

Curriculum Vitae

Chanisa Thonusin, MD, PhD, FRCPT



Office Address: Cardiac Electrophysiology Research and Training Center
 Faculty of Medicine, Chiang Mai University
 110 Intrawaroros Road
 Sripum, Mueang District, Chiang Mai 50200
 Thailand
 Phone : 00 66 53 935329
 Fax : 00 66 53 935368
 E-mail : cthonusin@gmail.com

EDUCATION

- 1998-2001 The Prince Royal's College, Chiang Mai, Thailand
- 2001-2007 Doctor of Medicine (First-class honors and Academic Gold Medal Award), Faculty of Medicine, Chiang Mai, Thailand
- 2007-2008 Intern, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2008-2011 Certificate program in Clinical Sciences in Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2008-2011 Resident of Internal Medicine, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

- 2012-2014 Ph.D. pre-candidate of Molecular and Integrative Physiology, University of Michigan Medical School, Ann Arbor, Michigan, USA
- 2014-2017 Ph.D. candidate of Molecular and Integrative Physiology, University of Michigan Medical School, Ann Arbor, Michigan, USA
- 2015-2017 Certificate program in Advanced Metabolic Endocrinology, Metabolic Medical Institute, Boca Raton, Florida, USA
- 2017-2018 Postdoctoral fellow at Division of Metabolism, Endocrinology and Diabetes, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan, USA

HONORS AND AWARDS

- 1999 Academic Award for outstanding student, The Prince Royal's College, Chiang Mai, Thailand
- 2000 Academic Award for outstanding student, The Prince Royal's College, Chiang Mai, Thailand
- 2001 Academic Award for outstanding student, The Prince Royal's College, Chiang Mai, Thailand
- 2001 Best Student Award in Academic Performance, The Prince Royal's College, Chiang Mai, Thailand
- 2001 Student Award in Service Performance, The Prince Royal's College, Chiang Mai, Thailand
- 2002 Academic Medal Award for outstanding first year medical student, Chiang Mai University, Chiang Mai, Thailand
- 2003 Best Student Award in Academic Performance for second year medical student, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2003 Academic Medal Award for outstanding second year medical student, Chiang Mai University, Chiang Mai, Thailand
- 2004 Academic Medal Award for outstanding third year medical student, Chiang Mai University, Chiang Mai, Thailand
- 2005 Award for the best medical student in Radiology, Chiang Mai University, Chiang Mai, Thailand

- 2005 Academic Medal Award for outstanding fourth year medical student, Chiang Mai University, Chiang Mai, Thailand
- 2006 Academic Medal Award for outstanding fifth year medical student, Chiang Mai University, Chiang Mai, Thailand
- 2007 Academic Medal Award for outstanding sixth year medical student, Chiang Mai University, Chiang Mai, Thailand
- 2007 First-class honors and Academic Gold Medal Award of Doctor of Medicine, Chiang Mai University, Chiang Mai, Thailand.
- 2011 Distinguished Research Award (“The Prevalence of weight maintenance and factors that prevent weight regain after successful weight loss”), Department of Internal Medicine, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2019 Registration Reimbursement Award (“Effects of PCSK9 inhibitor and atorvastatin on mitochondria of red muscle fibers in obesity” at 9th Federation of the Asian and Oceanian Physiological Societies Congress, Kobe, Japan
- 2022 International Travel Grant Award (“Blood Metabolomes as Non-Invasive Biomarkers and Targets of Metabolic Interventions for Doxorubicin- and Trastuzumab-Induced Heart Failure”) at the American Heart Association Scientific Sessions 2022, Chicago, Illinois, USA

PROFESSIONAL APPOINTMENT

- 2012-2018 Lecturer, Department of Internal Medicine, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2018-2020 Lecturer, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2020-2022 Assistant professor, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
- 2022-present Associate professor, Department of Physiology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

