Curriculum Vitae

First-Family name: Jirakrit (Donrawee) Leelarungrayub

Academic position: Associate Professor

Working places

1. Department of Physical Therapy, Faculty of Associated Medical Sciences Chiang Mai University, Chiang Mai, 50200 Thailand. Tel: (+66)053949245. Fax: (+66) 53936042.

2. Sport Sciences, Graduate School, Chiang Mai University, Chiang Mai, 50200 Thailand



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Education

BSc. (Physical Therapy)	1993	Khon Kaen University, Thailand
MSc. (Biochemistry)	1999	Chiang Mai University, Thailand
Ph.D. (Biochemistry)	2006	Chiang Mai University, Thailand
B.A. (Foreign Languages for Business)	2023	The Far Eastern University, Thailand
MSc. (Data Sciences & Innovative Digital)	In Progress	The Far Eastern University, Thailand

Research scopes

- Clinical Chest Physical Therapy / Pulmonary and Cardiac Rehabilitation
- Applied Physiology and Biochemistry of Exercise
- Sports Sciences, Nutrition and Food Supplement
- Antioxidant and Oxidative Stress
- Thai Massage, Sport Massage, and Tok Sen Therapy
- Business and Management

Positions

- Chairman of Cardiopulmonary Division, Department of Physical Therapy, Faculty of Associated Medial Sciences, Chiang Mai University, Thailand (Since 2023)
- The committee of Sport Sciences Division, Graduate School, Chiang Mai University, Thailand (2016-present)
- Chairman of Cardiopulmonary Division, Department of Physical Therapy, Faculty of Associated Medial Sciences, Chiang Mai University, Thailand (2019-2017)
- Committee Chairman; Master of Physical Therapy Program, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University. Thailand (2016-2019)

Training & Education Courses-Related to Physical Therapy, Academic and Researches

- Certificate of "Introduction MSK & workshop Musculoskeletal Ultrasound Imaging shoulder& Elbow (USI-1) and Knee & Ankle (USI-2)" 23-24 April and 21-22 May 2022. Institute of Physical Therapy, College of Medicine, NTU. Thailand
- Certificate of appreciation "Essential Musculoskeletal Ultrasound Imaging for Physiotherapist" from Institute of Physical Therapy, College of Medicine, NTU. Thailand. January, 2021.
- Certificate of "Essential Musculoskeletal Ultrasound Imaging for Physiotherapist" Institute of Physical Therapy, College of Medicine, NTU.
- Certificate of "Tok Sen for Therapy" from Intellectual Development Institute (IDI) Thai Massage School. Chiang Mai, Thailand. 1 June 2021.

- Certificate of "Thai Traditional Medicine Assistant Program 330 hr." 12 May 2021. Intellectual Development Institute (IDI) Thai Massage School. Chiang Mai, Thailand.
- Certificate of "Sports Massage Practitioner Course" from Centre of Excellence. April 2021.
- Certificate of "Human Research Ethics 2020-2022". National Research Council of Thailand (NRCT). Thailand
- Certificate of "Human Research Ethics". 4-5 July 2019. Research administration Center, Chiang Mai University and Faculty of Nursing, Chiang Mai University. Thailand.
- Lecturers Responsible for the Program and Lecturers Participate Training: Administration and Management on Curriculum- Roles and Academic Quality Assurance (QA). 20 March 2019. By Office of Educational Quality Development. Chiang Mai University at Chiang Mai-Granville Hotel, Chiang Mai, Thailand.
- Application of Chan Massage in Physical Therapy. Holiday Garden Hotel, Chiang Mai, Thailand. 3-6 July 2017.
- Human Research Ethics. By Research Administration Center, Chiang Mai University and Forum for Ethical Review Committees in Thailand (FERCIT). 8-9 June 2017. Faculty of Nursing, Chiang Mai University. Thailand.
- Book and Textbook Writing for Academic Submission. Thongwoa Room, Chiang Mai University, Chiang Mai, Thailand. 28 June, 2017.
- Certificate of "Book and Textbook Writing" By Training Education Had Yai Center. Chiang Mai, Thailand. 20-21 June 2016.
- Book and Academic Writing at Grandville Chiang Mai Hotel, Chiang Mai, Thailand. 9-10 November, 2015
- Certificate of "R Statistical Analysis Program for Health Science". Faculty of Veterinary Science. Chiang Mai University, 25-27 July 2015.
- Certificate of "Human Research Ethics and Standard Operating Procedures; SOPs". By Faculty of Associated Medical Sciences. Chiang Mai University. 29 May 2013)
- Certificate of "Clinical Spirometer Evaluation". By Thoracic Society Royal of Thailand. Bangkok. (21-25 January 2011).

Education Learning Courses - Related to Business, Management, and Sports

- **Professional Certificate of Sport Business Management** (AlaskaX in collaboration with edX, Inc, an online learning initiative of University of Alaska Fairbanks, USA) (2023) under required courses of:
 - o Certificate of Sport Business Foundations
 - Certificate of Sales in Sport Business
 - o Certificate of Sales in Sport Analytics
- **Diploma of Healthcare Management** (Athena Global Education. UniAthna., Inc) (2023)
- Certificate of Sports Marketing (Northwestern University. USA, Coursera) (2023)
- Certificate of Sports Management (Udemy., Inc) (2023)
- Certificate of Creative Thinking: Techniques and Tools for Success. (Imperial College London) (2023)
- Certificate of Future Skill (Holistic skills Development-Future Human) (Udemy., Inc) (2023)
- **Diploma of Project Management** (International Business Management Institute, Berlin, Germany) (2023) under required courses:
 - o Certificate of Basics of Project Management.
 - o Certificate of Leadership & Team Development
 - o Certificate of Change Management
 - o Certificate of Risk Management

- **Diploma of Innovation Management** (International Business Management Institute, Berlin, Germany) (2023) under required courses of:
 - o Certificate of Basics of Innovation Management
 - o Certificate of Change Management
 - o Certificate of Design Thinking
 - o Certificate of Digital Transformation
- Certificate of Business Management (Mini-MBA) (International Business Management Institute, Berlin, Germany) (2023) under required courses of:
 - o Certificate of International Business & Economics
 - o Certificate of Essential Management Skills
 - o Certificate of Human Resource Management
 - o Certificate of Strategy & Operations
 - o Certificate of Finance & Accounting
 - o Certificate of Marketing & Communications
- Certificate of Principles of Marketing (Udemy., Inc) (2022)
- Certificate of English for Business and Entrepreneurship (University of Pennsylvania) (Coursera) (2022).
- Certificate of English for Career Development (University of Pennsylvania) (Coursera) (2022).
- Certificate of 120-Hour TESOL/TEFL Course (The World TERSOL Academy) (2021).
- Certificate of How to Write a Successful Research Paper (Udemy., Inc). (2021)
- **Diploma of Proofreading and Editing** (Centre of Excellence) (2021).

