

Curriculum Vitae

KREKWIT SHINLAPAWITTAYATORN, M.D., Ph.D.



Office Address: Cardiac Electrophysiology Research & Training Center
 Department of Physiology, Faculty of Medicine
 Chiang Mai University
 110 Intrawaroros Road
 Sripum, Mueang District, Chiang Mai 50200
 Thailand
 Phone: 053-935329 Ext 123
 Fax: 053-935368 Ext 116
 E-mail: kshinlap@gmail.com

EDUCATION

2006-2011 Ph.D. (Physiology and Biophysics), Department of Physiology and Biophysics, Case Western Reserve University, Cleveland, Ohio, USA

2004 Doctor of Medicine (M.D.), Chiang Mai University, Chiang Mai, Thailand

PROFESSIONAL APPOINTMENT

2025-Present Assistant Dean for Undergraduate Academic Affairs, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

2017-Present	Associate Professor, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2015-Present	Head of Cardiac Catheterization & Electrophysiology Laboratory, Cardiac Electrophysiology Research and Training Center, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2014-Present	Staff, Cardiac Electrophysiology Research and Training Center, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2013-Present	Assistant to the Chair for Research Affairs, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2004-Present	Staff, Cardiac Electrophysiology Research and Training Center, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

HONORS AND AWARDS

2024-2027	<i>NRCT Research Scholar</i> (เมธีวิจัย วช.), National Research Council of Thailand, Bangkok, Thailand
2021	<i>Thailand Science Research and Innovation-Chiang Mai University (Fundamental Fund)</i> , National Research Council of Thailand, Bangkok, Thailand
2021	<i>The Royal Golden Jubilee Fellowship Award for PhD Advisor</i> , Thailand Research Fund, Bangkok, Thailand
2020-2023	<i>NRCT Research Scholar</i> (เมธีวิจัย วช.), National Research Council of Thailand, Bangkok, Thailand
2019-2024	<i>NSTDA Research Chair</i> , the National Science and Technology Development Agency (NSTDA), Bangkok, Thailand (PI: Prof. Dr. Nipon Chattipakorn)
2018	<i>The Royal Golden Jubilee Fellowship Award for PhD Advisor</i> , Thailand Research Fund, Bangkok, Thailand
2017	<i>Faculty with the Highest Citations of the Year 2016 Award</i> , Faculty of Medicine, Chiang Mai University, Thailand

- 2017 *TRF-OHEC-SCOPUS Young Researcher Award in Health Science*, The Thailand Research Fund, Bangkok, Thailand
- 2016 *Gold Elephant Award for Best Young Research Scientist in Medical Science*, Chiang Mai University, Chiang Mai, Thailand
- 2015-2018 *TRF Research Scholar* (เมธีวิจัย สกว.), The Thailand Research Fund, Bangkok, Thailand
- 2014-2019 *NSTDA Research Chair*, the National Science and Technology Development Agency (NSTDA), Bangkok, Thailand (PI: Prof. Dr. Nipon Chattipakorn)
- 2014 *Outstanding Research Presentation Award*, the 14th Annual Meeting of Thailand Research Fund (TRF), Entitled “New Researchers Meet TRF Senior Scholars”, Pattaya, Thailand
- 2014 *Suandok’s Value Award (One in One Hundred Project)*, Chiang Mai Medical School, Chiang Mai, Thailand (โครงการหนึ่งในร้อย: รางวัลค่านิยมคนสวนดอก)
- 2014 *Young Investigator Award (Physiology, Pharmacology and Pathology, Second Place Winner)*, American College of Cardiology (ACC), Washington, DC, USA
- 2013 *Chiang Mai University Young Researcher Fund*, Chiang Mai University, Chiang Mai, Thailand
- 2012 *Outstanding TRF Research of the Year 2012*, the Thailand Research Fund, Bangkok, Thailand (PI: Prof. Dr. Nipon Chattipakorn)
- 2012 *First Place of the Faculty Oral Presentation Competition (3rd CMU Research Award)*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2012-2015 *Anandhamahidol Supporting Scholar Award*, Anandhamahidol Foundation, Bangkok, Thailand
- 2012 *Faculty Achievement Award*, Cardiac Electrophysiology Research and Training Center, Chiang Mai, Thailand
- 2012-2014 *TRF-CHE Research Grant for New Scholar*, the Thailand Research Fund, Bangkok, Thailand

- 2012 *Doctoral Excellence Award (Physiology and Biophysics)*, the Graduate and Postdoctoral Awards Ceremony, Case Western Reserve University, Cleveland, Ohio, USA
- 2011 *Finalist of Student Research Achievement Award (Category: Membrane Biophysics)*, 55nd Annual Meeting of the Biophysical Society, Baltimore, Maryland, USA
- 2009 *First Place Graduate Student Poster Presentation (Department Annual Retreat)*, Department of Physiology and Biophysics, Case Western Reserve University, Cleveland, Ohio, USA
- 2009 *First Place of the Trainee's Poster Presentation Competition (Research Festival)*, MetroHealth Medical Center, Case Western Reserve University, Cleveland, Ohio, USA
- 2008 *Outstanding Research Scientist in Medical Science*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2008 *American Heart Association Pre-Doctoral Fellowship Award* (Percentile Rank: 0.93), American Heart Association, Great Rivers Affiliate, USA
- 2008 *Finalist of Student Research Achievement Award (Category: Membrane Biophysics)*, 52nd Annual Meeting of the Biophysical Society, Long Beach, California, USA
- 2007 *First Place of the Trainee's Oral Presentation Competition (Genetic Basis of Cardiovascular Disease)*, MetroHealth Medical Center, Case Western Reserve University, Cleveland, Ohio, USA
- 2007 *Recknagel Graduate Student Best Academic Record*, Department of Physiology and Biophysics, Case Western Reserve University, Cleveland, Ohio, USA
- 2006 *The Staff Development Scholarship*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2006 *The Faculty Development Scholarship*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2004 *Outstanding Academic Achievement*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

- 2004 *Participating Scholarship*, The International Brain Research Organization (IBRO) Asia Pacific Associate School of Neuroscience, Chiang Mai, Thailand
- 2003 *Outstanding Academic Achievement*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2003 *Top Score in Family Medicine*, Department of Family Medicine, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 1997 *High Stand of Excellence in Outstanding Academic Achievement*, Montfort College, Chiang Mai, Thailand

ROYAL DECORATIONS OF THAILAND

- 2025 Commander (Second Class) of the Most Noble Order of the Crown of Thailand
เครื่องราชอิสริยาภรณ์อันมีเกียรติยศยิ่งมงกุฎไทย ชั้นทวีติยาภรณ์มงกุฎไทย (ท.ม.)
- 2020 Commander (Third Class) of the Most Exalted Order of the White Elephant
เครื่องราชอิสริยาภรณ์อันมีเกียรติยศยิ่งช้างเผือก ชั้นตริตาภรณ์ช้างเผือก (ต.ช.)
- 2014 Commander (Third Class) of The Most Noble Order of the Crown of Thailand
เครื่องราชอิสริยาภรณ์อันมีเกียรติยศยิ่งมงกุฎไทย ชั้นตริตาภรณ์มงกุฎไทย (ต.ม.)
- 2009 Companion (Fourth Class) of the Most Exalted Order of the White Elephant
เครื่องราชอิสริยาภรณ์อันมีเกียรติยศยิ่งช้างเผือก ชั้นจัตุรถาภรณ์ช้างเผือก (จ.ช.)