PROFESSIONAL DEGREES AND LICENSE

- 2017-present Ph.D.
- 2007-present M.D.
- 2011-present Thai Board of Internal Medicine

ORGANIZATION AND PARTICIPATION

2007-present	Thai Medical Council
2011-present	Royal College of Physicians of Thailand

PRESENTATIONS AT NATIONAL MEETINGS

April 2011	Poster presentation “The Prevalence of Weight Maintenance and Factors that Prevent Weight Regain After Successful Weight Loss” at 27 th annual meeting of the Royal College of Physicians of Thailand, Pattaya, Thailand
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PRESENTATIONS AT INTERNATIONAL MEETINGS

June 2016	Poster presentation “Effects of Intrinsic Oxidative Capacity (VO ₂ max) and Weight Loss on Age-Related Changes in Plasma Metabolite Levels” at 76 th Scientific Sessions of American Diabetic Association, New Orleans, Louisiana
October 2016	Poster presentation “Effects of Intrinsic Oxidative Capacity (VO ₂ max) and Weight Loss on Skeletal Muscle and Plasma Metabolite Levels” at A. Alfred Taubman Medical Research Institute 9 th Annual Symposium, Ann Arbor, Michigan
June 2017	Poster presentation “Effect of Intrinsic Oxidative Capacity (VO ₂ max) on Mitochondrial DNA and Metabolite Levels in Human Skeletal Muscle” at 77 th Scientific Sessions of American Diabetic Association, San Diego, California
November 2017	Oral presentation “Evidence that High Oxidative Capacity is Associated with Slow Metabolic Aging in Humans” at Brehm Tower Summer Diabetes Symposium, Ann Arbor, Michigan
March 2019	Poster presentation “Effects of PCSK9 inhibitor and atorvastatin on mitochondria of red muscle fibers in obesity” at 9 th Federation of the Asian and Oceanian Physiological Societies Congress, Kobe, Japan
June 2019	Poster presentation “Comparative Effects of PCSK9 Inhibitor and High-Dose Atorvastatin on Mitochondria of Red Muscle Fibers in Obese Female Rats” at 79 th Scientific Sessions of American Diabetic Association, San Francisco, California
June 2020	Poster presentation “Comparative Effects of Atorvastatin, a Proprotein Convertase Subtilisin/Kexin Type 9 Inhibitor (PCSK9i), and Estrogen on Oxidative Muscle Mitochondria in a Rat Model of Obesity with Menopause” at 80 th Scientific Sessions of American Diabetic Association, Virtual meeting

- June 2021 Poster presentation “The Effect of Exercise Capacity on Metabolic and Cardiac Aging in Normal and Obese Rats” at 81st Scientific Sessions of American Diabetic Association, Virtual meeting
- April 2022 Poster presentation “High Cardiorespiratory Fitness Exerts Cardioprotection in Obese Rats Regardless of Lifestyle Modification” at 71st Annual Scientific Sessions of the American College of Cardiology, Washington, DC
- June 2022 Poster presentation “High Cardiorespiratory Fitness Exerts Metabolic Protection in Obese Rats, Regardless of Caloric Restriction or Short-term Exercise” at 82nd Scientific Sessions of American Diabetic Association, New Orleans, Louisiana
- November 2022 Poster presentation “Blood Metabolomes as Non-Invasive Biomarkers and Targets of Metabolic Interventions for Doxorubicin- and Trastuzumab-Induced Heart Failure” at American Heart Association Scientific Sessions 2022. Chicago, Illinois
- June 2023 Poster presentation “Exercise and caloric restriction exert different benefits on metabolism and mechanical function of skeletal muscle in aging condition” at 83rd Scientific Sessions of American Diabetic Association, San Diego, California
- August 2023 Poster presentation “Melatonin attenuates an impairment of metabolic reprogramming in doxorubicin-induced cardiotoxicity: Insights from metabolomics study in rats” at European Society of Cardiology 2023, Amsterdam, Netherlands.
- August 2024 Oral presentation “Changes in blood metabolomes as potential biomarkers for severity and prognosis in doxorubicin-induced heart failure: a study in HER2-positive and HER2-negative breast cancer patients” at European Society of Cardiology 2024, London, United Kingdom.