International Editorial Board and Reviewer

- Associate Editor of American Journal of Biomedical Science & Research. Biomed Research and Technology LLC, California, USA. (Since 2019-present). Web sit available: https://biomedgrid.com/index.php.
- Honorable Board Member of Medical Sciences (Basel). Acta Scientific Medical Sciences. Switzerland. (Since 2019-present). Web site available: https://www.ncbi.nlm.nih.gov/pmc/ journals /3304/
- Editorial Board of Global Journal of Pharmacy and Pharmacology. EVOTEC Publisher. (since 2018-present). Website available: https://www. Evotecpublisher.com/globaljournal-of-pharmacy-and-pharmacology/
- Editorial Board of International Journal of Clinical and Experimental Medical Sciences, Sciences Publishing Group, ISSN Online: 2469-8032. (25 Oct, 2018-30 December 2020)
- Editorial Board of Reactive Oxygen Species (ROS). [React Oxyg Species (Apex)] (2016-2020) United States, Apex, N.C.: Cell Med Press, a Division of AIMSCI Scientific Publishing.
- Editorial Board of Journal of Pulmonology Study and Treatment. Ocimum Scientific Publisher. Australia. (since 2017-present)
- Editorial Board of the Global Journal of Physical Medicine and Rehabilitation. GSL publishers. USA (since 2018-present)

Research Grants

- Integrative smoking cessation with counseling, relaxation-deep breathing and chest mobilization exercise and *Vernonia cinerea* hard candy. Granted by the Faculty of Associated Medical Sciences, Chiang Mai University, Thailand. 2019-2020.
- Predicted formulas for Inspiratory and Expiratory Muscle Strengths from Spirometry Parameters and Physical Characteristics in Thai Healthy Persons Between 19-50 Years Old. Granted by the Research Center in Back, Neck, Other Joint Pain and Human Performance (BNOJPH), Khon Kaen University. Thailand. 2019-2020.

- Study on Effects of Exercise with Thai fruit on Oxidative Stress and Anti-oxidant in Biomolecules and Physiology in Elderly People. (Contract number- PHD/0117/2561). Granted by the Royal Golden Jubilee PhD (RJPHD). Thailand Research Fund (TRF). Thailand. 2019-2021.
- Study of Efficiency of Condensed Start Fruit mixed Honey Product on Oxidative Stress, Inflammation, and Physical Performance among Healthy Elderly People. (Contract-number-001/2561). Granted by Asia Research Center, Chulalongkorn University, Thailand (2018-2019)
- Study of Active compound, Anti-oxidant and Anti-inflammatory Activities of Star Fruit in vitro and Efficiency of Fruit Product on Health Performance in among of Elderly with Chronic Obstructive Pulmonary Disease. (Contract number-RRIMSD61_I0011). Granted by the Thailand Research Fund (TRF). Research and Researcher for Industry (RRi). Thailand. 2017-2019.
- Development and Efficiency Study of Plai oil-liposome in Hydro-Gel Product for Galvanic Device on Pain Release in Physical Therapy as a Pilot Commercial product. (Contract numberCRP600502150). Granted by the Agricultural Research Development Agency (Public organization) (ARDA). Thailand. 2017-2018.
- Effects of Lung Volume Training between Slow-Deep and Fast-Deep Techniques on Respiratory Muscle Strength, Pulmonary Function, Physical Performance, Oxidative Stress, and Inflammatory Cytokines in Volunteers with Chronic Obstructive Pulmonary Disease with Mild to Moderate Severity. Granted by the Research Center in Back, Neck, Other Joint Pain and Human Performance (BNOJPH), Khon Kaen University. Thailand. 2017-2018.
- Efficiency of artificial respiratory muscle training device on oxidative stress, lung function and physical performance in patients with moderate severity of chronic obstructive pulmonary disease. Granted by the Research Center in Back, Neck, Other Joint Pain and Human Performance (BNOJPH), Khon Kaen University. Thailand. 2016-2017.
- Study the Active Compounds and Development the *Vernonia cinerea* Product for Smoking Cessation Aid. Contract number-BT-RD-2554-03. Granted by the National Science and Technology Development Agency (NSTDA), Northern network, Thailand. 2014-2016. Study of Antioxidant activity and Active compounds in *Vernonia cinerea* Less. Contract number-52-01-03. Granted by the National Science and Technology Development Agency (NSTDA), Northern network, Thailand. 2012-2014.
- Study of Effects and Efficiency of Exercise combined Natural product from *Vernonia cinerea* Less. on Smoking Cessation in Chiang Mai Provinces. Contract number-51-01-06. Granted by the Tobacco Control Research and Knowledge Management Center (TRC), Thailand.2011-2012.
- Anti-oxidant, Anti-inflammatory and Immune modulatory activities of Star Fruit and Lamud. (RDG5220040). Granted by the Thailand Research Fund (TRF). Thailand. 2010-2012.
- Study of Anti-oxidant and Anti-inflammatory Activities of Neosome-Plai and Application on Physical Therapy. (MRG5080140). Granted by the Thailand Research Fund (TRF). Thailand. 2009-2011.
- Modified of Biosensor for Hydrogen Peroxide Detection from Oxidative Stress for Application in Medicine. (QF-RI-101-04). Granted by Biomedical Engineering Center, Chiang Mai University. (2007-2009).

