

Curriculum Vitae

Associate Professor Dr. Sirinart Kumfu, Ph.D.

รองศาสตราจารย์ ดร.สิรินาถ คำฟู



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EDUCATION

2005 B.Sc. (Medical Technology), Second Class Honor
Faculty of Associated Medical Science,
Chiang Mai University, Chiang Mai, Thailand

2008 M.Sc. (Biochemistry),
Faculty of Medicine,
Chiang Mai University, Chiang Mai, Thailand

2013 Ph.D. (Physiology),
Faculty of Medicine,
Chiang Mai University, Chiang Mai, Thailand

PROFESSIONAL APPOINTMENT

2013-Present	<i>Academic staff</i> , Cardiac Electrophysiology unit, Cardiac Electrophysiology Research and Training (CERT) Center, Faculty of Medicine, Chiang Mai University
2013-Present	<i>Academic staff</i> , Cardiac Electrophysiology unit, Department of Physiology, Faculty of Medicine, Chiang Mai University
2016-2019	<i>Assistant professor</i> , Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2019-Present	<i>Associate professor</i> , Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

HONORS AND AWARDS

2020	รางวัล “ช่างทองคำ” นักวิจัยรุ่นใหม่ดีเด่น สาขาวิทยาศาสตร์สุขภาพ ประจำปี 2562, มหาวิทยาลัยเชียงใหม่
2019	รางวัลอาจารย์ดีเด่น ระดับบัณฑิตศึกษา (ปริญญาโท) คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่
2019	<i>TRF-OHEC-Scopus Young Researcher Award for New Scholar</i> , the Thailand Research Fund, Bangkok, Thailand
2018	รางวัลอาจารย์ที่ปรึกษาวิทยานิพนธ์หลักของนักศึกษาระดับปริญญาโท ที่มีผลงานตีพิมพ์ในวารสารวิชาการ ที่มี <i>impact factor</i> มากกว่า 1 ประจำปีการศึกษา 2560
2018	รางวัลอาจารย์ที่ปรึกษาวิทยานิพนธ์หลักของนักศึกษาระดับปริญญาโท ที่สำเร็จการศึกษาหลักสูตรวิทยาศาสตรมหาบัณฑิต สาขาชีววิทยา ประจำปีการศึกษา 2560 ตามที่ สกอ. กำหนด
2018-2020	<i>TRF-CHE Research Grant for New Scholar</i> , the Thailand Research Fund, Bangkok, Thailand
2018	<i>Outstanding poster presentation</i> , The 17 th Annual Conference of The Thailand Research Fund (TRF), The Regent Cha Am Beach Resort, Cha-Am, Phetburi, Thailand. 10-12 January, 2018

- 2017 ผู้แทนประเทศไทยเข้าร่วมการประชุม Global Young Scientists Summit (GYSS2017) ณ สาธารณรัฐสิงคโปร์ (14-21 มกราคม 2560)
- 2017-2019 *Faculty of Medicine Young Researcher Fund*, The Faculty of Medicine Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2016-2018 *TRF-CHE Research Grant for New Scholar*, the Thailand Research Fund, Bangkok, Thailand
- 2016 *Outstanding poster presentation*, The 15th Annual Conference of The Thailand Research Fund (TRF), The Regent Cha Am Beach Resort, Cha-Am, Phetburi, Thailand. 6-8 January, 2016
- 2015 *Chiang Mai University Young Researcher Fund*, CMU Junior Research Fellowship Program, Chiang Mai University, Chiang Mai, Thailand
- 2014-2016 *Faculty of Medicine Young Researcher Fund*, The Faculty of Medicine Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2014-2016 *TRF-CHE Research Grant for New Scholar*, the Thailand Research Fund, Bangkok, Thailand
- 2013 *Excellent PhD Thesis Award*, Health Sciences, Chiang Mai University.
- 2012 *Outstanding TRF Research of the Year 2012*, Thailand Research Fund, Bangkok, Thailand. (PI: Prof. Dr. Nipon Chattipakorn)
- 2012 *Outstanding oral presentation by Ph.D. student*, the Royal Golden Jubilee (RGJ) - Ph.D. Congress XIII, Chonburi, Thailand. 6-8 April 2012.
- 2010 *Outstanding poster presentation by Ph.D. student*, the 39th Annual Scientific Meeting of the Physiology Society of Thailand, Chonburi, Thailand. 2010.
- 2009-2012 *Ph.D. scholarship*, Royal Golden Jubilee Ph.D. program, Thailand Research Fund under the Office of the Prime Minister, the Royal Thai Government, Thailand.