PROFESSIONAL LICENSES

- 2004-Present M.D. (Thailand)

ORGANIZATION AND PARTICIPATION

- 2020-Present Asian Pacific Heart Rhythm Society
- 2009-Present Heart Rhythm Society
- 2007-Present American Biophysical Society

2006-Present	Thai Physiology Society
June 2005	The Meeting of the European Heart Rhythm Association (EUROPACE), Prague, Czech Republic
March 2004	The 1 st International Neurologic and Cardiac Electrophysiology Symposium (NCES), Chiang Mai, Thailand
February 2004	The 1 st International Brain Research Organization (IBRO) Asia Pacific Associate School of Neuroscience, Chiang Mai, Thailand
2004-Present	Thai Medical Council

PROFESSIONAL ACTIVITIES

Editorial Board

Chiang Mai Medical Journal (2013-Present)

International Journal of Biochemistry & Physiology (2018-Present)

Proceeding to the 1st international Neurological and Cardiac Electrophysiology Symposium (NCES) (2004)

Critical Reviewer of Manuscripts for:

Acta Physiologica, Advanced Fiber Materials, Advanced Science, Aging, Aging Research Reviews, American Journal of Cardiovascular and Thoracic Surgery, Anatomy & Physiology: Current Research, Animal Models and Experimental Medicine, Apoptosis, Biology, Biomedicine & Pharmacotherapy, Bioscience Reports, Cells, Cell Death Discovery, Cellular Physiology & Biochemistry, Cardiology Research and Practice, Chemico-Biological Interactions, Chronic Diseases and Translational Medicine, Clinics and Research in Hepatology and Gastroenterology, Current Molecular Medicine, Current Pharmaceutical Design, Drug Design, Development and Therapy, Experimental and Therapeutic Medicine, European Journal of Pharmacology, European Journal of Neuroscience, Frontiers in Cardiovascular Medicine, Frontiers in Pharmacology, Frontiers in Veterinary Science, Heart Rhythm, Inflammation Research, International Journal of Biochemistry & Physiology, Journal of Ethnopharmacology, Journal of Nanobiotechnology, International Journal of Molecular Sciences, Journal of

Advanced Research, Journal of Cellular and Molecular Medicine, Journal of Ethnopharmacology, Journal of Inflammation Research, The International Journal of Neuroscience, The Journal of Cardiovascular Medicine and Cardiology, Journal of Arrhythmia, Journal of Advanced Research, Journal of Cellular and Molecular Medicine, Journal of Cytology & Histology, Journal of Ethnopharmacology, Journal of Inflammation Research, Khon Kaen University Research Journal, Medicine, Neuropeptides, Oxidative Medicine and Cellular Longevity, Payao University Research Journal, Plos One, SAGE Open Medicine, ScienceAsia, Scientific Reports, Theranostics, The European Journal of Pharmacology, The International Journal of Neuroscience, The Journal of Cardiovascular Medicine & Cardiology

PRESENTATIONS AT INTERNATIONAL MEETINGS

November 2020	AHA Scientific Sessions 2020, USA
August 2020	ESC Congress, The Digital Experience
March 2019	68 th Annual Scientific Sessions, American College of Cardiology (ACC), New Orleans, LA, USA
March 2018	95 th Annual Meeting of the Physiological Society of Japan (JSP), Takamatsu, Kagawa, Japan
March 2017	66 th Annual Scientific Sessions, American College of Cardiology (ACC), Washington, DC, USA
March 2014	63 rd Annual Scientific Sessions, American College of Cardiology (ACC), Washington, DC, USA
March 2013	62 nd Annual Scientific Sessions, American College of Cardiology (ACC), San Francisco, California, USA
May 2011	32 nd Annual Scientific Sessions, Heart Rhythm Society, San Francisco, California, USA
March 2011	55 th Annual Meeting of the Biophysical Society, Baltimore, Maryland, USA
February 2010	54 th Annual Meeting of the Biophysical Society, San Francisco, California, USA
May 2009	30 th Annual Scientific Sessions, Heart Rhythm Society, Boston, Massachusetts, USA

- February 2009 53nd Annual Meeting of the Biophysical Society, Boston, Massachusetts, USA
- February 2008 52nd Annual Meeting of the Biophysical Society, Long Beach, California, USA
- March 2006 70th Annual Scientific Sessions, Japanese Circulation Society, Nagoya, Japan
- March 2005 54th Annual Scientific Sessions, American College of Cardiology (ACC), Orlando, Florida, USA

PRESENTATIONS AT NATIONAL MEETINGS

- May 2014 “102nd TRF Seminar Series-From Molecular To Market”, Chiang Mai, Thailand
- December 2005 “U.S.-Thai symposium on Biomedical Engineering in Thailand”, Bangkok, Thailand

INVITED LECTURES AT INTERNATIONAL MEETINGS

- December 6, 2024 *The Influence of Obese Insulin-Resistance on the Outcome of the Ischemia/Reperfusion Insult to the Heart & Kidney, Renal Diseases & Biotechnology for Blood Purification (RB2024)*, Chiang Mai, Thailand
- November 3, 2023 *Vagus nerve stimulation and its cardioprotective effects against myocardial ischemia/reperfusion injury*, 10th Federation of the Asian and Oceanian Physiological Societies Congress in conjunction with the 75th Annual Meeting of the Korean Physiological Society, Daegu, Korea
- October 26, 2019 *Vagus Nerve Stimulation: A Promising Cardioprotective Strategy Against Ischemia-Reperfusion Injury*, 12th Asian Pacific Heart Rhythm Society Scientific Session (APHRs), Bangkok, Thailand
- October 24, 2019 *Arrhythmic Disease Modeling*, 12th Asian Pacific Heart Rhythm Society Scientific Session (APHRs), Bangkok, Thailand

February 23, 2013 *Sodium Channel Polymorphisms and Arrhythmogenic Events: Pro-Arrhythmic or Anti-Arrhythmic*, Asian Pacific Society of Cardiology Congress, Pattaya, Thailand

INVITED LECTURES AT NATIONAL MEETINGS

- December 19, 2019 *Vagus Nerve Stimulation for Heart Diseases: An Example of Basic Research Towards Research Innovation*, 47th Physiological Society of Thailand Annual Meeting, Bangkok, Thailand
- July 25, 2014 *Vagus Nerve Stimulation Exerts Cardioprotection in Acute Myocardial Infarction*, 10th International Neurologic and Cardiac Electrophysiology Symposium (NCES), Chiang Mai, Thailand
- October 4, 2013 *Neuro-Cardiology: The Vagus Nerve Stimulation and Its Effects on Cardiac Functions*, Department of Medical Technology, Faculty of Allied Health Sciences, Naresuan University, Phitsanulok, Thailand
- November 28, 2012 *Molecular and Cardiac Electrophysiology*, Department of Medical Technology, Faculty of Allied Health Sciences, Naresuan University, Phitsanulok, Thailand
- July 5, 2012 *Anatomy and Physiology of Cardiovascular System*, Nursing Services Center, Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand
- June 25, 2012 *Vagus Nerve Stimulation as a Promising Cardioprotective Strategy Against Ischemia-Reperfusion Injury*, 9th International Neurologic and Cardiac Electrophysiology Symposium (NCES), Chiang Mai, Thailand
- January 20, 2012 *Modulations of Cardiac Sodium Channelopathies by a Common Sodium Channel Polymorphism*, Department of Microbiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- December 9, 2011 *Modulations of Sodium Channel Long QT and Brugada Syndrome Mutations by a Common Sodium Channel Polymorphism*, Department of Biochemistry, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

- May 4, 2006 *Research and Application in Cardiovascular Diseases: Heart, PDE-5 Inhibitor, and Sudden Cardiac Death*, 35th Annual Scientific Sessions, Thai Physiology Society, Chiang Mai, Thailand
- August 17, 2005 *Device Therapy in Sudden Cardiac Death*, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- February 2, 2005 *Electrocardiogram and Cardiac Arrhythmia*, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai, Thailand