International publications

Yankai A, **Leelarungrayub J**, Laskin JJ. Preliminary study: beneficial effects of short period of Thai Tok Sen massage on pain, pressure pain threshold, and upper trapezius muscle thickness among people with shoulder pain. International Journal of Therapeutic Massage and Bodywork: Research, Education, and Practice. 2023; 16(1): 1-9. (Corresponding author)

Sonma T, Leelarungrayub J, Klaphajone J. Preliminary Study: Immediate Effect of Moderate-Intensity Interval Exercise on Nitric Oxide and Other Oxidative Stress Markers from Stationary Bicycling in Healthy Sedentary Men. Journal of Physical Education and Sport.2022; 2334-2339. (Corresponding author)

- Kanthain R, Leelarungrayub J, Likhitsathian S, Natakankitkul S. Efficacy of combined relaxed deep-breathing with chest mobilization exercise and *Vernonia cinerea* hard candy on smoking cessation and oxidative stress in active teenage smokers. Pharmacognosy Journal, 2022; 14(6): 720-727. (Corresponding author)
- **Leelarungrayub J**, Traisrisilp S, Traisrisilp A. Effect of Thai Tok Sen therapy on upper trapezius muscle thickness form ultrasonographic evidence. Open Journal of Clinical & Medical Images. 2022; 2(2): 1-4. (Corresponding author)
- Jynwara Kaju, **Jirakrit Leelarungrayub**, Surapol Natakankitkul, Supawatchara Singhatong, Chanchai Dechthummarong, James J Laskin. Comparative active compounds and antioxidant activity between the sweet- and sour-type star fruit (*Averrhoa carambola* L.) In Vitro. Journal of Associated Medical Sciences. 2022; 55(3): 36-43. (Corresponding author)
- Yankai A, Leelaraungrayub J, Kantain R, Laskin JJ. Preliminary Study: Immediate Effect of the Slow Deep Breathing Exercise and Sustained Maximal Inspiration with Volume-Oriented Incentive Spirometry on the Diffusing Lung Capacity in Healthy Young Participants. Trends in Sciences. 2021; 18(21): 346. https://doi.org/10.48048/tis.2021.346. (Corresponding author)
- **Leelarungrayub J**, Yankai A. Potential Clinical Effects of Integrated Therapeutic Thai Massage with Tok Sen and Physical Therapy in Case of Office Syndrome: Clinical Experience. International Journal of Clinical Studies & Medical Case Reports. 2021. DOI:10.46998/IJCMCR.2021.14.000332. (Corresponding author)
- Sriboonreung T, Leelarungrayub J, Yankai A, Puntumetakul R. Correlation and Predicted Equations of MIP/MEP from the Pulmonary Function, Demographics and Anthropometrics in Healthy Thai Participants aged 19-50 Years. Clinical Medicine Insights: Circulatory Respiratory and Pulmonary Medicine. 2021; 15: 11795484211004494.doi: 10.1177/11795484211004494. (Corresponding author)
- Pothasak Y, Leelarungrayub J, Natakankitkul S, Singhatong S. Prototype Star Fruit-Honey Product and Effectiveness on Antioxidants, Inflammation and Walking Distance in Participants with Stable Chronic Obstructive Pulmonary Disease (COPD). Pharmacognosy Journal 2020; 12(5): 1121-1134. (Corresponding author)
- Ooneklabh K, Leelarungrayub J, Chamnongkich S, Pothongsunun P. Preliminary study on work-related musculoskeletal disorder and ergonomic implementation program among wood carvers in Chaing Mai Province, Thailand. Global Journal of Physiotherapy and Rehabilitation. 2020. doi: 10.36811/gjpr.2020. 110005. (Corresponding author)
- Kantain R, Singhatong S, Natakankitkul S, Dechsupa N, Leelarungrayub J. Potential of hard candy containing spray-dried *Vernonia cinerea* extract with total phenolic compounds, total flavonoids and nicotine replacement as an anti-smoking aid. Pharmacognosy Journal. 2020; 12(1): 35-43. (Corresponding author)
- **Leelaurngrayub J,** Pothasak Y, Kuntain R, Kaju J, Izhar AM. Potential health benefits of Thai seasonal fruits; Sapodilla and Star fruit for elderly people. American Journal of Biomedical Science & Research. 2019;5(1): 49-53. (Corresponding author)
- **Leelarungrayub J,** Puntumetakul R, Sriboonreung T, Pothasak Y, Klaphajone J. Relationship of respiratory muscle strength and walking distance with pulmonary function, quality of life and nitric oxide in chronic obstructive pulmonary disease patients. Clinical of Clinical and Diagnostic Research. 2019; 13: YC05-YC09. (Corresponding author)
- **Leelarungrayub J.** Kanthanin R, Kaju S. Case report: Clinical benefits of combination of scapumothoracic-thoracic extension mobilization and reversed lower costal breathing treatments in conventional chest physical therapy in a COPD patient. Chest. 2019; 155: 287A. (Corresponding author)
- **Leelarungrayub J**, Sriboonreung T, Pothasak Y, Kaju J, Puntumetakul R. Anti-oxideant and Anti-inflammatory Activities of *Manilkara zapota* (Sapodilla) In vitro and Efficiency in Healthy Elderly Persons. Journal of Scientific and Technical Research. 2019; 15: BJSTR.MS.ID.002684. (Corresponding author)