2008 *Outstanding oral presentation by M.Sc. student, the 37th Physiological Society of Thailand's Annual Conference, Garden Sea View Resort, Pattaya, Chonburi, Thailand. 2008.*

PROFESSIONAL LICENSE

2005-present Medical Technologist (M.T.), Thailand

ORGANIZATION AND PARTICIPATION

2014-Present Thai Physiology Society

PRESENTATIONS AT INTERNATIONAL MEETINGS

November 2021 ePoster (virtual) presentation in American Heart Association (AHA) Scientific Sessions 2021 in Boston, Massachusetts, USA. 13-15 November 2021.

November 2020 ePoster (virtual) presentation in European Society of Cardiology (ESC congress 2020) Amsterdam, Netherlands. August 29, 2020 - September 1, 2020.

July 2017 Poster presentation in the Alzheimer's Association International Conference (AAIC) 2017, ExCel London Convention Centre, London, England. July 16-20, 2017.

March 2015 Poster presentation in American College of Cardiology (ACC) 2015 Scientific Sessions in San Diego, California, USA. March 14 - 16, 2015.

November 2011 Poster presentation in American Heart Association (AHA) Scientific Sessions 2011 in Orlando, Florida, USA. 12-16 November 2011.

PRESENTATIONS AT NATIONAL MEETINGS

- January 2018** Poster presentation in the 17th Annual Conference of The Thailand Research Fund (TRF), The Regent Cha Am Beach Resort, Cha-Am, Phetburi, Thailand. 10-12 January, 2018. (Outstanding poster presentation)
- September 2017** Oral presentation in the 15th International Neurologic and Cardiac Electrophysiology Symposium (NCES), CERT conference room, Faculty of medicine, Chiang Mai University. 1 September, 2017.
- April 2016** Oral presentation in the 14th International Neurologic and Cardiac Electrophysiology Symposium (NCES), CERT conference room, Faculty of medicine, Chiang Mai University. 29 April, 2016.
- January 2016** Poster presentation in the 15th Annual Conference of The Thailand Research Fund (TRF), The Regent Cha Am Beach Resort, Cha-Am, Phetburi, Thailand. 6-8 January, 2016. (Outstanding poster presentation)
- April 2012** Oral presentation in The Royal Golden Jubilee (RGJ) - Ph.D. Congress XIII, Chonburi, Thailand. 6-8 April 2012. (Outstanding oral presentation by Ph.D. student)
- May 2010** Poster presentation in The 39th Annual Scientific Meeting of the Physiology Society of Thailand, Chonburi, Thailand. 2010. (Outstanding poster presentation by Ph.D. student)
- May 2008** Oral presentation in The 37th Physiological Society of Thailand's Annual Conference 2008, Garden Sea View Resort, Pattaya, Chonburi, Thailand (Outstanding oral presentation by M.Sc. student)
- October 2007** Oral presentation in Annual Biochemical Research Meeting The 7th Annual Meeting, Department of Biochemistry, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- July 2007** Oral presentation in Thailand Research Fund Senior Research Scholar Meeting 2007, Sujinno building, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

ACADEMIC ACTIVITIES

Graduate Student's Dissertation Committees

PhD Graduates:

1. Chalita Kingnate, M.D., M.Sc, Co-Advisor

Research area: Cancer

2. Phudit Jatavan, M.D., M.Sc, Co-Advisor

Research area: Thalassemia

3. Juthamas Khamseekaew, B.Sc, Co-Advisor

Research area: Cardiac electrophysiology

4. Suwakon Wongjaikam, M.Sc, Co-Advisor

Research area: Cardiac electrophysiology

M.Sc. Graduates:

1. Phansa Phitthayaphong, B.Sc. Co-Advisor

Research area: Neurophysiology

2. Natthicha Sumneang, B.Sc. Major Advisor

Research area: Cardiac electrophysiology

3. Wanitchaya Minta, B.Sc. Major Advisor

Research area: Cardiac electrophysiology

Special Academic Appointments

2014-Present Graduate School Faculty, Chiang Mai University, Chiang Mai,
Thailand

