

## Curriculum Vitae

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Marital Status Married

### EDUCATION

1994 – 2000 Doctor of Medicine, M.D., Honor  
Chiang Mai University, Thailand  
2010 – 2014 Doctor of Philosophy (Ph.D.) in Medical Engineering  
Thammasat University, Thailand

### PROFESSIONAL APPOINTMENT

2004-2007 Physiological Curriculum Committee for second-year Medical Student,  
Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand  
2004-2007 Comprehensive Examination Committee for Pre-clinic Medical Student,  
Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

- 2004-2007            Physiological Curriculum Committee for second-year Paramedical Student, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2005-2007            Graduation Ceremony Committee, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2005-2007            Medical Student Scholarship Committee, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2005-2007            Medical Student Dormitory Committee, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2005-2007            Cardiovascular System Curriculum Committee for second-year Medical Student, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2005-2007            Educational Quality Accreditation Committee, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2005-2007            Research Committee, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2006-2007            Health Promotion in Medical Student Committee, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2017-Present        Assistant professor, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

### **PROFESSIONAL LICENSES**

- 2000-Present        M.D. (Thailand)

### **ORGANIZATION AND PARTICIPATION**

- 2004-Present        Thai Physiology Society

### **PRESENTATIONS AT NATIONAL MEETINGS**

- May 2006                      Presentation oot the 35<sup>th</sup> Annual Scientific Meeting of the Thai Physiological Society. Chiang Mai, Thailand.
- May 2012                      Poster session presented at the 41st Annual scientific meeting of the Physiology Society of Thailand, Bangkok, Thailand.
- December 2012              Presentation at the 1st Conference on Graduate Student Network of Thailand, Pathumthani, Thailand.
- Febuary 2014                Presentation at the 6th Academic week, Faculty of Engineering, Thammasat University, Thailand, Pathumthani, Thailand.

### **PRESENTATIONS AT INTERNATIONAL MEETINGS**

- March 2006                    Presentation at the 70<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society. Nagoya, Japan.
- December 2012              Presentation at the 5th Biomedical Engineering International Conference (BMEiCON), Ubonratchathani, Thailand & Champasak, Laos.
- May 2019                      Presentation at the 7th IWBBIO-2019: International Work-Conference on Bioinformatics and Biomedical Engineering; 2019 May 8-10; Granada, Spain.

### **INVITED LECTURES**

- February 2005                Invited lecture: Electrocardiogram and Cardiac Arrhythmia, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai, Thailand
- November 2005              Invited lecture: Respiratory Physiology for Cosmetic Sciences, Mae Fah Luang University, Chiang Rai, Thailand
- July 2006                      Invited lecture: Cardiovascular Physiology for Applied Alternative Medicines, Mae Fah Luang University, Chiang Rai, Thailand
- November 2006              Invited lecture: Cardiovascular Physiology for Cosmetic Sciences, Mae Fah Luang University, Chiang Rai, Thailand

## ACADEMIC ACTIVITIES

### Special Academic Appointments

2000-2001	Rotating Intern, Chiang Mai University Hospital, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2001-2004	Residency training in General Surgery, Department of Surgery, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2004-Present	Instructor, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2007-2009	Researcher, Heart Failure Research Center, Department of Experimental Cardiology, Academic Medical Center, University of Amsterdam, the Netherlands

### RESEARCH GRANT SUPPORT

Aug 2024-Present	Endowment Fund, Program Management Unit for Competitiveness Enhancement (PMUC), Thailand. "Effect of novel food in the form of beverage derived from Coffea Arabica pulp extract on lowering blood pressure in hypertensive patients with hyperlipidemia" (Co-Principal Investigator/Co-PI)
Jun 2021-2022	Endowment Fund, Thailand Science Research and Innovation (TSRI), Thailand. "Genomics and Metabolomics in Kynurenine Metabolism Pathway for Pathologic and Degree of Coronary Occlusion Prediction" (Co-Principal Investigator/Co-PI)
Oct 2018-2020	Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Acute Effect of Ganoderma lucidum on Blood Pressure in Rats" (Principal Investigator/PI)
Feb 2016-2018	Endowment Fund, National Science and Technology Development Agency, Thailand. "Correlations Between Sample Entropy as well as Atrial Fibrillatory Rate and CHA <sub>2</sub> DS <sub>2</sub> -VASc Score in Patients with Atrial Fibrillation" (PI)
May 2006-Sep 2007	Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Effects of Garlic Powder on the Induction of Ventricular Fibrillation in Swine." (PI)
Nov 2004-Oct 2006	Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Effects of Garlic Powder on Defibrillation Efficacy in Swine." (PI)

- Nov 2004-Oct 2006      Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Effects of Sildenafil Citrate and Nitroglycerine Combination on Defibrillation Efficacy in Swine." (Co-PI)
- Sep 2004-Feb 2006      Endowment Fund, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Effects of Sildenafil Citrate on Defibrillation Efficacy in Swine." (Co-PI)

## RESEARCH FIELDS OF INTEREST

1. Cardiovascular physiology and cardiac electrophysiology
2. Herbs and anti-arrhythmic effects
3. Calcium handling of cardiac myocytes and arrhythmogenesis
4. Biomedical engineering: ECG signal processing