- **Leelarungrayub J,** Puntumetakul R, Sriboonreung T, Pothasak Y, Klaphajone J. Correlation between the Respiratory Muscle Strength and Six-Minute Walking Distance and Oxidative Stress/Inflammatory Cytokines in Patients with Stable Chronic Obstructive Pulmonary Disease (COPD): A Preliminary Study. Reactive Oxygen Species (Apex). 2019; 7(20): 86-92. (Corresponding author)
- Leelarungrayub J, Puntumetakul R, Sriboonreung T, Pothasak Y, Klaphajone J. Preliminary study: Comparative Effects of Lung Volume Therapy between Slow and Fast Deep-Breathing Techniques on Pulmonary Function, Respiratory Muscle Strength, Oxidative Stress, Cytokines, 6-minute Walking Distance, and Quality of Life in Persons with Chronic Obstructive Pulmonary Disease (COPD). International Journal of Chronic Obstructive Pulmonary Disease. 2018; 13: 3909-3921. (Corresponding author)
- Pinkaew D, Leelarungrayub J, Wonglangka K, Klaphalone J. Effect of artificial respiratory muscle training in patients with chronic obstructive pulmonary disease. Walailak Journal 2018; 15(9): 669-678.
- **Leelarungrayub J,** Pinkaew D, Yankai A, Chuatrakoon B, Kanthanin R. Simple artificial training device for respiratory muscle strength and lung volumes in healthy young male and female subjects: a pilot study. Journal of Bodywork and Movement Therapies. 2017; 21: 995-1002. (Corresponding author)
- **Leelarungrayub** J, Parameyong A, Wungpinichpong W, Klaphajone J. Benefits of Banana (*Musa sapientum* Linn) Consumption for Physical Strength, Metabolic Response, Oxidative Stress, Lipid Profiles, and Interleukin-23 in Healthy Men: A Preliminary Study. The Open Sports Sciences Journal. 2017; 10: 151-159. (Corresponding author)
- **Leelarungrayub J**, Pinkaew D, Puntumetakul R, Klaphajone J. Effects of a Simple Prototype Respiratory Muscle Trainer on Respiratory Muscle Strength, Quality of Life and Dyspnea, and Oxidative Stress in Chronic Obstructive Pulmonary Disease (COPD) Patients: A Preliminary Study. International Journal of Chronic Obstructive Pulmonary Disease. 2017; 12: 1415-1425. (Corresponding author)
- **Leelarungrayub J**, Borisuthibandit T, Pinkaew D, Yankai A. Correlation between Lung Injury Score/Oxygenation Index and Oxidative Stress Markers in Tracheal Aspirate Samples in Intubated Infant Patients during Chest Physical Therapy. Archives of Pediatric Infectious Diseases. 2017; 5(3): e57277. doi:10.5812/pedinfect.57277. (Corresponding author)
- **Leelarungrayub J**, Manorsoi J, Manorsoi A. Anti-Inflammatory activity of Niosomes Entrapped with Plai Oil (*Zingiber cassumunar* Roxb.) by Therapeutic Ultrasound in a Rat Model. International Journal of Nanomedicine. 2017; 12; 2469-2476. (Corresponding author)
- Ketsuwan N, Leelarungrayub J, Kothan S, Singhatong S. Antioxidant Compounds and Activities of the Stem, Flower and Leaf Extracts of the Anti-Smoking Thai Medicinal Plant: *Vernonia cinerea* Less. Drug Design, Development and Therapy. 2017: 11; 383-391. (Corresponding author)
- **Leelarungrayub J**, Pinkaew D, Klaphajone J, Eungpinichpong W, Bloomer RJ. Effects of L-carnitine Supplementation on Metabolic Utilization of Oxygen and Lipid Profiles among Trained and Untrained Humans. Asian Journal of Sports Medicine. 2016; e38707. doi: 10.5812/ asjsm. 38707. (Corresponding author)
- **Leelaurngrayub J**, Pinkaew D, Wonglangka K, Eungpinichpong W, Klaphajone J. Short Term Pulmonary Rehabilitation for a Female Patient with Chronic Scleroderma Under a Single Case Research Design. Clinical Medicine Insights: Circulatory, Respiratory and Pulmonary Medicine. 2016: 10:11-17. (Corresponding author)
- **Leelarungrayub J**, Borisuthibandit T, Yankai A, Boontha K. Changes in Oxidative Stress from Tracheal Aspirates Samples during Chest Physical Therapy in Hospitalized Intubated Infant Patients with Pneumonia and Secretion Retention. Therapeutics and Clinical Risk Management. 2016:12: 1377-1386. (Corresponding author)
- **Leelarungrayub J,** Yankai A, Pinkaew D, Puntumetakul R, Laskin JJ, Bloomer RJ. A Preliminary study of effects of star fruit consumption on antioxidant and lipid status in Thai elderly individuals. Clinical interventions in Aging. 2016; 11: 1183-1192. (Corresponding author)

