Curriculum Vitae

Junhao Huang, Ph.D.

Professor

Dean, Center for Scientific Research, Guangzhou Sport University, China

Vice Dean, Guangdong Provincial Key Laboratory of Physical Activity and Health Promotion, Guangzhou Sport University, China

Visiting Professor

State Key laboratory of Quality Research in Chinese Medicine, Macau University of Science and Technology, Macau

Visiting Professor

Institute for Health & Sport, Victoria University, Australia

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Research Interests

Ion channel's function in human diseases; Chronic diseases with exercise and nutrition interventions; Cardiovascular and cognitive function

Biography

Dr. Huang received the Bachelor degree from Huazhong Agricultural University, China. He got his Master degree from Sun Yat-sen University, China. His Master degree dissertation focused on the antiepileptic effect of a Chinese medicine extracted from Panax Notoginseng. He obtained his Ph.D. degree from The Chinese University of Hong Kong, where he was supported by a research funding from the Research Grants Council (RGC) of Hong Kong. During his PhD research in Drs Guo-Wei He and Qin Yang's laboratory, Dr. Huang identified

important roles of ion channels (TRP channels and calcium-activated potassium channels) in modulating vascular endothelial function and dysfunction under exposure to hypoxia-reoxygenation. He then completed a two-year postdoctoral fellowship in ion channel drug discovery at The Queen's Medical Center, University of Hawaii at Manoa, where he was supported by grants from NIH and The Weinman Foundation. During his research with Drs Reinhold Penner and Andrea Fleig, he focused on the inhibition of TRPM7 channel-mediated Mg^{2+} transport by TRPM7 blocker as an anti-cancer strategy, also identified several novel TRPM7 ion channel inhibitors from FDA-approved drugs and their effects on cancer cell growth. Dr. Huang also worked as the postdoctoral scientist at UT Southwestern Medical Center, Hawaii Pacific University, as well as Virginia Commonwealth University, studying ion channels and human disease.

Dr. Huang currently works as the full Professor and Dean of Center for Scientific Research, Vice Dean of Guangdong Provincial Key Laboratory of Physical Activity and Health Promotion, Guangzhou Sport University, China. His laboratory is mainly investigating the molecular mechanisms of cardiovascular disease or neurological disease and the relationship between physical activity and human disease. Dr. Huang is especially interested in identifying how lifestyle modifications (exercise, diet, sleep, etc) improve cardiovascular or neurological function during physiological and pathophysiological states. His laboratory is also interested in the functional roles of ion channels in the regulation of chronic diseases with exercise intervention.

<u>Education and working</u>

2023 – present **Visiting Professor**, Victoria University, Australia

2022 – present **Visiting Professor**, University of Science and Technology, Macau

2021 – present **Dean**, Center for Scientific Research, Guangzhou Sport University, China

2021 – present **Vice Dean**, Guangdong Provincial Key Laboratory of Physical Activity and Health Promotion, Guangzhou Sport University, China

2021 – present **Professor**, Guangzhou Sport University, China

2020 – 2022 **Visiting Associate Professor**, University of Science and Technology, Macau

2017 – 2021 **Vice Dean**, Center for Scientific Research, Guangzhou Sport University, China

2015 – 2020 **Associate Professor**, Guangzhou Sport University, China

2014 – 2015 **Postdoctoral Fellow** (research field: ion channel research and human disease)

School of Medicine, Virginia Commonwealth University, Richmond, Virginia, USA

2013 – 2014 **Postdoctoral Research Associate** (research field: ion channel drug discovery)

College of Natural and Computational Sciences, Hawaii Pacific University, Hawaii, USA

2013 **Postdoctoral Fellow** (research field: neuroscience)

Department of Neuroscience, UT Southwestern Medical Center, Dallas, Texas, USA

2011 – 2013 **Postdoctoral Scientist** (research field: anti-cancer drug discovery)

The Queen's Medical Center, University of Hawaii at Manoa, Honolulu, Hawaii, USA

2008 – 2010 **Ph.D.** Major: Surgery

Department of Surgery, The Chinese University of Hong Kong, Hong Kong

2005 – 2007 **Master Degree** Major: Physiology

School of Life Science, Sun Yat-sen University, Guangzhou, China

2003 – 2004 **Exchange Student for Bachelor Degree Thesis**
Institute of Hydrobiology, Chinese Academy of Sciences, Hubei, China

2000 – 2004 **Bachelor Degree** Major: Aquaculture

Huazhong Agricultural University, Hubei, China

Publications

1) Full-Length Papers:

1. Guo W, Peng J, Su J, Xia J, Deng W, Li P, Chen Y, Liu G, #Wang S, #**Huang J**. The role and underlying mechanisms of irisin in exercise-mediated cardiovascular protection. ***PeerJ***. 2024, 12:e18413.
2. Wang C, Shu L, Cheng R, Yan M, Liang W, Zhou J, Shi N, Chen L, Peng L, **Huang J**, Hu M, Liao J. Exercise enhances anti-contractile effects of PVAT through endogenous H2S in high-fat diet induced obesity hypertension. ***Cardiovascular Drugs and Therapy***. 2024. https://doi.org/10.1007/s10557-024-07612-x.
3. Peng J, Guo W, Li P, Leng L, Gao D, Yu Z, Huang J, Guo J, #Wang S, #Hu M, #**Huang J**. Long-term effects of COVID-19 on endothelial function, arterial stiffness, and blood pressure in college students: a pre-post-controlled study. ***BMC Infectious Disease***. 2024, 24:742.
4. Zheng C, Chen JJ, Dai ZH, Wan KW, Sun FH, **Huang JH**, Chen XK. Physical exercise-related manifestations of long COVID: a systematic review and meta-analysis.