ACADEMIC ACTIVITIES

Graduate Student's Dissertation Committees

1. Nattayaporn Apaijai, B.S., Member of the Master Degree Committee
Topic: Effects of Metformin and Vildagliptin on Cardiac Function in High-Fat Diet Induced Insulin Resistant Rats (Physiology)
2. Hiranya Pintana, B.S., Member of the Master Degree Committee
Topic: Effects of Metformin and Vildagliptin on Learning and Memory Behaviors and Brain Mitochondrial Functions in High-Fat Diet Induced Insulin Resistant Rats (Physiology)
3. Kittiya Thunsiri, B.Eng., Member of the Master Degree Committee
Topic: Effects of Vagus Nerve Stimulation on the Ventricular Defibrillation (Biomedical Engineering)
4. Sivaporn Sivasinprasasn, M.S., Member of the Doctorate Degree Committee
Topic: Effects of Estrogen, Metformin and Vildagliptin on Cardiac Functions in Obese Insulin Resistance and Estrogen-Deprived Rats (Physiology)
5. Wanpitak Pongkan, D.V.M., Member of the Doctorate Degree Committee
Topic: Effect of Testosterone and Vildagliptin on Cardiac Ischemic and Reperfusion Injury in High-Fat Diet Induced Insulin Resistant Orchiectomized Rats (Physiology)

6. Tharnwimol Inthachai, B.S., Member of the Master Degree Committee
Topic: Effects of Metformin and Vildagliptin on the Rat's Heart with Chronic Myocardial Infarction
(Physiology)
7. Wattana Nuntaphum, B.S., Major Advisor of the Master Degree Committee
Topic: The Effects of Vagus Nerve Stimulation on the Heart Subjected to Acute Cardiac Ischemia/Reperfusion Injury in Swine
(Physiology)
8. Kannaporn Intachai, M.S., Major Advisor of the Doctorate Degree Committee
Topic: The Effects of Acetylcholine Receptors Activation in Cytoprotection Against Hypoxia/reoxygenation Induced Injury in H9c2 Cell
(Physiology)
9. Vanida Kantapanom, B.S., Major Advisor of the Master Degree Committee
Topic: The Effects of Caveolae Composition Alteration on the Heart in D-galactose-induced-aging Rats
(Physiology)

Graduate Student's Dissertation Examining Committees

1. Sirinart Kumfu, M.S., Member of the Doctorate Degree Examining Committee
Topic: Mechanisms of Iron Transportation Into the Hearts of Thalassemic Mice
(Physiology)
2. Luerat Supakul, B.S., Member of the Master Degree Committee
Topic: The Effect of Garlic Extract on Cardiac Function in Insulin Resistant Rats Induced by High-Fat Diet Consumption
(Physiology)
3. Tharnwimol Inthachai, B.S., Member of the Master Degree Committee
Topic: Effects of Metformin and Vildagliptin on the Rat's Heart with Chronic Myocardial Infarction
(Physiology)

4. Vichaya Auvichayapat, B.S., Member of the Master Degree Committee
Topic: Electrophysiological Characteristics of a Novel SCN5A Mutation (I239V or M1487K) in the Cardiac Voltage-Gated Sodium Channel (Physiology), Chulalongkorn University
5. Hongshan Zhang, M.S., Chair of the Doctorate Degree Examination Committee
Topic: The Relationship between Serum Mature Brain-derived Neurotrophic Factor and Pathological Factors related to Coronary Artery Disease Patients in Kunming, Yunnan, China
Epidemiology (International Program), Prince of Songkla University

Mentor for Recipients of National Scientific Research Awards

- 2016 Best Research Presentation Award (Master Level-Oral) 2016, The Physiological Society of Thailand (Wattana Nuntaphum, MSc)

Special Academic Appointments

- 2017-Present The Institutional Animal Care and Use Committee (IACUC), Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2016-Present The Institutional Biosafety Committee (IBC), Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2012-Present Graduate School Faculty, Naresuan University, Phitsanulok, Thailand
- 2011-Present Graduate School Faculty, Chiang Mai University, Chiang Mai, Thailand
- 2011-Present Committee, Cardiovascular Section for Medical Curriculum, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2011-Present Committee, Respiratory Section for Medical Curriculum, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2004-Present Grand Round Committee, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

- 2004-Present Comprehensive Examination Committee for Pre-clinic Medical Student, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2004-Present Physiological Curriculum Committee for 2nd years Medical Student, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

RESEARCH GRANT SUPPORT

- 04/2024-03/2027 NRCT Research Scholar (เมธีวิจัย วช.), National Research Council of Thailand, Bangkok, Thailand. “The Effects of Caveolae Composition Alteration on Cardioprotection of Acetylcholine Against Acute Myocardial Ischemia/Reperfusion Injury in D-galactose-induced-aging Rats From in Vitro to in Vivo Studies”. (PI)
- 07/2020-06/2023 NRCT Research Scholar (เมธีวิจัย วช.), National Research Council of Thailand, Bangkok, Thailand. “The Effects of Acetylcholine Receptors Activation on Cardioprotection Against Hypoxia/Reoxygenation Induced Injury in H9c2 Cell”. (PI)
- 10/2021-09/2022 Thailand Science Research and Innovation-Chiang Mai University, Thailand. “The Effects of Hyperbaric Oxygen Therapy on Metabolic Parameters, Cardiac and Mitochondrial Functions in D-galactose Induced Aging Rats in the Presence of Obese-Insulin Resistant Condition”. (PI)
- 03/2019-02/2020 Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “The Effects of Acetylcholine Receptors Activation in Cardioprotection Against Hypoxia/Reoxygenation-Induced Cell Injury in H9c2 Cell”. (PI)
- 03/2017-02/2019 Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “The Effects of Vagus Nerve Stimulation on Cardiac Mitochondrial Biogenesis in Swine’s Heart Subjected to Acute Ischemia/Reperfusion Injury”. (PI)

- 07/2015-06/2018 The Thailand Research Fund Grant (เมธีวิจัย สกว.), the Thailand Research Fund (RSA), Bangkok, Thailand. “The Effects of Vagus Nerve Stimulation on Acute Cardiac Ischemia/Reperfusion Injury”. (PI)
- 07/2013-06/2014 Chiang Mai University Young Researcher Fund, Chiang Mai University, Thailand. “Effect of the Vagal Nerve Stimulation on the Ventricular Defibrillation”. (PI)
- 07/2012-06/2014 TRF-CHE Research Grant for New Scholar, the Thailand Research Fund (MRG5580125), Bangkok, Thailand. “Role of Sodium Channel and Brugada Syndrome”. (PI)
- 07/2008-06/2010 American Heart Association Pre-doctorol Fellowship Grant (0815479D), Great Rivers Affiliate, USA. “Role of Sodium Channel and Brugada Syndrome”. (PI)
- 11/2004-10/2006 Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “Effect of Sildenafil Citrate and Nitroglycerine Combination on Defibrillation Efficacy in Swine”. (PI)
- 09/2004-02/2006 Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “Effect of Sildenafil Citrate on Defibrillation Efficacy in Swine”. (Co-PI)

PEER REVIEWED ARTICLES

(*Corresponding Author)

1. Inspiratory muscle training improves heart rate variability and respiratory muscle strength in obese young adults. Sa-Nguanmoo P, Pratanaphon S, Parameyong A, Chawawisuttikool J, **Shinlapawittayatorn K**, Chattipakorn N, Chattipakorn SC. *PLoS One* (IF: 2.6; Q1). 2025 Aug 20;20(8):e0329623.
2. Piriyaikhuntorn P, Tantiworawit A, Phimphilai M, Kaewchur T, Niprapan P, Srivichit B, Apaijai N, **Shinlapawittayatorn K**, Chattipakorn N, Chattipakorn SC. Melatonin Supplementation Alleviates Bone Mineral Density Decline and Circulating Oxidative