- Sopalard M, Leelarungrayub J, Klaphajone J. Variation of Knee Angle and Leg Length in Predicted VO_{2max} in Healthy Male Volunteers under the Queen's College Step Test. Journal of Physical Education and Sport. 2016: 16(2): 275-280. (Corresponding author)
- **Leelarungrayub J**, Laskin JJ, Bloomer RJ. Pinkaew D. Consumption of Star Fruit Juice on Proinflammatory Markers and Walking Distance in the Community Dwelling Elderly. Achieves of Gerontology and Geriatrics. 2016: 64:6-12. (Corresponding author)
- **Leelarungrayub J**, Eungpinichpong W, Klaphajone J, Prasannarong M, Boontha K. Effects of Manual Percussion during Postural Drainage on Lung Volumes and Metabolic Status in Healthy Subjects. Journal of Bodywork and Movement Therapies. 2016; 20: 356-363. (Corresponding author)
- Wongmekiat O, **Leelarungrayub D**, Thamprasert K. Alpha-lipoic acid attenuates renal injury in rats with obstructive nephropathy. Biomedical Research International. 2013; 2013: 138719. doi: 10.1155/2013/138719. Epub 2013 Oct 3.
- Chulasiri M, Wanaswas P, Sriaum D, Nakamat S, Wongkrajang Y, Kongsaktrakoon B, Phornchirasilp S, Songchitsomboon S, **Leelarungrayub D**. Utilizing hydroglycolic extract from myrobalan fruits to counteract reactive oxygen species. International Journal of Cosmetic Science. 2011; 33(4): 371-376.
- **Leelarungrayub D**, Sallepan M, Charoenwattana S. Effects of Acute Caffeinated Coffee Consumption on Energy Utilization Related to Glucose and Lipid Oxidation from Short Submaximal Treadmill Exercise in Sedentary Men. Nutrition and Metabolic Insights 2011; 4: 65-72. (Corresponding author)
- **Leelarungrayub D**, Khansuwan R, Pothongsunun P, Klaphajone J. N-Acetylcysteine Supplementation Controls Total Antioxidant Capacity, Creatine Kinase, Lactate, and Tumor Necrotic Factor–Alpha against Oxidative Stress Induced by Graded Exercise in Sedentary Men. Oxidative Medicine and Cellular Longevity 2011, doi: 10.1155/2011/329643. (Corresponding author)
- **Leelarungrayub D**, Ketsuwan N, Pothongsunun P, Klaphajone J, Bloomer RJ. Effects of N-acetylcysteine on oxidative stress, interleukin-2, and running time in sedentary men. Gazzeta Medica Italiana 2011; 170: 239-250. (Corresponding author)
- **Leelarungrayub D**, Saidee K, Pothongsunun P, Pratanaphon S, Yankai A, Bloomer RJ. Six weeks of aerobic dance exercise improves blood oxidative stress status and increase interleukin-2 in previously sedentary women. Journal of Bodywork and Movement Therapies 2011; 15: 355-362. (Corresponding author)
- **Leelarungrayub D**, Pratanaphon S, Pothongsunun P, Sriboonreung T, Yankai A, Bloomer RJ. *Vernonia cinerea* Less. Supplementation and strenuous exercise reduce smoking rate: relation to oxidative stress status and beta-endorphin release in active smokers. Journal of the International Society of Sports Nutrition 2010; 7:21, doi: 10.1186/1550-2783-7-21. (Corresponding author)
- **Leelarungrayub D**, Pothongsunan P, Yankai A, Pratanaphon S. Acute clinical benefits of chest wall-stretching exercise on expired tidal volume, dyspnea and chest expansion in a patient with chronic obstructive pulmonary disease: A single case study. Journal of Bodywork and Movement Therapies 2009; 13: 338-343. (Corresponding author)
- Singhatong S, Leelarungrayub D, Chaiyasut C. Antioxidant and toxicity activities of *Artocarpus lakoocha* Roxb. heartwood extract. Journal of Medicinal Plants Research 2010; 4(10):974-953. (Corresponding author)
- **Leelarungrayub D**, Suttijit M. Potential antioxidant and anti-inflammatory activities of Thai Plai, Eucalyptus, and lime essentials oils. International Journal of Essential Oil Therapeutics 2009; 3: 25-30. (Corresponding author)
- Chitapanarux T, Tienboon P, Pojchamarnwiputh S, **Leelarungrayub D**. Open-labeled pilot study of cysteine-rich whey protein isolate supplementation for nonalcoholic steatohepatitis patients. Journal of Gastroenterology and Hepatology 2009; 24: 1045-1050.
- Tienboon P, Chitapanarux T, Pojchamarnwiputh S, Leelarungrayub D. Effects of undenatured cysteinerich whey protein isolate supplementation for nonalcholic fatty liver disease patients. Annals of Nutrition & Metabolism 2009; 55(suppl. 1): 587-587 (Abstract).

- Tienboon P, Chitapanarux T, Pojchamarnwiputh S, **Leelarungrayub D**. Supplementation with undenatured cysteine rich whey protein isolated reduce oxidative stress in patients with nonalcholic fatty liver disease (NAFLD). Annals of Nutrition & Metabolism 2009; 55 (suppl. 1): 588-588 (Abstract).
- Wongmekiat O, Leelarungrayub N, Thamprasert K. Beneficial effect of shallot (*Allium ascalonicum* L) extract on cyclosporine nephrotoxicity in rats. Food Chemical Toxicology; 2008: 46: 1844-1850.
- **Leelarungrayub N**, Sutabhala T, Pothongsunun P, Chanarat N. Exhaustive Exercise Test and Oxidative Stress Response in Athletic and Sedentary subjects. Chiang Mai University Journal. 2005; 4 (2): 183-190. (Corresponding author)
- **Leelarungrayub N**, Rattanapanone V, Gebicki JM. Anti-oxidative stress and anti-inflammatory effects of Thai shallot (*Allium Ascanolicum* L.) extracts in human monocytic (U937) cells. The Niigata Journal of Health and Welfare. 2004; 4 (1): 11-19. (Corresponding author)

National publications

- Onneklabh K, Leelarungrayub J, Chamnongkich S. Case Report: Modified and innovative workstationstools for wood carving in Chiang Mai province, Thailand. Journal of Associated Medical Sciences. 2020; 53(3): 72-77. (Corresponding author)
- Songdechagraiqud E, Trevittaya P, **Leelarungrayub J**, Sonsuwan N. Preliminary study on the combined effects of simple expiratory muscle strength device training with conventional exercise on submental muscles force and maximal expiratory pressure related to swallowing in patients with head and neck cancer. Journal of Associated Medical Sciences. 2020; 53(2): 7-13. (Corresponding author)
- Pothasak Y, Singhatong S, Natakankitkul S, Dechasupa N, Wanachantararak P, Dechthummarong C, **Leelarungrayub J**. Active compounds, Free Radicals Scavenging and Tumor-Necrosis factor (TNF
 ∞) Inhibition Activities of Start Fruit-Sweet Type (*Averrhoa carambola* L.) *In Vitro*. Journal of Associated Medical Sciences. 2020; 53(1): 19-28. (Corresponding author)
- Ketsuwan N, Leelarungrayub J, Kothan S, Banchonglikitkul C. Effects of Thai Medicinal Plant; *Vernonia cinerea* Less. Extracts on Catecholamine, Oxidative Stress and Chromosome Aberration in Nicotine-Treated Rats. Journal of Associated Medical Sciences. 2017: 50 (3) 262-724. (Corresponding author)
- Intanont S, Leelarungrayub J, Yankai A, Klaphajone J. Resistance training between low and high intensities on oxidative stress, creatine kinase and muscle pain in sedentary males: a preliminary study. Journal of Medical Technology and Physical Therapy. 2016; 28(1): 22-34. (Corresponding author)
- Chitapanarux T, Tienboon P, Pojchamarnwiputh S, **Leelarungrayub D**. Effect of oral supplement of Whey protein isolate on non-alcoholic steatohepatitis patients. Thai Journal of Clinical Nutrition 2009; 3: 42- 47. (Corresponding author)
- Khunnala A, Narongchai S, Butkrachang S, Leelarungrayub D, Naraongchai P. Anti-oxidative stress activities of silibinin on alpha-amanitin in vitro. Thai Journal of Toxicology 2009; 24: 106-112. (Corresponding author)
- Vithayasintana B, Chitapanarux T, Thongsawat S, Praisontarangkul O, Pisespongsa P, Leerapun A, **Leelarungrayub N**. Role of Rebamipide in stress ulcer bleeding prophylasix for high-risk patients in neurosurgical intensive care unit: A randomized, prospective, unblind pilot study. Thai Journal of Gastroenterol 2009; 10:16-23. (Corresponding author)
- **Leelarungrayub** N, Tansenee J, Pothongsunun P, Chanarat N. Oxidative Stress Response to Exhaustive Exercise in Urine and Blood of Healthy Subjects: Preliminary study. Bulletin of Chiang Mai Associated Medical Sciences 2006; 39: 2-9. (Corresponding author)