INVITED LECTURES AT INTERNATIONAL MEETINGS

- October 2021 The Parenteral and Enteral Nutrition Society of Asia (PENSA) 2021, Virtual meeting

INVITED LECTURES AT NATIONAL MEETINGS

- October 2019 MED CMU 60th Anniversary Meeting “Now and Future in Health Care”, Chiang Mai, Thailand
- February 2022 Thai Metabolomics Society Webinar Series “MED x MET”, Virtual meeting
- January 2023 Research Trend in Cardiology, Chiang Mai University, Chiang Mai, Thailand

March 2023	The 17 th National Neurologic and Cardiac Electrophysiology Symposium, Chiang Mai, Thailand
September 2023	Thailand Hub of Talents in Cancer Immunotherapy Webinar Series, Virtual meeting
May 2024	The 18 th National Neurologic and Cardiac Electrophysiology Symposium, Chiang Mai, Thailand
July 2024	Oral and Maxillofacial Surgery CMU annual meeting, Chiang Mai, Thailand

ACADEMIC ACTIVITIES

Graduate Student's Dissertation Committees

1. Patcharapong Pantiya, Member of the Doctoral Degree Committee
Topic: The correlation between cardiorespiratory fitness and brain aging induced by chronic high-fat diet and D-galactose, and the effects of caloric restriction and exercise on this correlation in high-fat diet-fed rats and D-galactose-treated rats.
2. Napatsorn Imerb, Member of the Doctoral Degree Committee
Topic: "Effects of Aging and Obesity on Bone Remodeling and Effects of Hyperbaric Oxygen Therapy on Bone Remodeling in D-Galactose Induced Aging Rats with and without Obesity"
3. Lingling Huang, Member of the Doctoral Degree Committee
Topic: "Effects of Insulin Therapy on Gut Microbiota of Gestational Diabetes Mellitus (GDM) and Their Newborns"
4. Patchareeya Amput, Member of the Doctoral Degree Committee
Topic: "The Comparative Effects of Proprotein Convertase Subtilisin/kexin Type 9 (PCSK9) Inhibitor and Atorvastatin on Cardiac Function and in Obese-Insulin Resistant Female Rats with or without Estrogen Deprivation"
5. Busarin Arunsak, Member of the Master Degree Committee
Topic: "The Comparative Effects of Proprotein Convertase Subtilisin/kexin Type 9 (PCSK9) Inhibitor and Atorvastatin on Brain Function and Cognitive Function in Obese-Insulin Resistant Female Rats"
6. Kewarin Jinawong, Member of the Master Degree Committee
Topic: "The Effects of Necroptosis Inhibitor on Cognitive Function and Neuropathology in Obese-Insulin Resistant Rats Induced by High-Fat Diet Consumption"

Special Academic Appointments

2018-Present Graduate School Faculty, Chiang Mai University, Chiang Mai, Thailand

GRANT SUPPORT

October 2022-September 2025 Anandamahidol Foundation

RESEARCH GRANT SUPPORT

March 2022 – February 2024 National Research Council of Thailand (PI)
Title “The Predictive Effects of Cardiorespiratory Fitness on Sarcopenia, and the Modulating Effects of Caloric Restriction and Exercise on This Prediction in D-Galactose-Induced Premature Aging Rats”

December 2020 – December 2022 The Faculty of Medicine Endowment Fund for Research, Faculty of Medicine, Chiang Mai University (PI)
Title “Effects of cardiorespiratory fitness on brain aging in caloric-restricted rats after high fat diet-induced aging”