Journal of Exercise Science & Fitness. 2024, 22(4):341-349.

5. Gao DD, Liu GQ, Chen YL, Ding N, Zhong JH, Liang GN, Deng WJ, Li PL, Su JR, Wang M, #**Huang JH**, #Hu M. Cellular mechanism underlying leptin-induced anion secretion of rat epididymal epithelial cells. ***Andrology***. 2024, 1-11.
6. Yao G, Parris MR, Kuo WC, Porzgen P, Castillo B, Mason ES, Chinchilla A, **Huang J**, Suzuki S, Ross R, Akana E, Schuit SV, Miller SP, Penner R, Sun HS, Feng ZP, Hull KG, Romo D, Fleig A, Horgen FD. Transient receptor potential melastatin 7 (TRPM7) ion channel inhibitors: preliminary SAR and conformational studies of Xenicane Diterpenoids from the hawaiian soft coral Sarcothelia edmondsoni. ***Journal of Natural Products.*** 2024, 87(4):783-797.
7. Peng L, Chen L, Wang S, Guo L, Liang W, Zhou J, Shi N, **Huang J**, Hu M, Liao J. Association of lifestyle habits and cardiovascular risk among sedentary adults. ***Medicine***. 2023, 102(29):p e34376.
8. Li P, Liu Z, Wan K, Wang K, Zheng C, #**Huang J**. Effects of regular aerobic exercise on vascular function in overweight or obese older adults: A systematic review and meta-analysis. ***Journal of Exercise Science & Fitness.*** 2023, 21(4):313-325.
9. Gao DD, Ding N, Deng WJ, Li PL, Chen YL, Guo LM, Liang WH, Zhong JH, Liao JW, #**Huang JH**, #Hu M. Aerobic exercises regulate the epididymal anion homeostasis of high-fat diet induced obese rats through TRPA1-mediated cl^- and $HCO3^-$ secretion. ***Biology of Reproduction***. 2023, 11;109(1):53-64.
10. Wang C, Zhou J, Gao D, Wang Y, Guo L, Liang W, Shi N, Cheng R, Wang H, **Huang J**, Liao J, Hu M. Effects of Long-Term Aerobic Exercise on Perivascular Adipose Tissue Function and Akt/eNOS/NO Pathway in Obese Rats. ***Artery Research***. 2023, 29, 34-45.
11. **Huang JH**, Gao HW, Gao DD, Yang WY, Zhao MK, Shen B, Hu M. Exercise reduces airway smooth muscle contraction in asthmatic rats via inhibition of IL-4 secretion and SOCE. ***Allergy Asthma & Immunology Research***. 2023, 15(3):e24.
12. *Yin H, *__Huang J__, *Guo X, Xia J, Hu M. Romboutsia lituseburensis JCM1404 supplementation ameliorated endothelial function via gut microbiota modulation and lipid metabolisms alterations in obese rats. ***FEMS Microbiology Letters***. 2023, 370:fnad016.
13. Wen J, Leng L, Hu M, Hou X, #**Huang J**. Effects of whole-body vibration training on cognitive function: a systematic review. ***Frontiers in Human Neuroscience*** 2023, 17:854515.
14. Shi N, Xia J, Wang C, Zhou J, **Huang J**, Hu M, Liao J. Aerobic Exercise Prevents Arterial Stiffness and Attenuates Hyperexcitation of Sympathetic Nerves in Perivascular Adipose Tissue of Mice after Transverse Aortic Constriction. ***International Journal of***

Molecular Sciences. 2022, 23: 11189.