RESEARCH GRANT SUPPORT

1. 10/2022-09/2023 Thailand Science Research and Innovation (TSRI)-CMU “The search for novel diagnostic and prognostic biomarkers in hepatocellular carcinoma and cholangiocarcinoma” (PI)
2. 05/2022-04/2025 National Research Council of Thailand (NRCT) “The potential cardioprotective effects of cell death pathways inhibitions and mitochondrial dynamics modulations in iron-overloaded cardiomyopathy: From cell to organ investigations.” (PI)
3. 10/2021-09/2022 Thailand Science Research and Innovation (TSRI)-CMU “Effect of Fc Gamma Receptor blocking reagent on Alzheimer’s Related Proteins Change and cell toxicity in Microglial and Neuroblastoma Cell Lines under High-Fat Condition.” (PI)
4. 01/2021-01/2023 Faculty of Medicine Endowment Fund, Chiang Mai University, Chiang Mai, Thailand. “Effects of apoptotic inhibitor on cardiac mitochondrial function and mitochondrial respiration protein expressions in iron-overloaded rats.” (PI)
5. 03/2019-03/2021 Faculty of Medicine Endowment Fund, Chiang Mai University, Chiang Mai, Thailand. “The effects of lipocalin-2 receptor siRNA on intracellular iron uptake, mitochondrial dynamic and apoptosis in cardiomyocytes under iron overload condition.” (PI)
6. 05/2018-04/2020 TRF-CHE Research Grant for New Scholar, the Thailand Research Fund (MRG6180239), Bangkok, Thailand. “The roles of lipocalin-2 receptor as a portal of iron uptake into cardiomyocytes under iron overload condition.” (PI)
7. 01/2017-01/2019 Faculty of Medicine Endowment Fund, Chiang Mai University, Chiang Mai, Thailand. “Effects of iron chelator deferiprone and T-type calcium channel blocker efonidipine on cardiac apoptosis, cardiac mitochondrial functions, cardiac mitochondrial biogenesis and mitochondrial dynamics in iron overload thalassemic mice.” (PI)
8. 01/2017-01/2019 Faculty of Medicine Endowment Fund, Chiang Mai University, Chiang Mai, Thailand. “The effects of different doses of Humanin on brain mitochondrial function after myocardial ischemia reperfusion injury.” (PI)

9. 05/2016-04/2018 TRF-CHE Research Grant for New Scholar, the Thailand Research Fund (MRG5980222), Bangkok, Thailand. “The effects of combined iron chelator with TTCC blocker or antioxidant therapy on the heart of iron-overloaded thalassemic mice.” (PI)
10. 06/2014-05/2016 TRF-CHE Research Grant for New Scholar, the Thailand Research Fund (TRG5780002), Bangkok, Thailand. “Comparison beneficial effects between iron chelator, TTCC blocker and LTCC blocker on cardiac iron accumulation, cardiac functions and cardiac mitochondrial function in wild type and thalassemic mice under iron overload condition.” (PI)
11. 10/2014-04/2016 Faculty of Medicine Endowment Fund, Chiang Mai University, Chiang Mai, Thailand. “Comparison of therapeutic effects among iron chelator, T-type calcium channel blocker and L-type calcium channel blocker on cardiac iron accumulation and cardiac iron transporters protein expression in wild type and thalassemic mice under iron overload condition” (PI)
12. 01/2015-12/2015 Chiang Mai University Young Researcher Fund, Chiang Mai, Thailand. “Comparison therapeutic effects between iron chelator, TTCC blocker and LTCC blocker on cardiac iron accumulation and cardiac mitochondrial function in wild type and thalassemic mice under iron overload condition” (PI)

PEER REVIEWED ARTICLES

1. Sripetchwandee J, Kongkaew A, **Kumfu S**, Chunchai T, Chattipakorn N, Chattipakorn SC. Ferrostatin-1 and Z-VAD-FMK potentially attenuated Iron-mediated neurotoxicity and rescued cognitive function in Iron-overloaded rats. *Life Sci.* 2023 Jan 15;313:121269.
2. Jatavan P, Sekararithi R, Jaiwongkam T, **Kumfu S**, Chattipakorn N, Tongsong T. Comparisons of serum non-transferrin-bound iron levels and fetal cardiac function between fetuses affected with hemoglobin Bart's disease and normal fetuses. *Front Med (Lausanne).* 2023 Jan 3;9:1015306.