May 2020 – May 2022 The Faculty of Medicine Endowment Fund for Research, Faculty of Medicine, Chiang Mai University (PI)
Title “Effects of cardiorespiratory fitness on brain aging in high fat diet-induced aging rats compared to normal rats”

March 2019 - February 2021 Thailand Science Research and Innovation (PI)
Title “Effects of cardiorespiratory fitness on body weight and cardiometabolic features in obese versus non-obese rats, and on maintenance of body weight and cardiometabolic benefits after termination of caloric restriction- and exercise training-induced successful weight loss in obese rats”

January 2019 - January 2021 The Faculty of Medicine Endowment Fund for Research, Faculty of Medicine, Chiang Mai University (PI)
Title “The comparative effects of proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitor and high dose atorvastatin on the mitochondria of oxidative muscle fibers in obese female rats with and without estrogen deprivation”

RESEARCH FIELDS OF INTEREST

1. Metabolomics
2. Metabolism

3. Cardiovascular disease
4. Cardiotoxicity
5. Obesity and insulin resistance
6. Aging
7. Skeletal muscle

PEER REVIEWED ARTICLES

1. Huang H, Apaijai N, **Thonusin C**, Suntornsaratoon P, Chattipakorn N, Charoenphandhu N, Chattipakorn SC. Mothers with obesity and gestational diabetes did not induce brain pathologies or premature brain aging in their adolescent and early adult offspring in rats. *Neuroscience*. 2025 Jan 29;S0306-4522(25)00071-5.
2. Boonchooduang N, Louthrenoo O, Likhitweerawong N, Kunasol C, **Thonusin C**, Sriwichaiin S, Nawara W, Chattipakorn N, Chattipakorn SC. Impact of psychostimulants on microbiota and short-chain fatty acids alterations in children with attention-deficit/hyperactivity disorder. *Sci Rep*. 2025 Jan 24;15(1):3034.
3. Suparan K, Trirattanapa K, Piriyaikhuntorn P, Sriwichaiin S, **Thonusin C**, Nawara W, Kerdphoo S, Chattipakorn N, Tantiworawit A, Chattipakorn SC. Exploring Alterations of Gut/Blood Microbes in Addressing Iron Overload-Induced Gut Dysbiosis and Cognitive Impairment in Thalassemia Patients. *Sci Rep*. 2024 Oct 23;14(1):24951.
4. Pintana H, Apaijai N, Chunchai T, **Thonusin C**, Saengmearnuparp T, Kongkaew A, Chattipakorn N, Chattipakorn SC. The comparative effects between long-term and short-term treatment of finasteride on anxiety-like and depression-like behavior in early senescent male rats. *J Neurosci Res*. 2024 Oct;102(10):e25389.
5. Puttawong D, Wejaphikul Karn, **Thonusin C**, Dejkhamron P, Chattipakorn N, Chattipakorn SC. Potential Role of Sleep Disturbance in the Development of Early Puberty: Past Clinical Evidence for Future Management. *Pediatr Neurol*. 2024 Sep 15;161:117-124.
6. Narongkiatikhun P, **Thonusin C**, Sriwichaiin S, Nawara W, Fanhchaksai K, Wongsarikan N, Kumfu S, Chattipakorn N, Chattipakorn SC. Alterations of plasma metabolomes and their correlations with immunogenicity in maintenance hemodialysis patients receiving different COVID-19 vaccine regimens. *Physiol Rep*. 2024 Aug;12(16):e70005.
7. Srivichit B, **Thonusin C**, Aeimlapa R, Arinno N, Chunchai T, Charoenphandhu N, Chattipakorn N, Chattipakorn SC. Melatonin and Metformin in Mitigating Doxorubicin Alveolar Bone Toxicity. *J Dent Res*. 2024 Aug;103(9):916-925.