International and National Books

- **Jirakrit Leelarungrayub.** Oxidative Stress and Applied Research for Physical Therapy. 2021. Chiang Mai University Publisher, Chiang Mai, Thailand. ISBN 78-616-398-648-1.
- **Leelarungrayub J,** Pothasak Y, Kaju J, Kanthain R. Chapter7: Application of a Single-Case Research Design to Present the Effectiveness of Rehabilitation in the Clinic. In: Physical Therapy Effectiveness.

- Mario Bernardo-Filho (editor). 2020. pp.151-172. Croatia. INTECH. ISBN 978-1-83880-076-5. http://dx.doi:org/ 10.5772/ Intech-open.90665. (International publication)
- **Leelarungrayub D**. Chest Mobilization Techniques for Improving Ventilation and Gas Exchange in Chronic Lung Disease. In: CHRONIC OBSTRUCTIVE PULMONARY DISEASE: CURRENT CONCEPTS AND PRACTICE. Ong KC (editor). Croatia. INTECH. 2012: 399-422. ISBN: 978-953-51-0163-5 (International publication)
- **Jirakrit Leelarungrayub.** Single Case Research Design in Clinics. Thammasat University Publisher. Bangkok. 2015: (ISBN-978-616-382-344-1) (National publication)
- **Donrawee Leelarungrayub.** Clinical Chest Physiotherapy. Third edition. Thammasat University Publisher, Bangkok, 2016. (ISBN 978-974-466-743-4) (National publication)

International and National Presentation

- **Leelarungrayub J,** Yankai A, Laskin JJ. "Beneficial Effects of Short Period of Thai Tok Sen Massage on Pain, Pressure Pain Threshold, and Upper Muscle thickness among People with Office Syndrome" 6th World Congress on Physiotherapy, Physical Rehabilitation & Sports Medicine. November 28-29, 2022. Venue & Hospitality Holiday Inn Dubai al Barsha, Dubai-UAE.
- **Jirakrit Leelarungrayub**, Decha Pinkaew, Thanyaluck Sriboonreung, Yothin Pothasak, Rungthip puntumetakul, Jakkrit Klaphajone. "Potential Application of a Simple Prototype Inspiratory Muscle Device and Modified Fast- Deep Breathing Techniques via Voldyne Incentive Spirometry Enhances the Respiratory Function, Walking Capacity, and Quality of Life Among People with Chronic Obstructive Pulmonary Disease (COPD)" 2nd Edition of International Conference on COPD and Lung Disease. September 14-15,2022. https://magnusconferences.com/copd-lung-health/ speakers/2022
- **Leelarungrayub J.** "Phytochemicals and Anti-oxidants Property of Seasonal Fruits on Health for Elderly People with or without Chronic Disease" 3rd Conference on Nutrients and Dietary Phytochemicals. August 25, 2022. The Nutrition Association of Thailand under the Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn. Grand Richmond Hotel, Nonthaburi, Thailand.
- **Leelarungrayub J.** Combination of Therapeutic Thai Massage with Tok Sen in Patient with Office Syndrome: Clinical Experience. Global Summit on Traditional and Alternative Medicine (GSTAM2022). April 28-30, 2022. Tokyo, Japan.
- **Leelarungrayub J,** Kanthain R, Singhatong S, Dechsupa N, Natakankitkul. Pilot Hard Candy containing *Vernonia cinerea* extract and condensed honey for an anti-smoking aid. 3rd International Conference on Traditional Medicine, Phytochemistry and Medicinal Plants, Chiang Mai, Thailand. November 2-4, 2020. (Oral presentation)
- Leelarungrayub J, Puntumetakul R, Sriboonreung T, Sa-nguanmoo P, Chawawisuttikool J. Prediction of maximal respiratory pressure from the pulmonary function test, demographics and anthropometrics in Thai healthy participants aged 19-28 years. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University. 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Pothasak Y, SIngthong S, Dechsupa N, Natakankitkul S, Wanachantararak P, Dechthummarong C, Leelarungrayub J. Evidence of active compounds, free radical scavenging and tumor necrosis factor (TNF-∞) inhibitory activities of star fruit-sweet type (*Averrhoa carambola* L.) in vitro for a new commercial product. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University. 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Kanthain R, Singthong S, Dechsupa N, Natakankitkul S, **Leelarungrayub J**. Potential of hard candy containing spray-dried *Vernonia cinerea* extract with total phenolic and nicotine replacement as a new anti-smoking aid. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University. 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Kaju J, Singthong S, Dechsupa N, Natakankitkul S, Dechthummarong C, Leelarungrayub J. Preliminary study; comparative active compounds, radical scavenging and protective effects on glutathione and