3. Assavanopakun P, Sapbamrer R, **Kumfu S**, Chattipakorn N, Chattipakorn SC. Effects of air pollution on telomere length: Evidence from in vitro to clinical studies. *Environ Pollut.* 2022 Nov 1;312:120096.
4. Sriwichain S, Thiennimitr P, Thonusin C, Sarichai P, Buddhasiri S, **Kumfu S**, Nawara W, Kittichotirat W, Fucharoen S, Chattipakorn N, Chattipakorn SC. Deferiprone has less benefits on gut microbiota and metabolites in high iron-diet induced iron overload thalassemic mice than in iron overload wild-type mice: A preclinical study. *Life Sci.* 2022 Oct 15;307:120871.
5. Kaorop W, Maneechote C, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Mitochondrial-derived peptides as a novel intervention for obesity and cardiac diseases: bench evidence for potential bedside application. *J Clin Pathol.* 2022 Jul 21;jclinpath-2022-208321.
6. Hantrakool S, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Effects of Particulate Matter on Inflammation and Thrombosis: Past Evidence for Future Prevention. *Int J Environ Res Public Health.* 2022 Jul 19;19(14):8771.
7. Kiratikanon S, Chattipakorn SC, Chattipakorn N, **Kumfu S**. The regulatory effects of PTPN6 on inflammatory process: Reports from mice to men. *Arch Biochem Biophys.* 2022 May 30;721:109189.
8. Hantrakun P, Sekararithi R, Jaiwongkam T, **Kumfu S**, Chai-Adisaksopha C, Chattipakorn N, Tongsong T, Jatavan P. Effect of metformin on reducing platelet dysfunction in gestational diabetes mellitus: a randomized controlled trial. *Endocr Connect.* 2022 Apr 29;11(4):e220110.
9. **Kumfu S**, Chattipakorn SC, Chattipakorn N. Iron overload cardiomyopathy: Using the latest evidence to inform future applications. *Exp Biol Med (Maywood).* 2022 Feb 7 (IF:2.688; Q1)
10. Pinyopornpanish K, Phrommintikul A, Angkurawaranon C, **Kumfu S**, Angkurawaranon S, Yarach U, Buawangpong N, Chattipakorn N, Chattipakorn SC. Circulating Lipocalin-2 level is positively associated with cognitive impairment in patients with metabolic syndrome. *Sci Rep.* 2022 Mar 17;12(1):4635.

11. Sirilert S, Tongsong T, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Effects of intrauterine exposure to hepatitis B virus in fetuses. *J Med Microbiol*. 2021 Nov;70(11). (IF:2.156; Q1)
12. Phitthayaphong P, **Kumfu S**, Chattipakorn N, Chattipakorn SC. Blockage of Fc Gamma Receptors Alleviates Neuronal and Microglial Toxicity Induced by Palmitic Acid. *J Alzheimers Dis*. 2021 Jun 17. (IF:4.472; Q1)
13. Kobroob A, Peerapanyasut W, **Kumfu S**, Chattipakorn N, Wongmekiat O. Effectiveness of N-Acetylcysteine in the Treatment of Renal Deterioration Caused by Long-Term Exposure to Bisphenol A. *Biomolecules*. 2021 Apr 29;11(5):655. (IF:4.694; Q1)
14. Kingnate C, Charoenkwan K, **Kumfu S**, Apaijai N, Jaiwongkam T, Khunamornpong S, Chattipakorn N, Chattipakorn SC. Platinum-based chemotherapy and bevacizumab instigate the destruction of human ovarian cancers via different signaling pathways. *Biochem Pharmacol*. 2021 Jun;188:114587. (IF:5.009; Q1)
15. Shwe T, Bo-Htay C, Ongnok B, Chunchai T, Jaiwongkam T, Kerdphoo S, **Kumfu S**, Pratchayasakul W, Pattarasakulchai T, Chattipakorn N, Chattipakorn SC. Hyperbaric oxygen therapy restores cognitive function and hippocampal pathologies in both aging and aging-obese rats. *Mech Ageing Dev*. 2021 Apr;195:111465. (IF:4.304; Q1)
16. Tongprasert F, **Kumfu S**, Chattipakorn N, Tongsong T. Oxidative Stress and Inflammatory Markers of Cordocentesis Blood in Response to Fetal Anemia. *Curr Mol Med* 2021. (IF:2.254; Q1)
17. **Kumfu S**, Siri-Angkul N, Chattipakorn SC, Chattipakorn N. Silencing of lipocalin-2 improves cardiomyocyte viability under iron overload conditions via decreasing mitochondrial dysfunction and apoptosis. *J Cell Physiol* 2021;236(7):5108-5120. (IF:5.546; Q1)
18. Jatavan P, Lerthiranwong T, Sekararithi R, Jaiwongkam T, **Kumfu S**, Chattipakorn N, Tongsong T. The correlation of fetal cardiac function with gestational diabetes mellitus (GDM) and oxidative stress levels. *J Perinat Med* 2020;48(5):471-476. (IF:1.614; Q2)