## PEER REVIEWED ARTICLES

1. Duangburong S, Muengtawepongsa S, **Sungnoon R**, Pruksaphanrat B. Automatic Diagnosis of Atrial Fibrillation using multimodal ECG signal identities compared between Machine Learning (ML) and Adaptive Neuro-Fuzzy Inference System (ANFIS). *Journal of Healthcare Engineering*. Manuscript submitted for publication. (in press.)
2. **Sungnoon R**, Weerateerangkul P\*. Acute effects of Ganoderma lucidum on blood pressure in rats. *Health Sci Sci Tech Rev* 2023;16(3):30-39.
3. Muengtawepongsa S, **Sungnoon R**, Ngarmukos T. Increased sample entropy and high heart rate variability fluctuation in persistent atrial fibrillation as compared with paroxysmal atrial fibrillation: a matched case-control study. *Journal of Cardiovascular Disease Research*. 2021;12:125-133.
4. **Sungnoon R**, Suwanprasert K, Muengtawepongsa S. Reply to correspondence by Alcaez R and Rieta JJ. *Neurology Asia*. 2014;19:337-338.
5. **Sungnoon R**, Suwanprasert K, Muengtawepongsa S. Atrial electrophysiological property analysis by sample entropy and atrial fibrillatory rate with cardiac autonomic derangements in acute ischemic stroke with atrial fibrillation. *Neurology Asia*. 2014;19:11-18.

6. **Sungnoon R**, Muengtaweepongsa S, Kitipawong P, Ngarmukos T, Suwanprasert K. Increased sample entropy in atrial fibrillation relates to cardiac autonomic dysfunction determined by heart rate variability: a preliminary study. Proceedings of the 5th Biomedical Engineering International Conference (BMEiCON); 2012 Dec 5-7; Ubonratchathani, Thailand & Champasak, Laos. IEEE Xplore. 2012 Dec. doi: 10.1109/BMEiCon.2012.6465461.  
Available from: <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6465461>
7. Den Ruijter HM, Franssen R, Verkerk AO, van Wijk DF, Vaessen SF, Holleboom AG, Levels JH, Ophof T, **Sungnoon R**, Stroes ES, Kuivenhoven JA, Coronel R. Reconstituted high-density lipoprotein shortens cardiac repolarization. *Journal of the American College of Cardiology*. 2011;58:40-44.
8. Kanlop N, Shinlapawittayatorn K, **Sungnoon R**, Weerateerangkul P, Chattipakorn S, Chattipakorn N. Cilostazol attenuates ventricular arrhythmia induction and improves defibrillation efficacy in swine of garlic on the induction of ventricular fibrillation. *The Canadian Journal of Physiology and Pharmacology*. 2010;88:422-428.
9. Kanlop N, Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn S, Lailerd N, Chattipakorn N. Sildenafil citrate on the inducibility of ventricular fibrillation and upper limit of vulnerability in swine. *Medical Science Monitor*. 2008;14:BR205-209.
10. **Sungnoon R**, Kanlop N, Chattipakorn S, Chattipakorn N. Effects of garlic on the induction of ventricular fibrillation. *Nutrition*. 2008;24:711-716
11. **Sungnoon R**, Shinlapawittayatorn K, Chattipakorn S, Incharoen T, Chattipakorn N. Effects of garlic on defibrillation efficacy in swine. *International Journal of Cardiology*. 2008;126:143-144.
12. Chattipakorn N, Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn S. Fish oil does not improve defibrillation efficacy. *International Journal of Cardiology*. 2007;122:85-86.
13. **Shinlapawittayatorn K**, Chattipakorn S, Sungnoon R, Chattipakorn N. Effects of combined sildenafil-nitric oxide donor on defibrillation efficacy. *Journal of the Medical Association of Thailand*. 2007;90:2143-2149.

14. Chattipakorn N, Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn SC. Effects of n-3 polyunsaturated fatty acid on upper limit of vulnerability shocks. *International Journal of Cardiology*. 2006;107:299-302.
15. **Shinlapawittayatorn K**, Sungnoon R, Chattipakorn S, Chattipakorn N. Effects of sildenafil citrate on defibrillation efficacy. *Jouranl of Cardiovascular Electrophysiology*. 2006;17:292-295.

### PEER REVIEWED ABSTRACTS

1. **Sungnoon R** and Prasertwitayakij N. Correlations between sample entropy as well as atrial fibrillatory rate and CHA<sub>2</sub>DS<sub>2</sub>-VAsc score in patients with atrial fibrillation. Poster session presented at: IWBBIO-2019: International Work-Conference on Bioinformatics and Biomedical Engineering; 2019 May 8-10; Granada, Spain.
2. **Sungnoon R**, Muengtaweepongsa S, Suwanprasert K. Novel biosignal parameters relate to the brain-heart axis concept in ischemic stroke patients with atrial fibrillation: a preliminary study. Poster session presented at: 41st Annual scientific meeting of the Physiology Society of Thailand; 2012 May 2-4; Bangkok, Thailand.
3. Chattipakorn N, Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn S. Combined phosphodiesterase-5 inhibitor-nitric oxide donor attenuates defibrillation efficacy. *Europace*. 2007;9:178.
4. **Sungnoon R**, Shinlapawittayatorn K, Chattipakorn S, Incharoen T, Chattipakorn N. Garlic improves defibrillation efficacy in swine. *Circulation Journal*. 2006;70:392.
5. Chattipakorn N, Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn S. Effects of fish oil on shock-induced arrhythmia and defibrillation efficacy. *Circulation Journal*. 2006;70:415.
6. Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn S, Chattipakorn N. Sildenafil citrate markedly decreases defibrillation efficacy in a dose-dependent manner. *Circulation Journal*. 2006;70:344.

7. Shinlapawittayatorn K, **Sungnoon R**, Chattipakorn S , Suriyasataporn W, Chattipakorn N. Sildenafil citrate markedly increases defibrillation threshold in swine. *Journal of the American College of Cardiology*. 2005;45:110A.