- protein oxidation between sweet and sour types-star fruit (Averrhoa carambola L.) extracts in vitro model. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University. 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Ooneklabh K, Leelarungrayub J, Chamnongkich S, Pothongsunun P. Risk assessment and ergonomics improvement in wood cavers. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University. 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Ooneklabh K, Leelarungrayub J, Shammongkich S, Pothongsumun P. Risk assessment and ergonomics improvement in wood carvers. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University, 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Kaju J, Singthong S, Dechsupa N, Natakankitkul S, Dechthummarong C, **Leelarungrayub J**. Preliminary study: comparative active compounds, radical scavenging and protective effects of glutathione and protein oxidation between sweet and sour types-star fruit (Averrhoa carambola L.) extracts in vitro modle. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University, 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Kanthain R, Singthong S, Dechsupa N, Natakankitkul S, **Leelarungrayub J**. Potential of hard candy containing spray-dried Vernonia Cinerea etract with total phenolic and nicotine replacement as a new anti-smoking aid. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University, 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Pothasak U, Singthong S, Dechsupa N, Natakankitkul S, Wanachanrararak P, Dechthummarong C, Leelarungrayub. Evidence of active compounds, free radical scavenging and tumor-necrosis factor (TNF-∞) inhibitory activities of star fuit-sweet type (Averrhoa carambola L.) in vitro for a new commercial product. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University, 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- Leelarungrayub J, Puntumetakul R, Sriboonreung T, Sa-nguanmoo P, Chawawisuttikool J. Prediction of maximal respiratory pressure from the pulmonary function test, demographics and anthropometrics in Thai healthy participants aged 19-28 years. 2019 Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University, 6-8 November, 2019. Duan Tawan Hotel, Chiang Mai, Thailand (Poster presentation)
- **Leelarungrayub J.** The Challenge of Star Fruit Consumption for Health in Elderly People with Antioxidant Activity and Improved Lipoprotein in Profiles. International Aids and Nutritionals Conference "Ergogenic Aids and Nutritional Supplements for Health and Sports (ENHS)". January 20-23, 2016. Centrara Hotel & Conventional Centre, Khon Kaen, Thailand. 2016. p.5. (Oral presentation).
- **Leelarungrayub D**. The Thai Natural Plant: *Vernonia cinerea* for Reduction and Cessation of Smoking. The 15th World Conference on Tobacco or health (WCTH), Singapore. 20–24 March 2012. pp. 15-16. (Poster presentation)
- **Leelarungrayub N**. A comparative study N-acetylcysteine-derived drug on scavenging free radical and hydroperoxide formation in vitro. The 4th International World Asthma Meeting, Bangkok, 16 19 February 2004. (Oral presentation)
- **Leelarungrayub N**. The relationship between gross motor function measurement score and glutathione and malondialdehyde level in children with pneumonia. The 14th International World Physical Therapy, 7-12 June, 2003; Barcelona, Spain. 2003 (RR-PO- 0377) (Poster presentation)
- **Leelarungrayub N**. Effects of chest physical on biochemical changes in pediatric patient with pneumonia. The 8th General Assembly of Asian Confederation for Physical therapy, Central Grand Plaza Hotel, Bangkok, 17 20 November 2002. pp. 11-16. (Poster presentation)
- **Leelarungrayub D. Oxygen consumption** Queen's College Step Test. National Sport Sciences Conference. 4thCentara Convention Center. Khon Kaen. 13-14 September 2013. (Oral presentation)

Award and Product patents

- Good Oral Presentation: Group Health in the international Ergogenic Aids and Nutritional Supplements for Health and Sports; ENHS 2016. January, 20-22, 2016. Centara Hotel & Convention Centre, Khon Kaen, Thailand.
- Young Researcher Award for Smoking Control (2015). Tobacco Control Research Center. Mahidol University, Bangkok.
- Young Research Award by Thai Research Fund (TRF) (2014). Thai fruits-Functional fruits. By The National Sciences Foundation. 21 May 2014.
- New Innovation Product from Natural *Vernonia cinerea* Plant for Smoking Cassation in 2013 in NSTDA Investor's Day. Convention Hotel. Bangkok.
- Patent Product "Form and Component of Pill Product from *Vernonia cinerea*. Patient Number 1303000945. Since 9 October, 2013-2019. By Department of Intellectual Property (Thailand)

Academic services

- 1. Speaker in the topic "Physiology of mechanical ventilator" in the Management of Respiratory failure-2018 Conference. 3-6 Dec 2018, Duawtawan Chiang Mai Hotel, Chiang Mai, Thailand
- 2. Invited speaker in the topic: Preliminary Study of Efficiency of a Simple Respiratory Muscle Trainer on Respiratory Muscle Strength, Quality of Life and Dyspnea in Chronic Obstructive Pulmonary Disease (COPD) Patients. International Pulmonary & Respiratory Summit-2017. 18-20 May 2017, Bangkok, Thailand
- 3. Invited speaker in the topic "Rehabilitation in Pre- and Post-Thoracic Surgery" at Department of Thoracic Surgery, Faculty of Medicine, Chiang Mai University, 8, June, 2017.
- 4. Invited speaker in the topic "Mobilization of Bed-dependent Patient in Hospital for Nurses" 4 April, 2017 at Faculty of Medicine, Chiang Mai University, Thailand.
- 5. Invited speaker in the topic "COPD rehabilitation" Nurse Education Center. Faculty of Nurses. Chiang Mai University. Thailand. 2016. (10 August 2016).
- 6. Invited speaker in the topic "Physical therapy in COPD patients" Nurse Education Center. Faculty of Nurses. Chiang Mai University. 2016 (5 September 2016).
- 7. Academic Qualifier for evaluate the book "Physical Therapy in Illness Patient" from Nareasuan University Publisher. 18 May 2016.
- 8. Invited speaker in the topic "Laboratory investigation for Physical Therapy. The Twin Tower Hotel. Bangkok. By Physical Therapy Council. Bangkok. 2-23 June 2016.
- 9. Invited speaker in the topic "Drugs for Cardiovascular disease for Cardiac Rehabilitation" Duawtawan Chiang Mai Hotel. Chiang Mai. 7, 14 June 2016.
- 10. Invited speaker in the topic "Self-management for Rehabilitation after thoracotomy. Faculty of Medicine, Chiang Mai University. Chiang Mai. 11 April 2016
- 11.Invited speaker in the topic "Panel Discussion: Problem management of thoracic patients: Doctor and Nurse Aspects". Network Carling in Lung Cancer Patients. Faculty of Medicine. Chiang Mai University, Chiang Mai. 15 January 2016.
- 12. Invited speaker in the topic "Physical Therapy in Elderly" Twin Tower Hotel. 20-23 June, 2016. Bangkok, Thailand.
- 13.Invited speaker in the topic "Challenging of Star Fruit Consumption and Oxidative Stress and Lipid Profiles in Elderly Subject" at Sentara and Conventional Hotel, Khon Kaen, 21 January 2016.
- 14.Invited speaker in the topic "Living daily Life and Cancer- Nutritional Supplement for Prevent Cancer" 13 November, 2015 at Faculty of Medicine, Chiang Mai University, Thailand.
- 15.Invited speaker in the topic "Physical Therapy in COPD Patients" in the Mini Case Manage for COPD panel at Tarin Hotel, 9 July, 2015. Chiang Mai, Thailand.