19. Jatavan P, **Kumfu S**, Tongsong T, Chattipakorn N. Fetal Cardiac Cellular Damage Caused by Anemia in Utero in Hb Bart's Disease. *Curr Mol Med* 2021;21(2):165-175. (IF:2.254; Q1)
20. Nanthatanti N, Tantiworawit A, Piriyaakuntorn P, Rattanathammethee T, Hantrakool S, Chai-Adisaksopha C, Rattarittamrong E, Norasetthada L, Tuntiwechapakul W, Fanhchaksai K, Charoenkwan P, **Kumfu S**, Chattipakorn N. Leukocyte telomere length in patients with transfusion-dependent thalassemia. *BMC Med Genomics* 2020;13(1):73. (IF:2.630; Q1)
21. Sumneang N, Siri-Angkul N, **Kumfu S**, Chattipakorn SC, Chattipakorn N. The effects of iron overload on mitochondrial function, mitochondrial dynamics, and ferroptosis in cardiomyocytes. *Arch Biochem Biophys* 2020;680:108241. (IF:3.559; Q1)
22. Sumneang N, **Kumfu S**, Khamseekaew J, Siri-Angkul N, Fucharoen S, Chattipakorn SC, Chattipakorn N. Combined iron chelator with N-acetylcysteine exerts the greatest effect on improving cardiac calcium homeostasis in iron-overloaded thalassemic mice. *Toxicology* 2019;427:152289. (IF: 3.547; Q1)
23. Phrommintikul A, Wongcharoen W, **Kumfu S**, Jaiwongkam T, Gunaparn S, Chattipakorn SC, Chattipakorn N. Effects of Dapagliflozin vs. Vildagliptin on Cardiometabolic Parameters in Diabetic Patients with Coronary Artery Disease: A Randomised Study. *Br J Clin Pharmacol* 2019;85(6):1337-1347. (IF: 3.867; Q1)
24. Kingnate C, Charoenkwan K, **Kumfu S**, Chattipakorn N, Chattipakorn SC. Possible Roles of Mitochondrial Dynamics and the Effects of Pharmacological Interventions in Chemoresistant Ovarian Cancer. *EBioMedicine* 2018;34:256-266. (IF: 6.680; Q1)
25. Khamseekaew J, **Kumfu S**, Palee S, Wongjaikam S, Srichairatanakool S, Fucharoen S, Chattipakorn SC, Chattipakorn N. Effects of the iron chelator deferiprone and the T-type calcium channel blocker efonidipine on cardiac

function and Ca²⁺ regulation in iron-overloaded thalassemic mice. *Cell Calcium* 2018;72:18-25. (IF: 3.932; Q1)

26. Rueangdetnarong H, Sekararithi R, Jaiwongkam T, **Kumfu S**, Chattipakorn N, Tongsong T, Jatavan P. Comparisons of the oxidative stress biomarkers levels in gestational diabetes mellitus (GDM) and non-GDM among Thai population: cohort study. *Endocr Connect* 2018;7(5):681-687. (IF: 2.474; Q2)
27. Chinthakanan S, Laosuwan K, Boonyawong P, **Kumfu S**, Chattipakorn N, Chattipakorn SC. Reduced heart rate variability and increased saliva cortisol in patients with TMD. *Arch Oral Biol* 2018;90:125-129. (IF: 1.663; Q2)
28. **Kumfu S**, Charununtakorn ST, Jaiwongkam T, Chattipakorn N, Chattipakorn SC. Humanin Exerts Neuroprotection During Cardiac Ischemia-Reperfusion Injury. *J Alzheimers Dis* 2018;61(4):1343-1353. (IF: 3.517; Q1)
29. **Kumfu S**, Khamseekaew J, Palee S, Srichairatanakool S, Fucharoen S, Chattipakorn SC, Chattipakorn N. Combined iron chelator and T-type calcium channel blocker exerts greater efficacy on cardioprotection than monotherapy in iron-overload thalassemic mice. *Eur J Pharmacol* 2018;822:43-50. (IF: 3.170; Q1)
30. Sungkarat S, Boripuntakul S, **Kumfu S**, Lord SR, Chattipakorn N. Tai Chi Improves Cognition and Plasma BDNF in Older Adults With Mild Cognitive Impairment: A Randomized Controlled Trial. *Neurorehabil Neural Repair* 2018;32(2):142-149. (IF: 3.757; Q1)
31. Minta W, Palee S, Mantor D, Sutham W, Jaiwongkam T, Kerdphoo S, Pratchayasakul W, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Estrogen deprivation aggravates cardiometabolic dysfunction in obese-insulin resistant rats through the impairment of cardiac mitochondrial dynamics. *Exp Gerontol* 2018;103:107-114. (IF: 3.080; Q2)
32. **Kumfu S**, Khamseekaew J, Palee S, Srichairatanakool S, Fucharoen S, Chattipakorn SC, Chattipakorn N. A combination of an iron chelator with an