- Stress in Iron-Overloaded Thalassemia Patients. *J Pineal Res* (IF: 14.528; Q1). 2025 Apr;77(3):e70055.
3. Jinarat D, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Particulate matter and cardiac arrhythmias: From clinical observation to mechanistic insights at cardiac ion channels. *Environ Pollut* (IF: 6.792; Q1). 2025 May 15;373:126168.
 4. Tassanaviroj K, Plodpai P, Wongyikul P, Tanasombatkul K, **Shinlapawittayatorn K**, Phinyo P. Effect modification of diabetic status on the association between exposure to particulate matter and cardiac arrhythmias in a general population: A systematic review and meta-analysis. *PLoS One*. 2024;17;19(5). (IF: 3.7; Q1)
 5. Tajai P, Pruksakorn D, Chattipakorn SC, Chattipakorn N, **Shinlapawittayatorn K***. Effects of glyphosate-based herbicides and glyphosate exposure on sex hormones and the reproductive system: From epidemiological evidence to mechanistic insights. *Environ Toxicol Pharmacol*. 2023;102:104252. (IF: 4.3; Q1)
 6. Arinno A, Maneechote C, Khuanjing T, Prathumsap N, Chunchai T, Arunsak B, Nawara W, Kerdphoo S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Melatonin and metformin ameliorated trastuzumab-induced cardiotoxicity through the modulation of mitochondrial function and dynamics without reducing its anticancer efficacy. *Biochim Biophys Acta Mol Basis Dis*. 2023;1869(2):166618. (Impact Factor = 6.633, Q1)
 7. Sithirungson S, Sonsuwan N, Chattipakorn SC, Chattipakorn N, **Shinlapawittayatorn K***. Functional roles of orexin in obstructive sleep apnea: From clinical observation to mechanistic insights. *Sleep Med*. 2023;101:40-49. (Impact Factor = 4.842, Q1)
 8. Wanchaitanawong W, Thinrungraj N, Chattipakorn SC, Chattipakorn N, **Shinlapawittayatorn K***. Repurposing metformin as a potential treatment for inflammatory bowel disease: Evidence from cell to the clinic. *Int Immunopharmacol*. 2022;112:109230. (Impact Factor = 5.714, Q1)
 9. Gomutbutra P, Sriksamjak T, Sapinun L, Kunapun S, Yingchankul N, Apaijai N, **Shinlapawittayatorn K**, Phuackchantuck R, Chattipakorn N, Chattipakorn S. Effect of intensive weekend mindfulness-based intervention on BDNF, mitochondria function, and anxiety. A randomized, crossover clinical trial. *Compr Psychoneuroendocrinol*. 2022;11;100137. (Impact Factor = N/A)
 10. Apichartpiyakul P, **Shinlapawittayatorn K**, Rerkasem K, Chattipakorn SC, Chattipakorn N. Mechanisms and Interventions on Acute Lower Limb Ischemia/Reperfusion Injury: A Review and Insights from Cell to Clinical Investigations. *Ann Vasc Surg*. 2022;86;452-481. (Impact Factor = 1.607, Q2)

11. **Shinlapawittayatorn K**, Pongkan W, Sivasinprasasn S, Chattipakorn SC, Chattipakorn N. Sexual dimorphism in cardiometabolic and cardiac mitochondrial function in obese rats following sex hormone deprivation. *Nutr Diabetes*. 2022;17;12(1):11. (Impact Factor = 5.097, Q1)
12. **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. The Effects of Doxorubicin on Cardiac Calcium Homeostasis and Contractile Function. *J Cardiol*. 2022;80(2):125-132. (Impact Factor = 3.115, Q1)
13. Intachai K, Limpakan S, Chattipakorn S, Chattipakorn N, **Shinlapawittayatorn K***. Acetylcholine Exerts Cytoprotection Against Hypoxia/Reoxygenation-Induced Apoptosis, Autophagy and Mitochondrial Impairment Through Both Muscarinic and Nicotinic Receptors. *Apoptosis*. 2022;27(3-4):233-245. (Impact Factor = 5.346, Q1)
14. Tanprasert P, Limpakan S, Chattipakorn S, Chattipakorn N, **Shinlapawittayatorn K***. Targeting Mitochondria as a Therapeutic Anti-gastric Cancer Approach. *Apoptosis*. 2022;27(3-4):163-183. (Impact Factor = 5.346, Q1)
15. Prathumsap N, Ongnok B, Khuanjing T, Arinno A, Maneechote C, Apaijai N, Chunchai T, Arunsak B, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Acetylcholine receptor agonists provide cardioprotection in doxorubicin-induced cardiotoxicity via modulating muscarinic M2 and $\alpha 7$ nicotinic receptor expression. *Transl Res*. 2021;15:S1931-5244(21)00288-7. (Impact Factor = 7.012, Q1)
16. Meetham K, Taerujjirakul T, Garitjirapath N, Navic P, **Shinlapawittayatorn K**, Mahakkanukrauh P. The morphometric study of the moderator band in Thais. *Anat Sci Int*. 2021. (Impact Factor = 1.55, Q2)
17. Arinno A, Maneechote C, Khuanjing T, Ongnok B, Prathumsap N, Chunchai T, Arunsak B, Kerdphoo S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Cardioprotective effects of melatonin and metformin against doxorubicin-induced cardiotoxicity in rats are through preserving mitochondrial function and dynamics. *Biochem Pharmacol*. 2021;192:114743. (Impact Factor = 5.858, Q1)
18. Bo-Thay C, Shwe T, Jaiwongkam T, Kerdphoo S, Pratchayasakul W, Pattarasakulchai T, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Impact of iron overload on bone remodeling in thalassemia. *Aging*. 2021; 16;13(8):10955-10972. (Impact Factor = 5.682, Q1)
19. Piriyaikhuntorn P, Tantiworawit A, Phimphilai M, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Impact of iron overload on bone remodeling in thalassemia. *Arch Osteoporos*. 2020;14;15(1):143. (Impact Factor = 2.617, Q2)

20. Thonusin C, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. The Impact of Genetic Polymorphisms on Weight Regain After Successful Weight Loss. *Br J Nutr.* 2020;28;124(8):809-823. (Impact Factor = 3.334, Q1)
21. Prathumsap N, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Effects of Doxorubicin on the Heart: From Molecular Mechanisms to Intervention Strategies. *Eur J Pharmacol.* 2020;5;866:172818. (Impact Factor = 4.12, Q1)
22. Bo-Thay C, Shwe T, Higgins L, Palee S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Aging induced by D-galactose Aggravates Cardiac Dysfunction via Exacerbating Mitochondrial Dysfunction in Obese-insulin Resistant Rats. *GeroScience* 2019;42(1):233-249. (Impact Factor = 7.713, Q1)
23. Intachai K, Chattipakorn S, Chattipakorn N, **Shinlapawittayatorn K***. Revisiting the Cardioprotective Effects of Acetylcholine Receptor Activation against Myocardial Ischemia/Reperfusion Injury. *Int J Mol Sci* 2018;19(9):2466. (Impact Factor = 5.924, Q1)
24. Nuntaphum W, Pongkan W, Wongjaikam S, Thummasorn S, Tanajak P, Khamsekaew J, Intachai K, Chattipakorn S, Chattipakorn N, **Shinlapawittayatorn K***. Vagus Nerve Stimulation Exerts Cardioprotection Against Myocardial Ischemia/Reperfusion Injury Predominantly Through its Efferent Vagal Fibers. *Basic Res Cardiol* 2018;113(4):22. (Impact Factor = 17.165, Q1)
25. Charununtakorn ST, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Humanin Directly Protects Cardiac Mitochondria Against Dysfunction Initiated by Oxidative Stress by Decreasing Complex I activity. *Mitochondrion* 2018;38:31-40. (Impact Factor = 3.430, Q1)
26. **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. The Influence of Obese Insulin-Resistance on the Outcome of the Ischemia/Reperfusion Insult to the Heart. *Curr Med Chem* 2018;25(13):1501-1509. (Impact Factor = 4.184, Q1)
27. Clatot J, Hoshi M, Wan X, Liu H, Jain A, **Shinlapawittayatorn K**, Marionneau C, Ficker E, Ha T, Deschênes I. Voltage-Gated Sodium Channels Assemble and Gate as Dimers. *Nat Commun* 2017;12;8(1):2077. (Impact Factor = 12.121)