15. Yin H, **Huang J**, Hu M. Moderate-intensity exercise improves endothelial function by altering gut microbiome composition in rats fed a high-fat diet. ***Journal of Nippon Medical School***. 2022, 89: 316-327.
16. Tang S, Huang W, Wang S, Wu Y, Guo L, #**Huang J**, #Hu M. Effects of aquatic high-intensity interval training and moderate-intensity continuous training on central hemodynamic parameters, endothelial function and aerobic fitness in inactive adults. ***Journal of Exercise Science & Fitness***. 2022, 20(3):256-262.
17. *Gao D, *__Huang J__, Ding N, Deng W, Li P, Mai Y, Wu J, Hu M. Mechanosensitive Piezo1 channel in rat epididymal epithelial cells promotes transepithelial K^+ secretion. ***Cell Calcium***. 2022,104:102571.
18. Zhu Y, Sun F, Li C, **Huang J**, Hu M, Wang K, He S, Wu J. Acute effects of mindfulness-based intervention on athlete cognitive function: An fNIRS investigation. ***Journal of Exercise Science & Fitness***. 2022, 20(2):90-99.
19. *Gao DD, *__Huang JH__, *Zhang YL, Peng L, Deng WJ, Mai YN, Wu JR, Li PL, Ding N, Huang ZY, Zhu YX, Zhou WL, Hu M. Activation of TRPV4 stimulates transepithelial K^+ secretion in rat epididymal epithelium. ***Molecular Human Reproduction***. 2022, 28(2):gaac001.
20. *Cai L, *__Huang J__, *Gao D, Zeng S, Tang S, Chang Z, Wen C, Zhang M, Hu M, Wei GX. Effects of mind-body practice on arterial stiffness, central hemodynamic parameters and cardiac autonomic function of college students. ***Complementary Therapies in Clinical Practice*** 2021, 45:101492.
21. Hu M, Zeng N, Gu Z, Zheng Y, Xu K, Xue L, Leng L, Lu X, #Shen Y, #__Huang J__. Short-Term High-Intensity Interval Exercise Promotes Motor Cortex Plasticity and Executive Function in Sedentary Females. ***Frontiers in Human Neuroscience*** 2021, 15:620958.
22. Liao J, Yin H, **Huang J**, Hu M. Dysfunction of PVAT in mesenteric artery is restored by aerobic exercise in high-fat diet induced obesity. ***Clinical and Experimental Pharmacology and Physiology*** 2021, 48(5):697-703.
23. *#__Huang J__, *Liao J, *Fang Y, Deng H, Yin H, Shen B and Hu M. Six-week exercise training with dietary restriction improves central hemodynamics associated with altered gut microbiota in adolescents with obesity. ***Frontiers in Endocrinology*** 2020, 11:569085.
24. *__Huang J__, *Zhang L, Fang Y, Jiang W, Du J, Zhu J, Hu M, Shen B. Differentially expressed transcripts and associated protein pathways in basilar artery smooth muscle cells of the high-salt intake–induced hypertensive rat. ***PeerJ*** 2020, 8: e9849.
25. Li AS, Iijima A, **Huang J**, Li QX, Chen Y. Putative mode of action of the

monoterpenoids linalool, estragole, methyl eugenol and citronellal on ligand-gated ion channels. ***Engineering***. Volume 6, Issue 5, May 2020, Pages 541-545.

26. *Liao J, *__Huang J__, Wang S, Xiang M, Wang D, Deng H, Yin H, Xu F, Hu M. Effects of exercise and diet intervention on appetite-regulating hormones associated with miRNAs in obese children. ***Eating and Weight Disorders-Studies on Anorexia Bulimia and Obesity.*** 2020, 26(2):457-465. *Co-first Author
27. *__Huang J__, *Zheng Y, Gao D, Hu M, Yuan T. Effects of exercise on depression, anxiety, cognitive control, craving, physical fitness and quality of life in methamphetamine-dependent patients. ***Frontiers in Psychiatry***. 2020, 10: 999.
28. *__Huang J__, *Hao Y, Hu M, Yuan T. A commentary on "Activation of Cortical Somatostatin Interneurons Rescues Synapse Loss and Motor Deficits after Acute MPTP Infusion". ***Frontiers in Cellular Neuroscience-Cellular Neurophysiology***. 2019, 13: 544.
29. __Huang J__, Lai Q, Wang D, Yin H, Liao J, Wang S, Xu F, Hou X, Hu M. Effects of exercise training with dietary restriction on arterial stiffness, central hemodynamic parameters and cardiac autonomic function in obese adolescents. ***Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy***. 2019, 12:2157–2163.
30. __Huang J__, Zhang H, Tan X, Hu M, Shen B. Exercise restores impaired endothelium-derived hyperpolarizing factor–mediated vasodilation in aged rat aortic arteries via the TRPV4-KCa2.3 signaling complex. ***Clinical Interventions in Aging***. 2019, 14:1579-1587.
31. Xiang M, Liao J, __Huang J__, Deng H, Wang D, Xu Z, Hu M. Effect of a Combined Exercise and Dietary Intervention on Self-Control in Obese Adolescents. ***Frontiers in Psychology***. 2019, 10:1385.
32. Ding S, Zhang J, Yin S, Lu J, Hu M, Du J, #__Huang J__, #Shen B. Inflammatory cytokines tumor necrosis factor-α and interleukin-8 enhance airway smooth muscle contraction by increasing L-type Ca2+ channel expression. ***Clinical and Experimental Pharmacology and Physiology***. 2019, 46(1): 56-64. #Corresponding author
33. Ye L, Xu M, Hu M, Zhang H, Tan X, Li Q, #Shen B, #__Huang J__. TRPV4 is involved in irisin-induced endothelium-dependent vasodilation. ***Biochemical and Biophysical Research Communications***. 2018, 495(1): 41-45. #Corresponding author
34. Wang S, __Huang J__, Liao J, Liu S, Wang D, Hu M. Cause analysis of dizziness in community population and research on coping strategies. ***Minerva Medica***. 2018, 109(6).
35. Hu M, Wang S, Wang D, Lai Q, Chen X, Duan S, Zhao M, #__Huang J__. Combined moderate and high intensity exercise with dietary restriction improves cardiac autonomic function associated with a reduction in central and systemic arterial stiffness in obese adults: a clinical trial. ***PeerJ***. 2017, 5: e3900. #Corresponding author

