

Curriculum vitae

Sirawit Sriwichaiin, M.D.

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Current position: *Staff*, Cardiac Electrophysiology Research and Training Center,
Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

Instructor, Department of Physiology, Faculty of Medicine,
Chiang Mai University, Chiang Mai, Thailand

Physician, Maharaj Nakorn Chiang Mai Hospital, Faculty of Medicine,
Chiang Mai University, Chiang Mai, Thailand

Education

2012 – 2018 M.D. (First Class Honor): Faculty of Medicine,
Chiang Mai University, Chiang Mai, Thailand

Professional License

2018 – present M.D. (Thailand)

Professional Appointment

2019 – present *Instructor*, Department of Physiology, Faculty of Medicine, Chiang
Mai university

2018 – present *Staff*, Cardiac Electrophysiology Research and Training Center,
Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

2018 – present *Physician*, Maharaj Nakorn Chiang Mai Hospital, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

Organization and Participation

2019 – present The Physiological Society of Thailand

2018 – present The Medical Council of Thailand

Honors and Award

2019 Alzheimer’s Association International Conference 2019 Travel Fellowship award

2014 Top score in Human nervous system, Chiang Mai University
Top score in Human reproductive system, Chiang Mai University

2013 Top score in Hematology system, Chiang Mai University

Scholarship

2023 Monbukagakusho (MEXT) scholarship with Embassy Recommendation

Activities

2019 - Present Advisor, Chiang Mai University Medical Student Research Club, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

2018 Elective Course in Calcium and Bone Research, Center of Calcium and Bone Research (COCAB), Department of Physiology, Faculty of Science, Mahidol University, Bangkok, Thailand (Distinguished Professor Narattaphol Charoenphandhu, M.D., Ph.D.)

2018 Elective Course in Thalassemia Research Center, Institute of Molecular Biosciences, Mahidol University, Salaya Campus, Mahidol University, Bangkok, Thailand (Professor Emeritus Suthat Fucharoen, M.D.)

2018 - Present Member of the Organizing Committee, The Neurologic and Cardiac Electrophysiology Symposium (NCES), Cardiac Electrophysiology Research and Training (CERT) Center, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

2018 - 2019	Member of the Selection Committee and Advisor of Chiang Mai University medical student delegates participating in the Inter-Medical School Physiology Quiz (IMSPQ) at the University of Malaya, Kuala Lumpur, Malaysia and the University of Indonesia, Jakarta, Indonesia
2016	Elective Course in Department of Anatomy and Neurobiology, Faculty of Medicine, Kagawa University, Japan (Professor Takanori Miki)
2016	International winter seminar 2016, Faculty of medicine, Kagawa University, Kagawa, Japan
2015	Siriraj International Medical Microbiology, Parasitology and Immunology Competition (SIMPIC) 2015 candidate, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2015	Elective Course, Faculty of Medicine, Fukui University, Japan
2015	13 th Inter-medical school Physiology Quiz (IMSPQ) candidate, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2012 - 2018	Member of the Medical Student Academic Committee, Chiang Mai University Medical Student Organization (CMSO), Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2009-2010	Science Olympiad Camp – Mathematic major, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand in collaboration with The Promotion of Academic Olympiad and Development of Science Education Foundation (POSN)

Peer-Reviewed Articles

1. Thonusin C, Nawara W, Khuanjing T, Prathumsup N, Arinno A, Ongnok B, Arunsak B, **Sriwichaiin S**, Chattipakorn SC, Chattipakorn N. Blood metabolomes as non-invasive biomarkers and targets of metabolic interventions for doxorubicin- and trastuzumab- induced cardiotoxicity. *Arch Toxicol* 2022 (in press)
2. **Sriwichaiin S**, Apaijai N*, Phrommintikul A, Jaiwongkam T, Kerdphoo S, Pratchayasakul W, Thongmung N, Mahantassanapong U, Vathesatogkit P, Kitiyakara C, Sritara P, Chattipakorn N, Chattipakorn SC. Increased Efficiency of Mitochondrial Coupling with a Reduction in Other Mitochondrial Respiratory Parameters in Peripheral Blood Mononuclear Cells is Observed in Older Adults. *J Gerontol A Biol Sci Med Sci*. 2022 (in press) *AP and SS contributed equally in this paper.
3. Thummasorn S, Apichai S, Chupradit S, Sirisattayawong P, Chaiwong P, **Sriwichaiin S**, Pratchayasakul W, Chattipakorn N, Chattipakorn SC. T2DM patients with depression have higher levels of hyperglycemia and cognitive decline than T2DM patients. *PLoS One*. 2022;17(8):e0273327.