28. Weerateerangkul P, **Shinlapawittayatorn K**, Palee S, Apaijai N, Chattipakorn SC, Chattipakorn N. Early Testosterone Replacement Attenuates Intracellular Calcium Dyshomeostasis in the Heart of Testosterone-Deprived Male Rats. *Cell Calcium* 2017;67:22-30. (Impact Factor = 3.932, Q1)
29. Charununtakorn ST, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. High Dose Humanin Analogue Applied During Ischemia Exerts Cardioprotection Against Ischemia/Reperfusion Injury by Reducing Mitochondrial Dysfunction. *Cardiovasc Ther* 2017;35(5). (Impact Factor = 2.315, Q1)
30. **Shinlapawittayatorn K***, Chattipakorn SC, Chattipakorn N. Subthreshold Vagal Nerve Stimulation and the Controversial Findings Regarding the Anti-Infarct Effect Against Myocardial Ischemia/Reperfusion Injury. *Exp Physiol* 2017;102(3):385. (Impact Factor = 2.912, Q2)
31. Charununtakorn ST, Apaijai N, Kerdphoo S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Humanin exerts cardioprotection against cardiac ischemia-reperfusion injury through attenuation of mitochondrial dysfunction. *Cardiovasc Ther* 2016;34:404-414. (Impact Factor = 2.512, Q2)
32. Palee S, Apaijai N, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Acetylcholine Attenuates Hydrogen Peroxide-Induced Intracellular Calcium Dyshomeostasis Through Both Muscarinic and Nicotinic Receptors in Cardiomyocytes. *Cell Physiol Biochem* 2016;39(1):341-9. (Impact Factor = 5.5, Q1)
33. 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;26;6:26866. (Impact Factor = 3.998, Q1)
34. 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;1;6:19749. (Impact Factor = 3.998, Q1)

[†] These two authors contributed equally to this work

35. Sivasinprasasn S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Estrogenic Impact on Cardiac Ischemic/Reperfusion Injury. *J Cardiovasc Transl Res* 2016;9(1):23-39. (Impact Factor = 2.319, Q1)
 36. Charununtakorn ST, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Potential Roles of Humanin on Apoptosis in the Heart. *Cardiovasc Ther* 2016;34(2):107-14. (Impact Factor = 2.756, Q1)
 37. Wijarnpreecha K, Siri-Angkul N, **Shinlapawittayatorn K**, Charoenkwan P, Silvilairat S, Siwasomboon C, Visarutratna P, Srichairatanakool S, Tantiworawit A, Phrommintikul A, Chattipakorn S, Chattipakorn N. Heart Rate Variability as an Alternative Indicator for Identifying Cardiac Iron Status in Non-Transfusion Dependent Thalassemia Patients. *PLoS One* 2015;17;10(6):e0130837. (Impact Factor = 2.740, Q1)
 38. **Shinlapawittayatorn K***, Chinda K, Palee S, Surinkaew S, Kumfu S, Kumphune S, Chattipakorn S, KenKnight BH, Chattipakorn N. Vagus Nerve Stimulation Initiating During Ischemia, But Not Reperfusion, Exerts Cardioprotection and is Associated With Amelioration of Cardiac Mitochondrial Dysfunction. *Heart Rhythm* 2014;11(12):2278-87. (Impact Factor = 5.731, Q1)
 39. Thunsiri K, **Shinlapawittayatorn K[†]**, Chinda K, Palee S, Surinkaew S, Chattipakorn S, KenKnight BH, Chattipakorn N. Application of vagus nerve stimulation from the onset of ventricular fibrillation to post-shock period improves defibrillation efficacy. *Int J Cardiol* 2014;176(3):1030-2. (Impact Factor = 3.471, Q1)
- † These two authors contributed equally to this work
40. Pornsriniyom D, **Shinlapawittayatorn K**, Fong J, Andrews ND, Foldvary-Schaefer N. Continuous Positive Airway Pressure Therapy for Obstructive Sleep Apnea Reduces Interictal Epileptiform Discharges in Adults with Epilepsy. *Epilepsy & Behavior* 2014;37:171-174. (Impact Factor = 2.061, Q2)
 41. Hoshi M, Du X, **Shinlapawittayatorn K**, Liu H, Chai S, Wan X, Ficker E, Deschenes I. Brugada Syndrome Disease Phenotype Explained in Apparently Benign Sodium Channel Mutations. *Circ Cardiovasc Genet (Circ Genom Precis Med)* 2014;7(2):123-31. (Impact Factor = 7.465, Q1)

- with editorial comment by Abriel H and Sottas V. Unexpected α - α Interactions With Na_v1.5 Genetic Variants in Brugada Syndrome. *Circ Cardiovasc Genet (Circ Genom Precis Med)* 2014;7(2):97-99.
- 42. Khan S, Abu Jawdeh BG, Goel M, Schilling WP, Parker MD, Puchowicz M, Yadav S, Harris RC, Hoshi M, **Shinlapawittayatorn K**, Deschênes I, Ficker E, and Schelling JR. Lipotoxic Disruption of the Na⁺/H⁺ Exchanger-PI(4,5)P₂ Interaction Expedites Proximal Tubule Apoptosis. *J Clin Invest* 2014;124(3):1057-68. (Impact Factor = 11.864, Q1)
- 43. Supakul L, Pintana P, Apaijai N, Chattipakorn S, **Shinlapawittayatorn K**, Chattipakorn N. Protective Effects of Garlic Extract on Cardiac Function, Heart Rate Variability, and Cardiac Mitochondria in Obese Insulin Resistant Rats. *Eur J Nutr* 2013;53(3):919-28. (Impact Factor = 4.449, Q1)
- 44. **Shinlapawittayatorn K***, Chinda K, Palee S, Surinkaew S, Thunsiri K, Weerateerangkul P, Chattipakorn S, KenKnight BH, Chattipakorn N. Low-amplitude, left vagus nerve stimulation significantly attenuates ventricular dysfunction and infarct size through prevention of mitochondrial dysfunction during acute ischemia-reperfusion injury. *Heart Rhythm* 2013;10(11):1700-07. (Impact Factor = 5.731, Q1)
 - with editorial comment by Laurita KR and Hirose M. Electrical Vagal Stimulation and Cardioprotection. *Heart Rhythm* 2013;10(11):1708-09.
- 45. Abu Jawdeh BG, Khan S, Deschênes I, Hoshi M, Goel M, Lock JT, **Shinlapawittayatorn K**, Babcock G, Lakhe-Reddy S, DeCaro G, Yadav SP, Mohan ML, Naga Prasad SV, Schilling WP, Ficker E, and Schelling JR. Phosphoinositide Binding Differentially Regulates NHE1 Na⁺/H⁺ Exchanger-Dependent Proximal Tubule Cell Survival. *J Biol Chem* 2011;286(49):42435-45. (Impact Factor = 4.238, Q1)
- 46. **Shinlapawittayatorn K**, Dudash L, Poelzing S, Ficker E, Deschênes I. Cardiac Sodium Channel Fragments Spanning H558R Polymorphism Rescue Defective Trafficking of a Brugada Syndrome Mutation. *Circ Cardiovasc Genet (Circ Genom Precis Med)* 2011;4(5):500-9. (Impact Factor = 7.465, Q1)
- 47. **Shinlapawittayatorn K**, Du X, Liu H, Ficker E, Kaufman ES, Deschênes I. A Common SCN5A Polymorphism Restores the Biophysical Defects of SCN5A Mutations. *Heart Rhythm* 2011;8(3):455-62. (Impact Factor = 5.731, Q1)