36. *__Huang J__, *Furuya, H, Faouzi M, Zhang Z, Monteilh-Zoller M, Kawabata KG, Horgen D, Kawamori T, Penner R, Fleig A. Inhibition of TRPM7 suppresses cell proliferation of colon adenocarcinoma in vitro and induces hypomagnesemia in vivo without affecting azoxymethane-induced early colon cancer in mice. ***Cell Communication and Signaling***. 2017, 15(1): 30.
37. __Huang J__, Wang S, Xu F, Wang D, Yin H, Lai Q, Liao J, Hou X, Hu M. Exercise training with dietary restriction enhances circulating irisin level associated with increasing endothelial progenitor cell number in obese adults: an intervention study. ***PeerJ***. 2017, 5: e3669.
38. Wang XC, Sun WT, Fu J, __Huang JH__, Yu CM, Underwood MJ, He GW, Yang Q. Impairment of coronary endothelial function by hypoxia-reoxygenation involves TRPC3 inhibition-mediated KCa channel dysfunction: implication in ischemia-reperfusion injury. ***Scientific Reports.*** 2017, 7(1): 5895.
39. Hu M, Sheng JZ, #__Huang JH__, #Hou XH, Yu Y. Relationship between bone mineral values and leg anaerobic power in professional wrestlers. ***Biomedical Research***. 2017, 28(3): 1266-1271. #Co-corresponding author
40. Wang S, Liao J, __Huang J__, Yin H, Yang W, Hu Min. miR-214 and miR-126 were associated with restoration of endothelial function in obesity after exercise and dietary intervention. ***Journal of Applied Biomedicine***. 2017, 16(1): 34-39.
41. Chen MH, Li J, Jiang FF, Fu J, Xia XM, Du J, Hu M, #__Huang JH__, #Shen B. Orai1 forms a Signal Complex with BK_{Ca} Channel in Mesenteric Smooth Muscle cells. ***Physiological Reports***. 2016, 4(1). #Co-corresponding author
42. *Song K, *Zhong XG, *Xia XM, __Huang JH__, Fan YF, Yuan RX, Xue NR, Du J, Han WX, Xu AM, Shen B. Orai1 forms a Signal Complex with SK3 Channel in Gallbladder Smooth Muscle. ***Biochemical and Biophysical Research Communications***. 2015, 466(3): 456-462. *Co-first Author
43. *Zhang Z, *Faouzi M, __Huang JH__, Geerts D, Yu H, Fleig A, Penner R. N-Myc-induced Up-regulation of TRPM6/TRPM7 Channels Promotes Neuroblastoma cell Proliferation. ***Oncotarget***. 2014, 5(17): 7625-7634. *Co-first Author
44. *Yang Q, *__Huang JH__, Yao XQ, Underwood MJ, Yu CM. . ***Journal of Thoracic and Cardiovascular Surgery***. 2014, 148(4): 1665-1673. *Co-first Author
45. Zhang Z, Yu H, __Huang J__, Faouzi M, Schmitz C, Penner R, Fleig A.The TRPM6 Kinase Domain Determines the Mg ATP-sensitivity of TRPM7/M6 Heteromeric ion Channels. ***Journal of Biological Chemistry***. 2014, 289(8): 5217-5227.
46. Xue HM, Yu CM, Underwood MJ, __Huang JH__, Yang Q. AVE3085 Protects Coronary Endothelium from the Impairment of Asymmetric Dimethylarginine by Activation and

Recoupling of eNOS. ***Cardiovascular Drugs and Therapy***. 2012, 26(5): 383-392.

47. **Huang JH**, He GW, Xue HM, Yao XQ, Liu XC, Underwood MJ, Yang Q. TRPC3 Channel Contributes to Nitric Oxide Release: Significance During Normoxia and Hypoxia-reoxygenation. ***Cardiovascular Research***. 2011, 91(3): 472-482.
48. *Yang Q, *__Huang JH__, Man YB, Yao XQ, He GW. Use of Intermediate/Small Conductance Calcium-activated Potassium Channel Activator for Endothelial Protection. ***Journal of Thoracic and Cardiovascular Surgery***. 2011, 141(2): 501-510. *Co-first Author
49. Xiang H, Liu Y, Zhang B, **Huang J**, Li Y, Yang B, Huang Z, Xiang F, Zhang H. The Antidepressant Effects and Mechanism of Action of Total Saponins from the Caudexes and Leaves of Panax Notoginseng in Animal Models of Depression. ***Phytomedicine***. 2011, 18(8): 731-738.
50. Xue HM, He GW, **Huang JH**, Yang Q. New Strategy of Endothelial Protection in Cardiac Surgery: use of Enhancer of Endothelial Nitric Oxide Synthase. ***World Journal of Surgery***. 2010, 34(7): 1461-1469.

2) Books & Book chapters

1. **Huang J**, Hu M, Sun F, Wei G, Yuan T, Cooper SB, Eds. Exercise, nutrition, and cognitive function: Implications on health promotion and performance improvement. ***Lausanne: Frontiers Media SA***. 2023.
2. **Huang J**, Yin H. Role of microbiota in the regulation of obesity under exercise intervention. In: Hu M (Eds.) Exercise interventions on obesity: theory and practice. ***Science Press***. 2023. p.154-168.
3. Xiang M, **Huang J**. Design of fundamental experimental study and clinical study on obesity. In: Hu M (Eds). Exercise interventions on obesity: theory and practice. ***Science Press***. 2023. p.38-55.