8. Saengmearnuparp T, Pintana H, Apaijai N, Chunchai T, **Thonusin C**, Kongkaew A, Lojanapiwat B, Chattipakorn N, Chattipakorn SC. Long-term Treatment with a 5-Alpha-Reductase Inhibitor Alleviates Depression-like Behavior in Obese Male Rats. *Behav Brain Res*. 2024 Jul 18:115155.
9. Suparan K, Sriwichaiin S, **Thonusin C**, Sripetchwandee J, Khuanjing T, Maneechote C, Nawara W, Arunsak B, Chattipakorn N, Chattipakorn SC. Donepezil Ameliorates Gut Barrier Disruption in Doxorubicin-treated Rats. *Food Chem Toxicol*. 2024 May 15:114741.
10. **Thonusin C**, Osataphan N, Leemasawat K, Nawara W, Sriwichaiin S, Supakham S, Gunaparn S, Apaijai N, Somwangprasert A, Phrommintikul A, Chattipakorn SC, Chattipakorn N. Changes in Blood Metabolomes as Potential Markers for Severity and Prognosis in Doxorubicin-Induced Cardiotoxicity: A Study in HER2-Positive and HER2-Negative Breast Cancer Patients. *J Transl Med*. 2024 Apr 29;22(1):398.
11. Chunchai T, Chinchapo T, Sripetchwandee J, **Thonusin C**, Chattipakorn N, Chattipakorn SC. Lipopolysaccharide exacerbates depressive-like behaviors in obese rats through complement C1q-mediated synaptic elimination by microglia. *Acta Physiol (Oxf)*. 2024 Mar 10:e14130.
12. Upaphong P, **Thonusin C**, Wanichthanaolan O, Chattipakorn N, Chattipakorn SC. Consequences of exposure to particulate matter on the ocular surface: Mechanistic insights from cellular mechanisms to epidemiological findings. *Environ Pollut*. 2024 Mar 15:345:123488.
13. Jinawong K, Piamsiri C, Apaijai N, Maneechote C, Arunsak B, Nawara W, **Thonusin C**, Pintana H, Chattipakorn N, Chattipakorn SC. Modulating Mitochondrial Dynamics Mitigates Cognitive Impairment in Rats with Myocardial Infarction. *Curr Neuropharmacol*. 2024 Jan 31.
14. **Thonusin C**, Pantiya P, Kongkaew A, Nawara W, Arunsak B, Sriwichaiin S, Chattipakorn N, Chattipakorn SC. Exercise and Caloric Restriction Exert Different Benefits on Skeletal Muscle Metabolism in Aging Condition. *Nutrients*. 2023 Dec 3;15(23):5004.
15. Pantiya P, **Thonusin C**, Chunchai T, Pintana H, Ongnok B, Nawara W, Arunsak B, Kongkaew A, Chattipakorn N, Chattipakorn SC. Long-term lifestyle intervention is superior to transient modification for neuroprotection in D-galactose-induced aging rats. *Life Sci*. 2023 Nov 6:334:122248.
16. Kumfu S, Sripetchwandee J, **Thonusin C**, Sumneang N, Maneechote C, Arunsak B, Chunchai T, Oo TT, Kongkaew A, Chattipakorn SC, Chattipakorn N. Ferroptosis inhibitor improves cardiac function more effectively than inhibitors of apoptosis and necroptosis through cardiac mitochondrial protection in rats with iron-overloaded cardiomyopathy. *Toxicol Appl Pharmacol*. 2023 Nov 15:479:116727.