48. Hsu K, Han J, **Shinlapawittayatorn K**, Deschênes I, Marbán E. Membrane Potential Depolarization As a Triggering Mechanism for Vpu-Mediated HIV-1 Release. *Biophysical Journal* 2010;99(6):1718-25. (Impact Factor = 3.665, Q1)
49. Kanlop N, **Shinlapawittayatorn K**, Sungnoon R, Weerateerangkul P, Chattipakorn S, Chattipakorn N. Cilostazol Attenuates Ventricular Arrhythmia Induction and Improves Defibrillation Efficacy in Swine. *Can J Physiol Pharmacol* 2010;88(4):422-8. (Impact Factor = 2.644, Q2)
50. Kanlop N, **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn S, Lailerd N, Chattipakorn N. Effects of Sildenafil Citrate on the Inducibility of Ventricular Fibrillation and Upper Limit of Vulnerability in Swine. *Med Sci Monit* 2008;14(10):BR205-9. (Impact Factor = 1.433, Q2)
51. Sungnoon R, **Shinlapawittayatorn K**, Chattipakorn S, Chattipakorn N. Effects of Garlic on Defibrillation Efficacy. *Int J Cardiol* 2008;126(1):143-4. (Impact Factor = 3.471, Q2)
52. **Shinlapawittayatorn K**, Chattipakorn S, Sungnoon R, Chattipakorn N. Effects of Combined Sildenafil-Nitric Oxide Donor on Defibrillation Efficacy. *J Med Assoc Thai* 2007;99(10):2143-149. (SJR = 0.2, Q3)
53. Chattipakorn N, **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn S. Fish Oil Does Not Improve Defibrillation Efficacy. *Int J Cardiol*. 2007;122(1):85-6. (Impact Factor = 3.471, Q1)
54. **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn S, Chattipakorn N. Effects of Sildenafil Citrate on Defibrillation Efficacy. *J Cardiovasc Electrophysiol* 2006;17(3):292-295. (Impact Factor = 2.424, Q1)
- with editorial comment by Kowey PR and Yan GX. Doctor, why Didn't you Tell me About This Before the ICD? *J Cardiovasc Electrophysiol* 2006;17(3):296-297.
55. Chattipakorn N, **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn SC. Effects of n-3 polyunsaturated fatty acid on upper limit of vulnerability shocks. *Int J Cardiol* 2006;107(3):299-302. (Impact Factor = 3.471, Q1)
56. Chattipakorn N, **Shinlapawittayatorn K**, Chattipakorn S. Electrophysiological Mechanisms of Ventricular Fibrillation Induction. *Indian Pacing Electrophysiol J* 2005;5(1):43-50. (SJR = 0.351, Q3)

57. **Shinlapawittayatorn K**, Chattipakorn N. Effects of Sildenafil citrate on the cardiovascular system. *Brazilian Journal of Medical and Biological Research* 2005;38(9):1303-11. (Impact Factor = 1.740, Q1)

EDITORIAL COMMENTS

58. **Shinlapawittayatorn K**, Deschênes I. Alteration of Tyrosine Kinase Signaling: Another Player in the Arrhythmogenesis of Atrial Fibrillation? *Heart Rhythm* 2010;7(9):1253-4. (Impact Factor = 5.731, Q1)

PEER REVIEWED ABSTRACTS

1. Arinno A, Maneechote C, Khuanjing T, Chunchai T, Prathumsap N, Arunsak B, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Ranolazine administration effectively alleviates trastuzumab-induced cardiotoxicity through modulation of mitochondrial function in rats. *J Am Coll Cardiol*. 2022; 79(9_Supplement): 1928 (Impact Factor = 24.094, Q1)
2. Prathumsap N, Ongnok B, Khuanjing T, Arinno A, Maneechote C, Apaijai N, Chunchai T, Arunsak B, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Modulating cardiac autonomic balance by vagus nerve stimulation attenuates mitochondrial dysfunction and provides protection against trastuzumab-induced cardiotoxicity. *J Am Coll Cardiol* 2022;79(9_Supplement):1945. (Impact Factor = 24.094, Q1)
3. Arinno A, Maneechote C, Khuanjing T, Chunchai T, Prathumsap N, Arunsak B, Kerdphoo S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Melatonin and metformin exert cardioprotection against trastuzumab-induced cardiotoxicity through modulating cardiac mitochondrial dynamics in rats. *Circulation* 2021; 144(Suppl_1): A9375-A (Impact Factor = 29.69, Q1)
4. Arinno A, Maneechote C, Khuanjing T, Chunchai T, Prathumsap N, Ongnok B, Arunsak B, Jaiwongkam T, Kerdphoo S, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Ranolazine exerted cardioprotection against doxorubicin-induced cardiotoxicity through inhibiting excessive autophagy in rats. *Eur Heart J*. 2021;42_Supplement_1 (Impact Factor = 22.673, Q1)
5. Arinno A, **Shinlapawittayatorn K**, Maneechote C, Khuanjing T, Chunchai T, Prathumsap N, Ongnok B, Arunsak B, Jaiwongkam T, Kerdphoo S, Chattipakorn SC, Chattipakorn N. Melatonin, metformin, and ranolazine protect heart against doxorubicin-

- induced cardiotoxicity through modulating cardiac mitochondrial dynamics in rats. *J Am Coll Cardiol*. 2021;77:18_Supplement_1 (Impact Factor = 20.589, Q1)
6. Prathumsap N, Ongnok B, Khuanjing T, Arinno A, Maneechote C, Apaijai N, Chunchai T, Arunsak B, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Modulating cardiac autonomic balance by vagus nerve stimulation attenuates mitochondrial dysfunction and provides protection against trastuzumab-induced cardiotoxicity. *J Am Coll Cardiol* 2022;79 (9_Supplement):1945. (Impact Factor = 24.094, Q1)
 7. Arinno A, Maneechote C, Khuanjing T, Chunchai T, Prathumsap N, Arunsak B, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Ranolazine administration effectively alleviates trastuzumab-induced cardiotoxicity through modulation of mitochondrial function in rats. *J Am Coll Cardiol* 2022;79 (9_Supplement):1928. (Impact Factor = 24.094, Q1)
 8. Intachai K, Chattipakorn S, Chattipakorn N, **Shinlapawittayatorn K**. Acetylcholine Receptor Agonists Exert Cytoprotection Against Hypoxia/Reoxygenation Injury Through Inhibiting Apoptosis and Promoting Mitochondrial Dynamics and Biogenesis. *Biophys J* 2021. (Impact Factor = 3.665, Q1)
 9. **Shinlapawittayatorn K**, PongkanW, Sivasinprasasn S, Chattipakorn S, Chattipakorn N. Cardiometabolic Differences Between Male and Female Obese-Insulin Resistant Rats Following Sex Hormone Deprivation. *Circulation* 2020. (Impact Factor = 23.603, Q1)
 10. Bo-Thay C, Shwe T, Palee S, Pattarasakulchai T, **Shinlapawittayatorn K**, Chattipakorn CC, Chattipakorn N. Hyperbaric Oxygen Therapy Attenuates D-galactose-induced-age-Related Cardiac Dysfunction Through Mitigating Cardiac Mitochondrial Dysfunction in Pre-diabetic Rats. ESC Congress 2020.
 11. **Shinlapawittayatorn K**, PongkanW, Sivasinprasasn S, Chattipakorn S, Chattipakorn N. Cardiometabolic Differences Between Male and Female Obese-Insulin Resistant Rats Following Sex Hormone Deprivation. *Circulation* 2020. (Impact Factor = 23.603, Q1)
 12. Bo-Thay C, Shwe T, Palee S, Pattarasakulchai T, **Shinlapawittayatorn K**, Chattipakorn CC, Chattipakorn N. Hyperbaric Oxygen Therapy Attenuates D-galactose-induced-age-Related Cardiac Dysfunction Through Mitigating Cardiac Mitochondrial Dysfunction in Pre-diabetic Rats. ESC Congress 2020.