Invited Presentations and Honorary Activities at Conferences

1. **Huang J**. Effects of aquatic high-intensity interval training and moderate-intensity continuous training on body composition, aerobic fitness and vascular function in overweight/obese adults. Australian and New Zealand Obesity Society Annual Scientific Conference 2024, Sydney, Australia, 2024 (**Oral presentation**)
2. **Huang J,** Yan X. Comparative effects of different exercise types on endothelial function, arterial stiffness, and executive function in sedentary young individuals. The 29th Annual Congress of the European College of Sport Science. Glasgow-Scotland, UK, 2024 (**Oral**

presentation)

3. **Huang JH**. The effect and possible mechanism of 8-week Flexi-Bar Vibration exercise on cognitive function in middle-aged and elderly women. The 2nd International Forum on "Exercise Health and Physical Medicine Integration" & 2023 Academic Annual Congress of Sports and Health Science Branch of China Association of Gerontology and Geriatrics. Shenyang, China, 2023 (**Conference Presider & Plenary lecture**)
4. **Huang JH**. Mechanism of aerobic exercise improving SOCE-mediated coronary contraction in aging rats. The 20th Chinese Biophysics Congress. Changsha, China, 2023 (**Invited speech**)
5. **Huang JH**. The 8th Guangzhou International Conference on Exercise and Health. Guangzhou, China, 2023 (**Organizing Committee Member & Conference Presider**)
6. **Huang JH**. Mechanism of aerobic exercise improving SOCE-mediated coronary contraction in aging rats. 2023 Zhuhai International Symposium on Sports and Wellness for the Elderly. Zhuhai, China, 2023 (**Keynote speech**)
7. **Huang JH**, Liu Z. The effect and mechanism of acute HIIT and MICT interventions on the endothelial function in sedentary adults. The 13th National Convention on Sport Science of China. Tianjin, China, 2023 (**Oral presentation**)
8. **Huang JH**, Deng W. Mechanism of aerobic exercise improving SOCE-mediated coronary contraction in aging rats. The 28th Annual Congress of the European College of Sport Science. Paris, France, 2023 (**Poster presentation**)
9. **Huang JH**. Mechanism of aerobic exercise improving SOCE-mediated coronary contraction in aging rats. 2022 Academic Annual Congress of Sports and Health Science Branch of China Association of Gerontology and Geriatrics. Shenyang, China, 2022 (**Plenary lecture**)
10. **Huang JH**. Effects of 6-week aquatic high-intensity interval training and moderate-intensity continuous training on vascular function in inactive adults. The 7th Guangzhou International Conference on Exercise and Health. Guangzhou, China, 2022 (**Organizing Committee Member & Conference Presider & Plenary lecture**)
11. **Huang JH**. The role of Piezo1 channel in exercise-enhancing cytotoxic activity of natural killer cells. Dr. Erwin Neher Biophysics and Innovative Drug Discovery Summit. Macao, China, 2022 (**Invited speech**)
12. **Huang JH**. The effect of exercise training combined with dietary control on vascular function in obese people. The 5th Diabetes and Obesity Forum and the Guangdong-Hong Kong-Macao Greater Bay Area Metabolic Disease Frontier Academic Forum. Guangzhou, China, 2021 (**Invited speech**)
13. **Huang JH**. Role of store-operated Ca^{2+} entry in aerobic exercise reducing airway smooth

muscle contraction in asthmatic rats. 2021 Academic Annual Congress of Sports and Health Science Branch of China Association of Gerontology and Geriatrics. Shanghai, China, 2021 (**Keynote speech**)

14. **Huang JH**, Gao D, Hu M. The mechanism of aerobic exercise inhibiting IL-4 secretion and downregulating Orai channel to improve airway smooth muscle function in asthma. The 12th National Convention on Sport Science of China. Online, China, 2021 (**Oral presentation**)
15. **Huang JH**. The mechanism of aerobic exercise inhibiting IL-4 secretion and downregulating Orai channel to improve airway smooth muscle function in asthma. The 10th International Forum on Exercise and Health & 2021 Biophysical Society of China Annual Congress of Exercise and Public Health. Online, China, 2021 (**Academic Committee Member & Conference Presider & Plenary lecture**)
16. **Huang JH**, Hu M. Effect of a six-week exercise training with dietary restriction on pulse wave reflection, arterial stiffness and heart rate variability in obese adolescents. The 18th Annual Conference of the Society of Chinese Scholars on Exercise Physiology and Fitness. Xi'an, China, 2019 (**Oral presentation**)
17. **Huang JH**, Deng H, Hu M. The effects of exercise combined with dietary intervention on cardiovascular function and gut microbiota in obese adolescents. The 11th National Convention on Sport Science of China. Nanjing, China, 2019 (**Poster presentation**)
18. **Huang JH**. The effects of exercise combined with dietary intervention on vascular function in obese people. The 2nd Guangdong-Hong Kong-Macao Greater Bay Area Sports and Health Collaborative Innovation Forum. Guangzhou, China, 2019 (**Keynote speech**)
19. **Huang JH**. The 5th Guangzhou International Conference on Exercise and Health. Guangzhou, China, 2018 (**Organizing Committee Member & Conference Presider**)
20. **Huang JH**, Yang W, Zhao M, Hu M. Aerobic exercise increases BK_{Ca} channel expression to enhance tracheal smooth muscle relaxation in a murine asthma model. The 17th International Biochemistry of Exercise Conference. Beijing, China, 2018 (**Oral presentation**)
21. **Huang JH**, Deng H. A comparative study on the adaptability of heart rate variability among athletes in different sport events. 2018 Academic Exchange Conference of Sports and Health Rehabilitation Professional Committee of the Chinese Rehabilitation Medicine Association & U.S.-China Rehabilitation Association. Wuhan, China, 2018 (**Oral presentation**)
22. **Huang JH**. The 4th International Academic Conference on Sports Aids and Health Promotion and the Guangdong-Hong Kong-Macao Greater Bay Area Sports and Health