4. Pratchayasakul W, Arunsak B, Suparan K, **Sriwichaiin S**, Chunchai T, Chattipakorn N, Chattipakorn SC. Combined Caloric Restriction and Exercise Provides Greater Metabolic and Neurocognitive Benefits than either as a Monotherapy in Obesity With or Without Estrogen Deprivation. *J Nutr Biochem*. 2022;14:109125. (in press).
5. **Sriwichaiin 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;307:120871.
6. Pantiya P, Thonusin C, Sumneang N, Ongnok B, Chunchai T, Kerdphoo S, Jaiwongkam T, Arunsak B, Siri-Angkul N, **Sriwichaiin S**, Chattipakorn N, Chattipakorn SC. High Cardiorespiratory Fitness Protects against Molecular Impairments of Metabolism, Heart, and Brain with Higher Efficacy in Obesity-Induced Premature Aging. *Endocrinol Metab (Seoul)*. 2022;37(4):630-640.
7. Suparan K, **Sriwichaiin S**, Chattipakorn N, Chattipakorn SC. Human Blood Bacteriome: Eubiotic and Dysbiotic States in Health and Diseases. *Cells*. 2022;11(13):2015.
8. Thonusin C, Pantiya P, Sumneang N, Chunchai T, Nawara W, Arunsak B, Siri-Angkul N, **Sriwichaiin S**, Chattipakorn SC, Chattipakorn N. Effectiveness of high cardiorespiratory fitness in cardiometabolic protection in prediabetic rats. *Mol Med*. 2022;10;28(1):31.
9. **Sriwichaiin S**, Kittichotirat W, Chunchai T, Chattipakorn N, Chattipakorn SC. Profiles of gut microbiota in obese-insulin-resistant rats treated with probiotics. *Eur J Nutr*. 2022;61(5):2493-505.
10. **Sriwichaiin S**, Chattipakorn N, Chattipakorn SC. Metabolomic Alterations in the Blood and Brain in Association with Alzheimer's Disease: Evidence from in vivo to Clinical Studies. *J Alzheimers Dis*. 2021;84(1):23-50.
11. Theerajangkaphichai W, Sripetchwandee J, **Sriwichaiin S**, Svasti S, Chattipakorn N, Tantiworawit A, Chattipakorn SC. An association between fibroblast growth factor 21 and cognitive impairment in iron-overload thalassemia. *Sci Rep*. 2021;11(1):8057.
12. Apaijai N, **Sriwichaiin S***, Phrommintikul A, Jaiwongkam T, Kerdphoo S, Chansirikarnjana S, Thongmung N, Mahantassanapong U, Vathesatogkit P, Kitiyakara C, Sritara P, Chattipakorn N, Chattipakorn SC. Cognitive impairment is associated with mitochondrial dysfunction in peripheral blood mononuclear cells of elderly population. *Sci Rep*. 2020;10(1):21400. *AP and SS contributed equally in this paper.
13. Lahnwong S, Palee S, Apaijai N, **Sriwichaiin S**, Kerdphoo S, Jaiwongkam T, Chattipakorn SC, Chattipakorn N. Acute dapagliflozin administration exerts cardioprotective effects in rats with cardiac ischemia/reperfusion injury. *Cardiovasc Diabetol*. 2020;19(1):91.
14. Luca M, Chattipakorn SC, **Sriwichaiin S**, Luca A. Cognitive-Behavioural Correlates of Dysbiosis: A Review. *Int J Mol Sci*. 2020;21(14).

15. Mantor D, Pratchayasakul W, Minta W, Sutham W, Palee S, Sripetchwandee J, Kerdphoo S, Jaiwongkum T, **Sriwichaiin S**, Krintratun W, Chattipakorn N, Chattipakorn SC. Both oophorectomy and obesity impaired solely hippocampal-dependent memory via increased hippocampal dysfunction. *Exp Gerontol.* 2018;108:149-58.