13. **Shinlapawittayatorn K**, Pongkan W, Sivasinprasasn S, Chattipakorn S, Chattipakorn N. Sexual Dimorphism in Cardiometabolic and Cardiac Mitochondrial Function in Obese Rats Following Sex Hormone Deprivation. *J Am Coll Cardiol* 2019. (Impact Factor = 18.639, Q1)
14. Bo-Htay C, Shwe T, **Shinlapawittayatorn K**, Palee S, Chattipakorn SC, Chattipakorn N. Aging Aggravates Left Ventricular Dysfunction in Obesity Through the Impairment of Mitochondrial Function, Autophagy and Increased Apoptosis in Obese Rats. *J Am Coll Cardiol* 2019. (Impact Factor = 18.639, Q1)
15. **Shinlapawittayatorn K**, Chattipakorn S, Chattipakorn N. Vagus Nerve Stimulation Exerts Cardioprotection Against Myocardial Ischemia/Reperfusion Injury Predominantly Through its Efferent Vagal Fibers. *J Physiol Sci* 2018 (Impact Factor = 3.341, Q1)
16. **Shinlapawittayatorn K**, Nuntaphum W, Tanajak P, Thummasorn S, Khamseekaew J, Wongjaikam S, Chattipakorn S, Chattipakorn N. Vagus Nerve Stimulation Initiating Requires Both Ipsilateral and Contralateral Efferent Vagal Activity to Fully Exert its Cardioprotection Against Cardiac Ischemia/Reperfusion Injury. *J Am Coll Cardiol* 2017. (Impact Factor = 18.639, Q1)
17. Charununtakorn ST, **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. High-Dose Humanin Analogue Applied During Ischemia Provides Cardioprotection Against Ischemia-Reperfusion Injury Through Attenuating Mitochondrial Dysfunction. *J Am Coll Cardiol* 2017. (Impact Factor = 18.639, Q1)
18. Sivasinprasasn S, Sangquanmoo P, Prachasakul W, **Shinlapawittayatorn K**, Chattipakorn S, Chattipakorn N. High-Fat Diet Consumption Accelerated the Developments and Metabolic Disorders in Estrogen-Deprived Rats. *Endocrinology Review* 2014;35(3):1060. (Impact Factor = 15.167, Q1)
19. **Shinlapawittayatorn K**, Chinda K, Palee S, Surinkaew S, Kumfu S, Kumphune S, Chattipakorn S, KenKnight BH, Chattipakorn N. Vagus Nerve Stimulation Initiating During Ischemia, But Not Reperfusion, Exerts Cardioprotection and is Associated With

- Amelioration of Cardiac Mitochondrial Dysfunction. *J Am Coll Cardiol* 2014;63:A538. (Impact Factor = 18.639, Q1)
20. Pongkan W, **Shinlapawittayatorn K**, Chattipakorn S, Chattipakorn N. Testosterone Replacement Prevents Cardiac Ischemic-Reperfusion Injury and Preserves Cardiac Performance in Testosterone-Deprived Rats. *J Am Coll Cardiol* 2014;63:A44. (Impact Factor = 18.639, Q1)
21. **Shinlapawittayatorn K**, Chinda K, Palee S, Surinkaew S, Thunsiri K, Weerateerangkul P, Chattipakorn S, KenKnight BH, Chattipakorn N. Left Vagus Nerve Stimulation Significantly Attenuates Ventricular Dysfunction and Infarct Size Through Prevention of Mitochondrial Dysfunction During Acute Ischemia-Reperfusion Injury in Swine. *J Am Coll Cardiol* 2013;61:A17. (Impact Factor = 18.639, Q1)
22. Hoshi M, **Shinlapawittayatorn K**, Chi S, Du XX, Liu H, Wan X, Ficker E, Deschênes I. Wild-Type Sodium Channels and Atypical Brugada Syndrome Mutations Interact Through C-Terminul Region. *Biophys J* 2013. (Impact Factor = 3.665, Q1)
23. Hoshi M, **Shinlapawittayatorn K**, Du X, Liu H, Chai S, Ficker E, Deschênes I. Atypical Brugada Syndrome Sodium Channel Mutations Require Interaction with Wild-Type Channels to Produce Disease Phenotype. *Circulation* 2012. (Impact Factor = 23.054, Q1)
24. **Shinlapawittayatorn K**, Du X, Liu H, Nassal DM, Liu H, Enweane P, Deschênes I. A Novel Loss-of-Function Mechanism for Brugada Syndrome Sodium Channel Mutations. *Heart Rhythm* 2011. (Impact Factor = 5.225, Q1)
25. **Shinlapawittayatorn K**, Nassal DM, Liu H, Ficker E, Deschênes I. Dominant-Negative Suppression of Sodium Channel Activity By a Brugada Syndrome Mutation Observed in Cardiomyocytes. *Biophys J* 2011. (Impact Factor = 3.665, Q1)
26. Kuri B, Nassal DM, **Shinlapawittayatorn K**, Ficker E, Deschênes I. Identification of KChIP2 in Guinea Pig Heart. *Biophys J* 2011. (Impact Factor = 3.665, Q1)
27. Du X, Enweana P, **Shinlapawittayatorn K**, Liu H, Deschênes I. A Novel Mechanism of Action for Sodium Channel Brugada Syndrome Mutations. *Heart Rhythm* 2010;7(11):1716. (Impact Factor = 5.225, Q1)
28. **Shinlapawittayatorn K**, Du X, Liu H, Ficker E, Deschênes I. Do Sodium Channel α - α Interactions Contribute to Loss-of-Function Observed in Brugada Syndrome? *Biophys J* 2010. (Impact Factor = 3.665, Q1)