17. Imerb N, **Thonusin C**, Pratchayasakul W, Chanpaisaeng K, Aeimlapa R, Charoenphandhu N, Chattipakorn N, Chattipakorn SC. Hyperbaric oxygen therapy exerts anti-osteoporotic effects in obese and lean D-galactose-induced aged rats. *FASEB J.* 2023 Nov;37(11):e23262.
18. Pantiya P, **Thonusin C***, Ongnok B, Chunchai T, Kongkaew A, Nawara W, Arunsak B, Chattipakorn N, Chattipakorn SC. Chronic D-galactose administration induces natural aging characteristics, in rat's brain and heart. *Toxicology.* 2023 Jun 15;492:153553.
* Pantiya P and **Thonusin C** equally contribute to this article as co-first authors.
19. Thonusin C, Nawara W, Arinno A, Khuanjing T, Prathumsup N, Ongnok B, Chattipakorn SC, Chattipakorn N. Effects of melatonin on cardiac metabolic reprogramming in doxorubicin-induced heart failure rats: A metabolomics study for potential therapeutic targets. *J Pineal Res.* 2023 May 13:e12884.
20. Pantiya P, **Thonusin C**, Chunchai T, Ongnok B, Nawara W, Arunsak B, Chattipakorn N, Chattipakorn SC. Higher untrained fitness exerts a neuroprotection in Independence to caloric restriction or exercise in high-fat diet-induced obesity. *Exp Neurol.* 2023 Apr 17;365:114416.
21. **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.* 2023 Feb;97(2):603-618.
22. Upaphong P, **Thonusin C**, Choovuthayakorn J, Chattipakorn N, Chattipakorn SC. The Possible Positive Mechanisms of Pirenoxine in Cataract Formation. *Int. J. Mol. Sci.* 2022 Aug 21;23(16):9431.
23. Sriwichaiin S, Thiennimitr P, **Thonusin C**, Sarichai P, Buddhasiri S, Kumfu S, Nawara W, Kittichotirut 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 Aug 8;307:120871.
24. 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 Better Protective Efficacy in Obesity-Induced Premature Aging. *Endocrinol Metab.* 2022 Aug;37(4):630-640.
* Pantiya P and **Thonusin C** equally contribute to this article as co-first authors.
25. Huang L, Sililas P, **Thonusin C**, Tongsong T, Luewan S, Chattipakorn N, Chattipakorn SC. The Association between Gut Microbiota and Insulin Therapy in Women with Gestational Diabetes Mellitus. *Can J Diabetes.* 2022 May 31;S1499-2671.

26. Imerb N, **Thonusin C**, Pratchayasakul W, Arunsak B, Nawara W, Ongnok B, Aeimlapa R, Charoenphandhu N, Chattipakorn N, Chattipakorn SC. D-galactose-induced aging aggravates obesity-induced bone dyshomeostasis. *Sci Rep*. 2022 May 20;12(1):8580.
27. **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 Mar 10;28(1):31.
28. Srivichit B, **Thonusin C**, Chattipakorn N, Chattipakorn SC. Impacts of bisphosphonates on the bone and its surrounding tissues: mechanistic insights into medication-related osteonecrosis of the jaw. *Arch Toxicol* 2022 May;96(5):1227-1255.
29. Imerb N, **Thonusin C**, Pratchayasakul W, Arunsak B, Nawara W, Aeimlapa R, Charoenphandhu N, Chattipakorn N, Chattipakorn SC. Hyperbaric oxygen therapy improves age induced bone dyshomeostasis in non-obese and obese conditions. *Life Sci*. 2022 Apr 15;295:120406.
30. Trongtrakul K, **Thonusin C***, Pothirat C, Chattipakorn SC, Chattipakorn N. Past Experiences for Future Applications of Metabolomics in Critically Ill Patients with Sepsis and Septic Shocks. *Metabolites*. 2021 Dec 21;12(1):1.
*Chattipakorn N and **Thonusin C** equally contribute to this article as co-corresponding authors.
31. Huang L, Sililas P, **Thonusin C**, Luewan S, Chattipakorn SC. Early gut dysbiosis could be an indicator of unsuccessful diet control in gestational diabetes mellitus. *J Diabetes*. 2021 Dec;13(12):1054-1058.
32. Likhitweerawong N, **Thonusin C**, Boonchooduang N, Louthrenoo O, Nookaew I, Chattipakorn N, Chattipakorn SC. Profiles of urine and blood metabolomics in autism spectrum disorders. *Metab Brain Dis*. 2021 Oct;36(7):1641-1671.
33. Nantasupha C, **Thonusin C***, Charoenkwan K, Chattipakorn SC, Chattipakorn N. Metabolic reprogramming in epithelial ovarian cancer. *Am J Transl Res* 2021 Sep 15;13(9):9950-9973.
*Chattipakorn N and **Thonusin C** equally contribute to this article as co-corresponding authors.
34. Sililas P, Huang L, **Thonusin C**, Luewan S, Chattipakorn N, Chattipakorn SC, Tongsong T. Association between gut microbiome and development of gestational diabetes mellitus. *Microorganisms* 2021 Aug 8;9(8):1686.
35. **Thonusin C**, Chattipakorn SC, Chattipakorn N. Staying fit and the obese aging heart condition. *Aging (Albany NY)*. 2021 May 13;13(10):13374-13375.
36. Huang L, **Thonusin C**, Chattipakorn N, Chattipakorn SC. Impacts of gut microbiota on gestational diabetes mellitus: a comprehensive review. *Eur J Nutr*. 2021 Aug;60(5):2343-2360.
37. Imerb N, **Thonusin C**, Chattipakorn N, Chattipakorn SC. Aging, obese-insulin resistance, and bone remodeling. *Mech Ageing Dev*. 2020 Aug 25;191:111335.