Graduate Students

- 1. Mr. Konaek Chirawat. Independent Study title "Predicted equation of oxygen consumption from moderate intensity from Astrand-Ryhming Step Test among healthy volunteers aged 18-25 years old" Sport Sciences Department. Graduate School, Chiang Mai University. 2023-present
- 2. Mr. Thanakorn Pinitdetsakul. Independent Study Title "Correlation and Predicted Equation of Sprint Ability from Vertical Jump High, Leg Strength, Quadriceps muscle Thickness, and Physical Characteristics Among Pre-high School Students" Sport Sciences Department. Graduate School, Chiang Mai University. 2022-present
- 3. Mr.Thanawat Sonma. Thesis title" Acute Response Between Moderate-Intensity Interval and Continuous Exercise on Oxidative Stress and Peak Oxygen Consumption in Healthy Sedentary Men" Sport Sciences Department, Graduate School, Chiang Mai University. 2021-2023.
- 4. Miss. Siwimon Kaju. Thesis title" Study on Effects of Exercise with Thai fruit on Oxidative Stress and Anti-oxidant in Biomolecules and Physiology in Elderly People" Doctor of Philosophy Program in Biomedical Science (International Program), Faculty of Associated Medical Sciences, Chiang Mai University, Thailand. Granted by the Royal Golden Jubilee PhD (RJPHD). Thailand Research Fund (TRF). Thailand. Contract number- PHD/0117/2561). 2019-2023.
- 5. Ms. Rungtiwa Kanthain. Thesis title "Integrative Smoking Cessation with Counselling, Relaxation-Deep Breathing with Chest Mobilization Exercises, and *Vernonia cinerea* Lozenge". Master of Science (Movement and Exercise Sciences). Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand. (Granted by STEP CMU, Chiang Mai University, Chiang Mai, Thailand) (2019-2021).
- 6. Mr. Yothin Pothasak. Thesis title "Study of Active compound, Anti-oxidant and Antiinflammatory Activities of Star Fruit in vitro and Efficiency of Fruit Product on Health Performance in among of Elderly with Chronic Obstructive Pulmonary Disease: Master of Movement and Exercise Sciences, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand. Granted by the Thailand Research Fund (TRF). Research and Researcher for Industry (RRi). Thailand. (Contract numberRRIMSD61 I0011). 2017-2019.
- 7. Miss. Kanokporn Ooneklabh. Thesis title "Risk assessment and Ergonomics Improvement for the Wood Carving" Doctor of Philosophy (Biomedical Sciences). Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand. (2016-2019).
- 8. Miss. Erin Songdechagraiwud. Thesis title "The Effects of Expiratory Muscle Strength Training on Swallowing and Quality of Life in Patients with Head and Neck Cancer During Radiotherapy. Master of Science (Communication Disorders). Department of Occupational, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand (2017-2019)
- 9. Mrs. Songkran Phipatsupamongkol. Thesis title "Comparison the Oxidative Stress Status from Weight Resistance Training between Moderate and Heavy Weight in Sedentary Males". Master of Science (Sport Sciences). Graduate School. Chiang Mai University. (2014-2016).
- 10. Mr. Mana Sopalard. Thesis title "Knee Angle and Box Step Height on Maximal Oxygen Consumption Following the Queen's College Step Test in Male Volunteers Aged 18-27 years". Master of Science (Sport Sciences). Graduate School, Chiang Mai University, Chiang Mai, Thailand (2014-2016).
- 11. Mr.Nitinet Ketsuwan. Thesis title" Effects of *Vernonia cinerea* L. Extracts on nicotine, free radicals and chromosome" Doctor of Philosophy Program in Biomedical Science. Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand. (Granted by The National Science and Technology Develop Agency (NSTDA), Northern, Thailand. 2014-2016.
- 12. Miss. Sairawee Boonplong. Thesis title "Effect of Aquatic Aerobic Exercise Program at Shallow and Deep Water in 30-50 Year Overweight Adults. Master of Science (Sport Sciences). Graduate School. Chiang Mai University, Chiang Mai, Thailand (2009-2011).
- 13. Mr. Nitinet Ketsuwan. Thesis Title "Effect of N-acetylcysteine on Oxidative Stress and Inflammation after Short Heavy Exercise in Sedentary Male Subjects" Master of Science (Movement and Exercise

- Sciences). Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand (2008-2010).
- 14. Miss. Raphiphat Khansuwan. Thesis title "Effects of Using N-acetylcysteine on Changes of Muscle Injury and Fatigue from Acute Short Heavy Exercise in Sedentary Male Subjects.Master of Science (Sport Sciences). Graduate School, Chiang Mai University, Chiang Mai, Thailand (2008-2010). Miss. Kunteera Saidee. Thesis title "Effects of Aerobic Dance a
- 15. Moderate Intensity in Women on Oxidative Stress and Interleukin-2" Master of Science (Sport Sciences). Graduate School. Chiang Mai University, Chiang Mai, Thaialnd (2007-2009).
- 16. Mrs. Jiaranai Khantipongse. Thesis title "Development of High-Performance Liquid Chromatography for Quantitation of Plasma Lactate in HIV-infected Patients Receiving Antiretroviral Drugs. Master of Science (Toxicology). Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand (2006-2008).