antioxidant exerts greater efficacy on cardioprotection than monotherapy in iron-overload thalassemic mice. *Free Radic Res* 2018;52(1):70-79. (IF: 2.825; Q2)

33. **Kumfu S**, Chattipakorn SC, Chattipakorn N. T-type and L-type Calcium Channel Blockers for the Treatment of Cardiac Iron Overload: An Update. *J Cardiovasc Pharmacol* 2017;70(5):277-283. (IF: 2.371; Q2)
34. **Kumfu S**, Fucharoen S, Chattipakorn SC, Chattipakorn N. Cardiac complications in beta-thalassemia: From mice to men. *Exp Biol Med (Maywood)* 2017;242(11):1126-1135. (IF: 3.005; Q1)
35. Wongjaikam S, **Kumfu S**, Khamseekaew J, Chattipakorn SC, Chattipakorn N. Restoring the impaired cardiac calcium homeostasis and cardiac function in iron overload rats by the combined deferiprone and N-acetyl cysteine. *Sci Rep* 2017;7:44460. (IF: 4.011; Q1)
36. Khamseekaew J, **Kumfu S**, Wongjaikam S, Kerdphoo S, Jaiwongkam T, Srichairatanakool S, Fucharoen S, Chattipakorn SC, Chattipakorn N. Effects of iron overload, an iron chelator and a T-Type calcium channel blocker on cardiac mitochondrial biogenesis and mitochondrial dynamics in thalassemic mice. *Eur J Pharmacol* 2017;799:118-127. (IF: 3.170; Q1)
37. Wongjaikam S, **Kumfu S**, Khamseekaew J, Sripetchwandee J, Srichairatanakool S, Fucharoen S, Chattipakorn SC, Chattipakorn N. Combined Iron Chelator and Antioxidant Exerted Greater Efficacy on Cardioprotection Than Monotherapy in Iron-Overloaded Rats. *PLoS One* 2016;11(7):e0159414. (IF: 2.776; Q1)
38. Chunchai T, Samniang B, Sripetchwandee J, Pintana H, Pongkan W, **Kumfu S**, Shinlapawittayatorn K, KenKnight BH, Chattipakorn N, Chattipakorn SC. Vagus Nerve Stimulation Exerts the Neuroprotective Effects in Obese-Insulin Resistant Rats, Leading to the Improvement of Cognitive Function. *Sci Rep* 2016;6:26866. (IF: 4.011; Q1)