38. Pantiya P, **Thonusin C**, Chattipakorn N, Chattipakorn SC. Mitochondrial abnormalities in neurodegenerative models and possible interventions: Focus on Alzheimer's disease, Parkinson's disease, Huntington's disease. *Mitochondrion*. 2020 Aug 20;55:14-47.
39. Amput P, Palee S, Arunsak B, Pratchayasakul W, **Thonusin C**, Kerdphoo S, Jaiwongkam T, Chattipakorn SC, Chattipakorn N. PCSK9 inhibitor and atorvastatin reduce cardiac impairment in ovariectomized prediabetic rats via improved mitochondrial function and Ca²⁺ regulation. *J Cell Mol Med*. 2020 Jul 6;24(16):9189–203.
40. Arunsak B, Pratchayasakul W, Amput P, Chattipakorn K, Tosukhowong T, Kerdphoo S, Jaiwongkam T, **Thonusin C**, Palee S, Chattipakorn N, Chattipakorn SC. Proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitor exerts greater efficacy than atorvastatin on improvement of brain function and cognition in obese rats. *Arch Biochem Biophys*. 2020 Aug 15;689:108470.
41. **Thonusin C**, Pantiya P, Jaiwongkam T, Kerdphoo S, Arunsak B, Amput P, Palee S, Pratchayasakul W, Chattipakorn N, Chattipakorn SC. A proprotein convertase subtilisin/kexin type 9 inhibitor provides comparable efficacy with lower detriment than statins on mitochondria of oxidative muscle of obese estrogen-deprived rats. *Menopause*. 2020 Oct;27(10):1155-1166.
42. **Thonusin C**, Shinlapawittayatorn K, Chattipakorn SC, Chattipakorn N. The impact of genetic polymorphisms on weight regain after successful weight loss. *Br J Nutr*. 2020 Oct 28;124(8):809-823.
43. **Thonusin C**, Apaijai N, Jaiwongkam T, Kerdphoo S, Arunsak B, Amput P, Palee S, Pratchayasakul W, Chattipakorn N, Chattipakorn SC. The comparative effects of high dose atorvastatin and proprotein convertase subtilisin/kexin type 9 inhibitor on the mitochondria of oxidative muscle fibers in obese-insulin resistant female rats. *Toxicol Appl Pharmacol*. 2019 Aug 29;382:114741.
44. **Thonusin C**, IglayReger HB, Soni T, Rothberg AE, Burant CF, Evans CR. Evaluation of Intensity Drift Correction Strategies Using MetaboDrift, a Normalization Tool for Multi-Batch Metabolomics Data. *J Chromatogr A*. 2017 Nov 10;1523:265-274.
45. Overmyer KA, **Thonusin C**, Qi NR, Burant CF, Evans CR. Impact of Anesthesia and Euthanasia on Metabolomics of Mammalian Tissues: Studies in a C57BL/6J Mouse Model. *PLoS One*. 2015 Feb 6;10(2):e0117232.
46. **Thonusin C**, Buranapin S. The Prevalence of Weight Maintenance and Factors that Prevent Weight Regain After Successful Weight Loss. *Thai Journal of Parenteral and Enteral Nutrition*, Vol. 22 No. 3.

