nanobar Array Assay Revealed Complementary Roles of BIN1 Splice Isoforms in Cardiac T-Tubule Morphogenesis. *Nano Lett.* 20(9):6387-6395.
17. Yang HQ, Zhou P, Wang LP, Zhao YT, Ren YJ, Guo YB, Xu M, **Wang SQ\*** (2020) Compartmentalized beta<sub>1</sub>-adrenergic signalling synchronizes excitation-contraction coupling without modulating individual Ca<sup>2+</sup> sparks in healthy and hypertrophied cardiomyocytes. *Cardiovasc Res.* 116(13):2069-2080.
18. Yang L, Li RC, Xiang B, Li YC, Wang LP, Guo YB, Liang JH, Wang XT, Hou T, Xing X, Zhou ZQ, Ye H, Feng RQ, Lakatta EG, Chai Z, **Wang SQ\*** (2021) Transcriptional regulation of intermolecular Ca<sup>2+</sup> signaling in ground squirrel cardiomyocytes: the myocardin-junctophilin axis. *Proc. Natl. Acad. Sci. U.S.A.* 118, e2025333118.
19. Gao SH, Wang GZ, Wang LP, Feng L, Zhou YC, Yu XJ, Liang F, Yang FY, Wang Z, Sun BB, Wang D, Liang LJ, Xie DW, Zhao S, Feng HP, Li X, Li KK, Tang TS, Huang YC, Wang SQ, Zhou GB (2022) Mutations and clinical significance of calcium voltage-gated channel subunit alpha 1E (CACNA1E) in non-small cell lung cancer. *Cell Calcium.* 102:102527.
20. Li J, Shang Z, Chen JH, Gu W, Yao L, Yang X, Sun X, Wang L, Wang T, Liu S, Li J, Hou T, Xing D, Gill DL, Li J, **Wang SQ**, Hou L, Zhou Y, Tang AH, Zhang X, Wang Y (2023) Engineering of NEMO as calcium indicators with large dynamics and high sensitivity. *Nat. Methods* 20:918-924.