Collaborative Innovation Forum. Guangzhou, China, 2018 (**Conference Presider**)

23. **Huang JH**, Hu M, Wang S, Xu F, Wang D, Yin H, Lai Q, Liao J, Hou X. An 8-week combined exercise and diet intervention improves endothelial function, endothelial progenitor cells and circulating irisin in obese adults. 22nd Annual Congress of the European College of Sport Science. MetropolisRuhr, Germany, 2017 (**Oral presentation**)
24. **Huang JH**, Zhang H, Shen B, Xu m, Ye L, Hu M. Irisin induces endothelium-dependent vasodilation via activating TRPV4 channels. 6th International Ion Channel Conference. Qingdao, China, 2017 (**Oral presentation**)
25. **Huang JH**. Irisin induces endothelium-dependent vasodilation via TRPV4 channel. 2017 Chinese Association for Physiological Sciences Academic Symposium on Cardiovascular Physiology. Guangzhou, China, 2017 (**Plenary lecture**)
26. **Huang JH**. Irisin-induced endothelium-dependent vasodilation is mediated by TRPV4 channels. 2017 Chinese Youth Scholars Academic Symposium on Sports Physiology and Biochemistry. Shenzhen, China, 2017 (**Plenary lecture**)
27. **Huang JH**. The roles of TRPV4-K_{Ca} complex in aerobic exercise-improving aortic endothelium-dependent relaxation in aged rats. The 4th China Academic Symposium on Sports Physiology and Biochemistry. Wuxi, China, 2016 (**Oral presentation**)
28. **Huang JH**, He GW, Xue HM, Yao XQ, Yang Q. Effect of Hypoxia-Reoxygenation on Endothelial Canonical Transient Receptor Potential Channels. 18th Annual Scientific Congress, Hong Kong College of Cardiology. Hong Kong, China, 2010 (**Oral presentation**)
29. **Huang JH**, Yang Q, Underwood MJ, Yao XQ, He GW. Coronary Endothelial Ca^{2+}-Activated K^+ Channels Under Hypoxic Exposure. Experimental Biology 2009. New Orleans, USA, 2009 (**Oral presentation**)
30. **Huang JH**, Yang Q, Yao XQ, He GW. Response of TRPC3 Channels to Acute Hypoxia. 13th Annual Scientific Meeting of the Institute of Cardiovascular Science and Medicine. Hong Kong, China, 2009 (**Oral presentation**)
31. **Huang JH**, Yang Q, Yao XQ, He GW. Effect of Acute Hypoxia on Endothelial Intermediate Conductance Ca^{2+}-Activated K^+ Channels. Annual Scientific Meeting of the Hong Kong Pharmacology Society. Hong Kong, China, 2008 (**Oral presentation**)
32. **Huang JH**, Yang Q, Yao XQ, He GW. Intermediate Conductance Ca^{2+}-Activated K^+ Channels in Porcine Coronary Endothelium under Hypoxic Exposure. 12th Annual Scientific Meeting of the Institute of Cardiovascular Science and Medicine. Hong Kong, China, 2008 (**Oral presentation**)

Research Project Experience

1. 2023-2025 The effects of different swimming training interventions on cardiovascular function in obese adolescents (Science and Technology Innovation Project of the General Administration of Sport of China, 23KJCX055), PI
2. 2023-2024 The influencing factors and improvement mechanisms of physical activity in children with autism: based on the method of parental executive intervention (Scientific Research Project of Sports Bureau of Guangdong Province, China, GDSS2022N012), PI
3. 2023-2025 The regulatory mechanism of aerobic exercise on Romboutsia-TMAO-TRPV4-K_{Ca} pathway in improving endothelial function in high-fat diet-induced obese rats (Foundation of Higher Education of Guangdong Province, China, 2023ZDZX2033), PI
4. 2023-2025 The mechanism underlying the mediating effect of the mechanosensitive channel Piezo1 on exercise-induced changes in cytotoxicity of natural killer cells (Natural Science Foundation of Guangdong Province, China, 2023A1515012011), PI
5. 2022-2024 The role of mechanosensitive channel Piezo1 in exercise-regulating NK cell cytotoxic activity (Science and Technology Innovation Project of the General Administration of Sport of China), PI
6. 2020-2023 The regulatory mechanism of exercise on PVAT eNOS/NO pathway in improving vascular function in obesity and the effects of miR-214 (National Natural Science Foundation of China, 31971105), Co-PI
7. 2019-2022 The mechanism of aerobic exercise inhibiting IL-4 secretion and downregulating STIM1/Orai signaling pathway to improve airway smooth muscle function in asthma (Natural Science Foundation of Guangdong Province, China, 2019A1515012167), PI
8. 2019-2021 The mechanism of STIM1/Orai1 underlying the protective effects of aerobic exercise on airway smooth muscle function under the exposure to asthma (Foundation of Higher Education of Guangdong Province, China, 2019KTSCX078), PI
9. 2018-2021 The mechanism of exercise-induced irisin in improving the functional capacities of both endothelial progenitor cells and their released exosomes in obese adults (National Natural Science Foundation of China, 31771315), Co-PI
10. 2017-2019 The mechanism of TRPV4-K_{Ca} complex underlying the protective effects of