PEER REVIEWED ABSTRACTS

1. **Thonusin C**, Osataphan N, Leemasawat K, Nawara W, Sriwichaiin S, Supakham S, Gunaparn S, Apaijai N, Somwangprasert A, Phrommintikul A, Chattipakorn SC, Chattipakorn N. “Changes in blood metabolomes as potential biomarkers for severity and prognosis in doxorubicin-induced heart failure: a study in HER2-positive and HER2-negative breast cancer patients” at European Society of Cardiology 2024, London, UK
2. Piriyaikhuntorn P, Tantiworawit A, Niprapan P, **Thonusin C**, Kaewchur T, Chattipakorn N, Chattipakorn SC. “Alterations of Plasma Metabolomics Profile in Thalassemia Patients with Low Bone Mineral Density” at 65th American Society of Hematology annual meeting and exposition. Washington, D.C.
3. Suwannasom S, Leemasawat K, Apaijai N, **Thonusin C**, Phrommintikul A, Chattipakorn SC, Chattipakorn N. “Effect of Pre-reperfusion Sodium-Glucose Cotransporter 2 Inhibitor on Myocardial Infarct Size and Mitochondrial Function in Patients with Acute Myocardial Infarction: A Randomized Control Trial” at 73rd Annual Scientific Sessions of the American College of Cardiology, Atlanta, Georgia
4. Bhumrapee S, **Thonusin C**, Aeimplapa R, Charoenphandhu N, Chattipakorn N, Chattipakorn SC. “Comparative Effects of Metformin and Melatonin on Alveolar Bone Remodeling in Doxorubicin-Treated Rats” at The American Society for Bone and Mineral Research (ASBMR) meeting 2023, Vancouver, BC, Canada
5. **Thonusin C**, Nawara W, Arinno A, Khuanjing T, Prathumsap N, Ongnok B, Chattipakorn SC, Chattipakorn N. “Melatonin Attenuates an Impairment of Metabolic Reprogramming in Doxorubicin-Induced Cardiotoxicity: Insights from Metabolomics Study in Rats” at European Society of Cardiology 2023, Amsterdam, Netherlands
6. Pantiya P, **Thonusin C**, Ongnok B, Chunchai T, Kongkaew A, Nawara W, Arunsak B, Chattipakorn N, Chattipakorn SC. “Long-term D-galactose Administration Mimics Natural Aging in Rat’s Hippocampus” at The Alzheimer’s Association International Conference 2023, Amsterdam, Netherlands
7. Chanchalotorn S, Pantiya P, **Thonusin C**, Chunchai T, Ongnok B, Chattipakorn N, Chattipakorn SC. “Lifestyle Intervention Protects Against High-fat Diet-induced Neurodegeneration via CD147-related Mechanism” at The Alzheimer’s Association International Conference 2023, Amsterdam, Netherlands
8. Boonchooduang N, Louthrenoo O, Likhitweerawong N, **Thonusin C**, Chattipakorn N, Chattipakorn SC. “Fecal Short-Chain Fatty Acids as Potential Biomarkers for Attention-Deficit/Hyperactivity Disorder” at European Psychiatric Association Congress 2023, Paris, France

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