Peer-Reviewed Abstracts

1. Thonusin C, Nawara W, Khuanjing T, Prathumsap N, Arinno A, Ongnok B, Arunsak B, **Sriwichaiin S**, Chattipakorn S, Chattipakorn N. Abstract 11203: Blood Metabolomes as Non-Invasive Biomarkers and Targets of Metabolic Interventions for Doxorubicin- and Trastuzumab-Induced Heart Failure. *Circulation.* 2022;146(Suppl_1):A11203-A.
2. **Sriwichaiin S**, Apaijai N, Phrommintikul A, Jaiwongkam T, Kerdphoo S, Chansirikarnjana S, Thongmung N, Mahantassanapong U, Vathesatogkit P, Kitiyakara C, Sritara P, Chattipakorn N, Chattipakorn SC. Impaired mitochondrial ATP production, reduced mitochondrial spare respiratory capacity, and increased oxidative stress in PBMCs are associated with aging in adult EGAT population. *Alzheimer's & Dementia.* 2021;17(S3):e051283.
3. Thonusin C, Pantiya P, Sumneang N, **Sriwichaiin S**, Chattipakorn N, Chattipakorn S. 499-P: The Effect of Exercise Capacity on Metabolic and Cardiac Aging in Normal and Obese Rats. *Diabetes.* 2021;70:499-P.
4. **Sriwichaiin S**, Apaijai N, Jaiwongkam T, Kerdphoo S, Pratchayasakul W, Palee S, Phrommintikul A, Kitiyakara C, Sritara P, Chattipakorn N, Chattipakorn S. Mitochondrial ATP-linked respiration in PBMCs is associated with cognition in Aged-EGAT population. *J Physiol Sci* 2019;136:1P-232.
5. Theerajangkaphichai W, Tantiworawit A, Sripetchwandee J, Apaijai N, **Sriwichaiin S**, Saiyasit N, Jinawong K, Arunsak B, Piriyaakuntorn P, Rattanathammethee T, Hantrakool S, Chai-Adisaksopha C, Rattarittamrong E, Norasetthada L, Charoenkwan P, Chattipakorn N, Chattipakorn S. Factor-Associated Risk Factors of Mild Cognitive Impairment in Thalassemia Patients: Probable Role of FGF21. *Blood.* 2019;134(Supplement_1):2251.
6. **Sriwichaiin S**, Lahnwong S, Apaijai N, Chattipakorn K, Kerdphoo S, Jaiwongkam T, Chattipakorn N, Chattipakorn SC. P1-174: Pretreatment with Dapagliflozin Provides Neuroprotective Effects Following Cardiac ischemia/reperfusion (I/R) Injury by Decreasing Amyloid Beta Aggregation and Blood-Brain Barrier Breakdown. *Alzheimer's & Dementia.* 2019;15(7S_Part_6):P303-P.
7. Pratchayasakul W, Mantor D, Minta W, Sutham W, Palee S, Sripetchwandee J, Kerdphoo S, Jaiwongkam T, **Sriwichaiin S**, Krintratun W, Chattipakorn N, Chattipakorn SC. P2-159: Both Estrogen Deprivation and Obesity Impair Hippocampal-Dependent Memory, but Estrogen Deprivation does not Aggravate that Memory under an Obese Condition. *Alzheimer's & Dementia.* 2018;14(7S_Part_13):P728-P9.

Works in Progress

1. Pretreatment with Dapagliflozin provides neuroprotective effects following cardiac ischemic/reperfusion (I/R) injury by decreasing amyloid beta aggregation and blood-brain barrier breakdown (Preparing Manuscript)
2. Increased Efficiency of Mitochondrial Coupling with a Reduction in Other Mitochondrial Respiratory Parameters in Peripheral Blood Mononuclear Cells is Observed in Older Adults (Under Submission)
3. Diet consumption shapes different profiles of gut microbiota in various age groups of Asian captive elephants (Preparing Manuscript)
4. Gasdermin D-mediated pyroptosis in myocardial ischemia and reperfusion injury: cumulative evidence for future cardioprotective strategies (Accepted)

Special Skills

1. Data handling using Microsoft Excel
2. Data analysis using SPSS
3. Data analysis and visualization using Prism – GraphPad
4. Coding, Data analysis, and visualization using R program
5. Data analysis using QIIME2 program for microbiota analysis
6. Japanese Language (Japanese-Language Proficiency Test (JLPT) – N4)

Scientific Abstract Participation at International Meetings

July 2021	Alzheimer's Association International Conference (AAIC) 2021, Denver, USA (Poster Presentation, Virtual meeting)
July 2019	Alzheimer's Association International Conference (AAIC) 2019, Los Angeles, USA (Poster Presentation)
March 2019	9 th Federation of the Asian and Oceanian Physiological societies (FAOPS) 2019 congress, Kobe, Japan (Poster Presentation)

Scientific Workshop Participation

March 2022	Basic Linux for Bioinformatics by Center of Multidisciplinary Technology for Advanced Medicine (CMUTEAM), Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
September 2021	Workshop: Analysis of Gut Microbiome in Human Health and Diseases, by Omics Center for health Sciences, Faculty of Medicine, Chiang Mai University, Chiang Mai and Systems Biology and Bioinformatics Laboratory, Pilot Plant Development and Training

Institute, King Mongkut's University of Technology Thonburi,
Thailand Technology Thonburi, Bangkok, Thailand

2020 – 2021

Diploma course in Clinical Epidemiology, Faculty of Medicine,
Chiang Mai University, Chiang Mai, Thailand

2020 – 2021

Diploma course in Clinical Statistics, Faculty of Medicine, Chiang Mai
University, Chiang Mai, Thailand

August 2019

Workshop Microbial Genome Sequencing and Metagenome Analysis
by Oxford Nanopore Technology, King Mongkut's University of