aerobic exercise on aging coronary endothelium under ischemia-reperfusion injury (National Natural Science Foundation of China, 31600969), PI

11. 2018-2019 The mechanism of irisin in exercise improving the functional capacities of both endothelial progenitor cells and their released exosomes (Foundation of Higher Education of Guangdong Province, China, 2017KTSCX109), PI
12. 2016-2018 Roles of TRPV4 Channel in the protective effects of aerobic exercise on vascular endothelial function with aging (Natural Science Foundation of Guangdong Province, China, 2016A030313625), PI
13. 2015-2017 Exercise training improves aging endothelial function and the roles of TRPV4 (Foundation of Higher Education of Guangdong Province, China, 2015KQNCX082), PI
14. 2016-2019 Roles of endothelial progenitor cell-derived microvesicles in vascular repair and diabetic atherosclerosis (National Natural Science Foundation of China, 81570403) , Co-PI
15. 2015-2016 Research Start-up fund for new faculty from Guangzhou Sport University, PI
16. 2014–2015 Molecular mechanisms of H_v1 voltage-gated proton channel function (NIH, 5R01GM092908-04)
17. 2013–2014 Nicotinic acetylcholine receptors drug development (NIGMS, P20GM103466)
18. 2011–2013 Channel kinases TRPM7 and TRPM6 (NIH, P01GM078195-01A1)
19. 2011–2013 TRPM7 inhibition of anti-cancer strategy (Weinman Innovation Award for Translation Research)
20. 2008–2010 Studies on the function and mRNA and protein expression of ion channels in the coronary endothelium related to ischemia (Hong Kong RGC Grant, 4651/07M)
21. 2008–2010 Modulation of intermediate- & small-conductance calcium-activated potassium channels in coronary endothelium in response to hypoxia (Hong Kong RGC Grant)
22. 2005–2007 Antiepileptic effect of Qi Ye Shen An (total saponins from the caudexes and leaves of panax notoginseng) (Natural Science Foundation of Guangdong Province, China)

Awards and honors

The Hundred Talents Program for Outstanding Young and Middle-aged Professional and Technical Talents of the General Administration of Sport of China

Second Prize of Guangdong Provincial Science and Technology Progress Award, 2021

Weiquan Li Outstanding Research Award, Guangzhou Sport University, 2023

Haocai Mo Scientific Research Award, Guangzhou Sport University, 2022

Haocai Mo Scientific Research Award, Guangzhou Sport University, 2021

Weiquan Li Outstanding Research Award, Guangzhou Sport University, 2020

Haocai Mo Scientific Research Award, Guangzhou Sport University, 2020

Haocai Mo Scientific Research Award, Guangzhou Sport University, 2019

Weiquan Li Outstanding Research Award, Guangzhou Sport University, 2018

Haocai Mo Scientific Research Award, Guangzhou Sport University, 2018

Weiquan Li Outstanding Research Award, Guangzhou Sport University, 2017

Outstanding Scientific Research Award, Guangzhou Sport University, 2015 - 2016

Weiquan Li Outstanding Research Award, Guangzhou Sport University, 2016

International Conference Travel Award for Postgraduate Student, The Chinese University of Hong Kong, 2009

Postgraduate Studentship Award, The Chinese University of Hong Kong, 2008 - 2010

Professional societies

Sports and Health Science Branch, China Association of Gerontology and Geriatrics – Council Member (2021 - present)

Exercise and Public Health Branch, Biophysical Society of China – Council Member (2021 - present)

Western Returned Scholars Association of Guangdong (Overseas-educated Scholars Association of Guangdong) – Council Member (2021 - present)

Chinese Association for Physiological Sciences - Member (2023 - present)

Institute of Cardiovascular Science and Medicine, The University of Hong Kong - Member (2023 - present)

China Sport Science Society - Member (2015 - present)

Guangdong Institute of Physical Health Management, China – Council Member (2016 - 2021)

Editorial activities

Guest Associate Editor –Frontiers in Human Neuroscience (2021 - present)

Guest Associate Editor –Frontiers in Physiology (2021 - present)

Editorial Board – Journal of Exercise Science & Fitness (2023 - present)