39. **Kumfu S**, Charunnuntakorn ST, Jaiwongkam T, Chattipakorn N, Chattipakorn SC. Humanin prevents brain mitochondrial dysfunction in a cardiac I/R injury model. *Exp Physiol* 2016;101(6):697-707. (IF: 2.624; Q2)
40. **Kumfu S**, Chattipakorn SC, Fucharoen S, Chattipakorn N. Effects of iron overload condition on liver toxicity and hepcidin/ferroportin expression in thalassemic mice. *Life Sciences* 2016;150:15–23. (IF: 3.448; Q1)
41. Khamseekaew J, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Effects of Iron Overload on Cardiac Calcium Regulation: Translational Insights Into Mechanisms and Management of a Global Epidemic. *Can J Cardiol* 2016;32(8):1009-16. (IF: 5.592; Q1)
42. Samniang B, Shinlapawittayatorn K, Chunchai T, Pongkan W, **Kumfu S**, Chattipakorn SC, KenKnight BH, Chattipakorn N. Vagus Nerve Stimulation Improves Cardiac Function by Preventing Mitochondrial Dysfunction in Obese-Insulin Resistant Rats. *Sci Rep* 2016;6:19749. (IF: 4.011; Q1)
43. **Kumfu S**, Chattipakorn SC, Fucharoen S, Chattipakorn N. Dual T-type and L-type calcium channel blocker exerts beneficial effects in attenuating cardiovascular dysfunction in iron-overload thalassemic mice. *Exp Physiol* 2016;101(4):521-39. (IF: 2.624; Q2)
44. Sangaralingham SJ, Wang BH, Huang L, **Kumfu S**, Ichiki T, Krum H, Burnett JC Jr. Cardiorenal fibrosis and dysfunction in aging: Imbalance in mediators and regulators of collagen. *Peptides* 2016;76:108-14. (IF: 2.659; Q2)
45. Wongjaikam S, **Kumfu S**, Chattipakorn SC, Fucharoen S, Chattipakorn N. Current and future treatment strategies for iron overload cardiomyopathy. *Eur J Pharmacol* 2015;765:86-93. (IF: 3.170; Q1)
46. Pratchayasakul W, Sa-Nguanmoo P, Sivasinprasasn S, Pintana H, Tawinvisan R, Sripetchwandee J, **Kumfu S**, Chattipakorn N, Chattipakorn SC. Obesity accelerates cognitive decline by aggravating mitochondrial dysfunction,

insulin resistance and synaptic dysfunction under estrogen-deprived conditions. *Horm Behav* 2015;72:68-77. (IF: 3.949; Q1)

47. Inthachai T, Lekawanvijit S, **Kumfu S**, Apaijai N, Pongkan W, Chattipakorn SC, Chattipakorn N. Dipeptidyl peptidase-4 inhibitor improves cardiac function by attenuating adverse cardiac remodeling in rats with chronic myocardial infarction. *Exp Physiol* 2015;100(6):667-79. (IF: 2.624; Q2)
48. Sivasinprasasn S, Sa-Nguanmoo P, Prachayasakul W, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Obese-insulin resistance accelerates and aggravates cardiometabolic disorders and cardiac mitochondrial dysfunction in estrogen-deprived female rats. *Age (Dordr)* 2015;37(2):28. (IF: 4.648; Q1)
49. Wijarnpreecha K, **Kumfu S**, Chattipakorn SC, Chattipakorn N. Cardiomyopathy Associated with Iron Overload: How Does Iron Enter Myocytes and What are the Implications for Pharmacological Therapy?. *Hemoglobin* 2015;39(1):9-17. (IF: 0.598; Q3)
50. Shinlapawittayatorn K, Chinda K, Palee S, Surinkaew S, **Kumfu S**, Kumphune S, Chattipakorn S, KenKnight BH, Chattipakorn N. Vagus Nerve Stimulation Initiated Late During Ischemia, but not Reperfusion, Exerts Cardioprotection via Amelioration of Cardiac Mitochondrial Dysfunction. *Heart Rhythm* 2014;11(12):2278-87. (IF: 5.225; Q1)
51. Semaming Y, **Kumfu S**, Pannangpetch P, Chattipakorn S, Chattipakorn N. Protocatechuic acid exerts cardioprotective effect in type-1 diabetic rats. *J Endocrinol* 2014;223(1):13-23. (IF: 4.381; Q1)
52. Lekawanvijit S, **Kumfu S**, Wang BH, Manabe M, Nishijima F, Kelly DJ, Krum H, Kompa AR. The Uremic Toxin Adsorbent AST-120 Abrogates Cardiorenal Injury Following Myocardial Infarction. *PLoS One* 2013;8(12):e83687. (IF: 2.776; Q1)
53. Liu S, Kompa AR, **Kumfu S**, Nishijima F, Kelly DJ, Krum H, Wang BH. Subtotal nephrectomy accelerates pathological cardiac remodeling post-

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BOOK CHAPTER

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RESEARCH FIELDS OF INTEREST

- Cardiac electrophysiology
- Neurophysiology
- Cardiac function
- Thalassemia
- Iron measurement
- Cell culture
- Mitochondrial function
- High-performance liquid chromatography (HPLC)
- Western blot
- Real-time RT-PCR