29. Sorrentino S, **Shinlapawittayatorn K**, Forleo C, Anaclerio M, Iacoviello M, Nalin I, De Santis D, Zaccaria M, Ficker E, Guida P, Deschênes I, Favale S. Evidence for a Novel Gene (KCNQ1) Underlying Brugada Syndrome. *Societa Italiana di Cardiologia-70° Congresso Nazionale* 2009.
30. Sorrentino S, **Shinlapawittayatorn K**, Forleo C, Anaclerio M, Iacoviello M, De Santis D, Nalin I, Ficker E, Favale S, Deschênes I. A Novel Gene (KCNQ1) Is Involved in Brugada Syndrome. *ESC Congress* 2009.
31. **Shinlapawittayatorn K**, Sorrentino S, Anaclerio M, Guida P, Iacoviello M, Favale S, Ficker E, Forleo C, Deschênes I. Evidence for a Novel Gene (KCNQ1) Underlying Brugada Syndrome. *Heart Rhythm* 2009. (Impact Factor = 5.225, Q1)
32. **Shinlapawittayatorn K**, Du X, Liu H, Kaufman ES, Deschênes I. A Common SCN5A Polymorphism Restores the Biophysical Defects of LQT3 Mutations. *Biophys J* 2009. (Impact Factor = 3.665, Q1)
33. **Shinlapawittayatorn K**, Kaufman ES, Deschênes I. SCN5A Polymorphism Decreases Arrhythmogenic Events in a Family Carrying a LQT3 Mutation. *Biophys J* 2008;94:3087. (Impact Factor = 3.665, Q1)
34. Chattipakorn N, Kanlop N, **Shinlapawittayatorn K**, Chattipakorn S. Novel Effects of a selective phosphodiesterase type III inhibitor on the defibrillation efficacy. *Eur Heart J* 2007;9. (Impact Factor = 23.239, Q1)
35. Chattipakorn N, **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn S. Combined phosphodiesterase-5 inhibitor-nitric oxide donor attenuates defibrillation efficacy. *Europace* 2007;9:178. (Impact Factor = 5.047, Q1)
36. **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn S, Chattipakorn N. Sildenafil citrate markedly decreases the defibrillation efficacy in a dose-dependent manner. *Circulation Journal* 2006;70:344. (Impact Factor = 3.025, Q1)
37. Chattipakorn N, Chattipakorn S, **Shinlapawittayatorn K**. Effect of fish oil on shock-induced arrhythmia and defibrillation efficacy. *Circulation Journal* 2006;70:415. (Impact Factor = 3.025, Q1)
38. Sungnoon R, **Shinlapawittayatorn K**, Chattipakorn S, Chattipakorn N. Garlic improves defibrillation efficacy in swine. *Circulation Journal* 2006;70:395. (Impact Factor = 3.025, Q1)
39. Chattipakorn N, Fotuhi P, Chattipakorn S, **Shinlapawittayatorn K**, Suriyasataporn W. n-3 Polyunsaturated fatty acid markedly reduces upper limit of vulnerability shocks. *J Am Coll Cardiol* 2005;45(3):373A. (Impact Factor = 18.639, Q1)

40. **Shinlapawittayatorn K**, Sangnoon R, Chattipakorn S , Suriyasataporn W, Chattipakorn N. Sildenafil citrate markedly increases defibrillation threshold in swine. *J Am Coll Cardiol* 2005;45(3):110A. (Impact Factor = 18.639, Q1)

BOOK CHAPTERS

1. **Shinlapawittayatorn K**, Chattipakorn SC, Chattipakorn N. Vagus Nerve Stimulation: A Promising Cardioprotective Strategy Against Ischemia-Reperfusion Injury. In: Coronary Artery Disease - Research and Practice. iConcept Press. 2016 (ISBN 978-1-922227-98-0).

OTHER ACADEMIC ARTICLES

1. "Public Knowledge Dissemination Article titled "Air Pollution and Cardiac Arrhythmias: A Link That Should Not Be Overlooked" published in the Bulletin of the Academy of Science, Royal Society of Thailand, Volume 4, Issue 3 (July – September 2025), ISSN 2774-1338 (Online)."

RESEARCH FIELDS OF INTEREST

1. Channelopathies in Heart Disease
2. Inherited Cardiac Arrhythmias
3. Ion Channels Trafficking
4. Regulation of Gene Expression and Gene Therapy
5. Patient-Specific Induced Pluripotent Stem (iPS) Cell Models
6. Heart-Brain Interactions in Cardiac Arrhythmias: Role of the Autonomic Nervous System
7. Cardiac Reperfusion Injury
8. Chemotherapy-induced cardiotoxicity
9. Mitochondrial dynamics and Mitophagy



Short Biography: Krekwit Shinlapawittayatorn, MD, PhD
 Associate Professor of Cardiac Electrophysiology
 Head of Cardiac Catheterization Laboratory, Cardiac Electrophysiology
 Research and Training Center (CERT), Faculty of Medicine,
 Chiang Mai University, Chiang Mai, 50200 Thailand.

Associate Professor Dr. Krekwit Shinlapawittayatorn received his M.D. from the Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand, and Ph.D. in Physiology and Biophysics from Case Western Reserve University (CWRU), USA. He is currently the Head of Cardiac Catheterization Laboratory of the Cardiac Electrophysiology Research and Training (CERT) Center and an Assistant Dean for Undergraduate Academic Affairs, Faculty of Medicine, Chiang Mai University, and serves as an Associate Professor in the Department of Physiology, Faculty of Medicine, Chiang Mai University. Associate Professor Dr. Krekwit Shinlapawittayatorn has received many international and national scientific awards including the American Heart Association Pre-Doctoral Fellowship Award (Percentile Rank: 0.93) from the American Heart Association and Young Investigator Award (Physiology, Pharmacology and Pathology, Second Place Winner) from the American College of Cardiology, Doctoral Excellence Award (Physiology and Biophysics) from Case Western Reserve University, the TRF Research Scholar Award from the Thailand Research Fund, the TRF-OHEC-SCOPUS Young Researcher Award in Health Science from the Thailand Research Fund and the Gold Elephant Award for Best Young Researcher in Medical Science from the Chiang Mai University. Currently, he has been studying the cardiac electrophysiological changes during vagus nerve stimulation and during ischemia and reperfusion injury, aging and chemotherapy-induced cardiotoxicity, using a wide range of study models ranging from cardiac mitochondria, isolated cardiomyocytes, and small as well as large (human-like) animal models to the bedside level for these pathophysiological studies.

- | | |
|-----------|--|
| 2014 | Outstanding Research Presentation Award, the 14 th Annual Meeting of Thailand Research Fund (TRF), Entitled “New Researchers Meet TRF Senior Scholars”, Pattaya, Thailand |
| 2014 | Young Investigator Award (Physiology, Pharmacology and Pathology, Second Place Winner), American College of Cardiology (ACC), Washington, DC, USA |
| 2012-2015 | Anandhamahidol Supporting Scholar Award, Anandhamahidol Foundation, Bangkok, Thailand |
| 2012-2014 | TRF-CHE Research Grant for New Scholar, the Thailand Research Fund, Bangkok, Thailand |
| 2012 | Doctoral Excellence Award (Physiology and Biophysics), the Graduate and Postdoctoral Awards Ceremony, Case Western Reserve University, Cleveland, Ohio, USA |
- ได้รับเชิญให้เป็นวิทยากรรับเชิญจากทั้งในและต่างประเทศรวมทั้งได้รับเชิญให้เป็นผู้ตรวจและวิจารณ์บทความก่อนที่จะตีพิมพ์ในวารสารชั้นนำ อาทิเช่น Acta Physiologica, Advanced Science, Heart Rhythm, Journal of Arrhythmia, Oxidative Medicine and Cellular Longevity, Plos One, Scientific Reports และ Theranostics เป็นต้น
 - มีผลงานตีพิมพ์งานวิจัยจำนวนทั้งสิ้นกว่า 60 เรื่องทั้งในรูปแบบของ original article และ editorial comment ในวารสารชั้นนำ อาทิเช่น Basic Research in Cardiology, Nature Communications, Journal of Clinical Investigation, Circulation Cardiovascular Genetics, GeroScience, Heart Rhythm และ Journal of Pineal Research เป็นต้น, h-index = 25 และเขียน book chapter ให้แก่ international textbook จำนวน 1 เล่ม