Review Editor – Frontiers in Physiology (2017 - present)

Editorial Board – Sports Medicine and Rehabilitation Journal (2016 - present)

Editorial Board – Journal of Sports Medicine and Therapy (2016 - present)

Editorial Board – Journal of Guangzhou Sport University (2022 - present)

Peer-Review activities

Reviewer for *Food Science and Human Wellness*

Reviewer for *Scandinavian Cardiovascular Journal*

Reviewer for *Neural Regeneration Research*

Reviewer for *Journal of the American Heart Association*

Reviewer for *Cerebral Cortex*

Reviewer for *Behavioural Brain Research*

Reviewer for *Journal of Exercise Science & Fitness*

Reviewer for *Frontiers in Endocrinology*

Reviewer for *Frontiers in Medicine*

Reviewer for *Sports Medicine and Health Science*

Reviewer for *Frontiers in Human Neuroscience*

Reviewer for *Obesity Research & Clinical Practice*

Reviewer for *Frontiers in Physiology*

Reviewer for *PeerJ*

Reviewer for *Cardiovascular Pathology*

Reviewer for *Frontiers in Molecular Neuroscience*

Reviewer for *Biomarkers in Medicine*

Reviewer for *Journal of Asthma*

Reviewer for *Journal of Asthma and Allergy*

Reviewer for *Sports Medicine and Rehabilitation*

Reviewer for *Advanced Exercise and Health Science*

Reviewer for *Translational Exercise Biomedicine*

Mentoring and education

Fei Long

Master Degree student, Exercise Training Program (2023 - present)

Qihong Fan

Master Degree student, Exercise Training Program (2023 - present)

Ying Li

Master Degree student, Exercise Training Program (2023 - present)

Xingyou Jiang

Master Degree student, Exercise Training Program (2023 - present)

Xinyu Liu

Master Degree student, Exercise Training Program (2023 - present)

Feiyao Zhang

Master Degree student, Exercise Training Program (2023 - present)

Mingxing Zhang

Master Degree student, Exercise Training Program (2023 - present)

Rongbin Zhu

Master Degree student, Exercise Training Program (2023 - present)

Wenxin Wang

Master Degree student, Exercise Training Program (2023 - present)

Weishan Lu

Master Degree student, Exercise Training Program (2023 - present)

Shan He

Ph.D student, Exercise Physiology Program (2022 - present)

Yutong Chen

Master Degree student, Exercise Training Program (2022 - present)

Yuanyuan Liu

Master Degree student, Exercise Training Program (2022 - present)

Yongpeng Zheng

Master Degree student, Exercise Training Program (2022 - present)

Guoqing Liu

Master Degree student, Exercise Physiology Program (2022 - present)

Jiarui Sui

Master Degree student, Exercise Physiology Program (2022 - present)

Junfeng Zhang

Master Degree student, Exercise Physiology Program (2022 - present)

Wenhuang Guo

Master Degree student, Exercise Rehabilitation Program (2022 - present)

Jianwei Peng

Master Degree student, Exercise Rehabilitation Program (2022 - present)

Yue Yang

Master Degree student, Exercise Physiology Program (2022 - present)

Yilin Chen

Master Degree student, Exercise Physiology Program (2021 - present)

Jinglin Huang

Master Degree student, Exercise Training Program (2021 - present)

Yuanling Zhong

Master Degree student, Exercise Training Program (2021 - present)

Kangle Wang

Ph.D student, Exercise Physiology Program (2020 - 2022)

Shen Wang

Ph.D student, Exercise Physiology Program (2015 - 2021)

Honggang Yin

Ph.D student, Exercise Physiology Program (2016 - 2022)

Peilun Li

Master Degree student, Exercise Physiology Program (2020 - present)

Ziqing Liu

Master Degree student, Exercise Rehabilitation Program (2020 - present)

Zhendong Yu

Master Degree student, Exercise Training Program (2020 - present)

Yu Chen

Master Degree student, Exercise Physiology Program (2019 - 2022)

Younian Mai

Master Degree student, Exercise Physiology Program (2019 - 2022)

Weiji Deng

Master Degree student, Exercise Physiology Program (2019 - 2022)

Jiarui Wu

Master Degree student, Exercise Rehabilitation Program (2019 - 2022)

Yanying Wu

Master Degree student, Exercise Rehabilitation Program (2018 - 2021)

Baihui Luo

Master Degree student, Exercise Physiology Program (2018 - 2021)

Yuqing Zheng

Master Degree student, Exercise Physiology Program (2017 - 2020)

Yuehua He

Master Degree student, Exercise Physiology Program (2017 - 2020)

Songxin Tan

Master Degree student, Exercise Physiology Program (2017 - 2020)

Zhengxiao Chang

Master Degree student, Exercise Physiology Program (2017 - 2020)

Hailin Deng

Master Degree student, Exercise Physiology Program (2016 - 2019)

Weiyue Yang

Master Degree candidate, Exercise Physiology Program (2015 - 2018)

Mengke Zhao

Master Degree candidate, Exercise Physiology Program (2015 - 2018)

Qinhao Lai

Master Degree candidate, Exercise Physiology Program (2015 - 2018)

Dan Wang

Master Degree candidate, Exercise Physiology Program (2015 - 2018)