

Curriculum Vitae

Sauwaluk Dacha, PT, PhD



Research Interest: Respiratory muscle training/
Cardiopulmonary rehabilitation/ Dyspnea mechanism/
COPD/ Neural Respiratory Drive (NRD)/ Diaphragm
paralysis/ Electromyogram (EMG)/pm2.5

Address:

Faculty of Associated Medical Sciences, Chiang Mai University
110 Intawaroros Rd., Sripoom, Chiang Mai, Thailand 50200
Tel. + 6653 94 9245

E-mail: sauwaluk.dacha@cmu.ac.th

ORCID: <https://orcid.org/0000-0003-4030-8096>

Scopus ID: 57199648874

h-index: 9 (Accessed June,2026)

Education/Degree

- | | |
|---------|--|
| 11/2019 | Doctor of Biomedical Sciences (PhD), Faculty of Movement and Rehabilitation Sciences; Research Group of Cardiovascular and Respiratory Rehabilitation KU Leuven, Belgium
Thesis title: Effects of respiratory muscle training on psychological and physiological aspects of dyspnea perception and exercise tolerance in patients with COPD
Promotor Prof. Dr. Daniel Langer
Co-promotors Prof. Dr. Rik Gosselink, Prof. Dr. Andreas Von Leupoldt |
| 06/2011 | Master of Health Service Administration, Strayer University, VA, United States |
| 03/2004 | Bachelor of Science (Physical Therapy), Chiang Mai University, Chiang Mai, Thailand |

Position: Deputy-Head of Physical Therapy Department for International Relations and Corporate Communications, Head of Cardiopulmonary Physical Therapy Division, Department of Physical Therapy, Chiang Mai University

- | | |
|-----------------|--|
| 05/2023-Present | Assistant Professor, Department of Physical Therapy, Chiang Mai University, Chiang Mai, Thailand |
| 10/2012-05/2023 | Lecturer, Department of Physical Therapy, Chiang Mai University, Chiang Mai, Thailand |
| 06/2008-03/2009 | Physical Therapist, Department of Physical Therapy, Sawanpracharak Hospital, Nakhonsawan, Thailand |
| 04/2004-02/2006 | Physical Therapist, Department of Physical Therapy, Srisawan Hospital, Nakhonsawan, Thailand |

Training and Courses

- 04/2017 ERS (European Respiratory Society) Pulmonary rehabilitation course, Athens, Greece
- 03/2017 Spike 2 program; CED (Cambridge Electronic Design Limited), Cambridge, United Kingdom

Publications

1. **Dacha S**, Janssens L, Rodrigues A, Louvaris Z, Janssens L, Gosselink R, et al. Comparison Between Manual and (Semi-)Automated Analyses of Esophageal Diaphragm Electromyography During Endurance Cycling in Patients With COPD. *Front Physiol.* 2019;10(885). **[Published: 10 July 2019] Q2 –This paper is based on chapter 4 of my Ph.D. dissertation**
2. Charususin N, **Dacha S**, Gosselink R, Decramer M, Von Leupoldt A, Reijnders T, et al. Respiratory muscle function and exercise limitation in patients with chronic obstructive pulmonary disease: a review. *Expert Rev Respir Med.* 2017;1-13. **[Published: 06 Nov 2017] Q2-- This paper is based on chapter 2 of my Ph.D. dissertation**
3. Langer D, Ciavaglia C, Faisal A, Webb KA, Neder JA, Gosselink R, **Dacha S**, Topalovic M, Ivanova A, O'Donnell D. E. Inspiratory muscle training reduces diaphragm activation and dyspnea during exercise in COPD. *J Appl Physiol* (1985). 2018;125(2):381-92. **[Published: 1 Aug 2018] Q2**
4. Caleffi Pereira M, **Dacha S**, Testelmans D, Gosselink R, Langer D. Assessing the effects of inspiratory muscle training in a patient with unilateral diaphragm dysfunction. *Breathe.* 2019;15(2):e90-e6. **[Published: 01 June 2019] Q3**

-----PhD Graduation 03 Oct 2019-----

5. Radtke T, Crook S, Kaltsakas G, Louvaris Z, Berton D, Urquhart S. D, Kampouras K, Rabinovich A. R, Verges S, Kontopidis D, Boyd J, Tonia T, Langer D, De Brandt J, Goertz V, Burtin C, Spruit A. M, Braeken C. W. D, **Dacha S**, Franssen M. E. F, Laveneziana P, Eber E, Troosters T, Neder J.A, Puhan A. M, Casaburi R, Vogiatzis* I, Hebestreit H. ERS Statement on Standardisation of Cardiopulmonary Exercise Testing in Chronic Lung Diseases. *Eur Respir Rev.* 2019;28(154). **[Published: 31 Dec 2019] Q1**
6. Rodrigues A, Louvaris Z, **Dacha S**, Janssens W, Pitta F, Vogiatzis I, et al. Differences in Respiratory Muscle Responses to Hyperpnea or Loaded Breathing in COPD. *Med Sci Sports Exerc.* 2020;52(5):1126-34 **[Published: 01 May 2020] Q1**
7. Louvaris Z, Rodrigues A, **Dacha S**, Gojevic T, Janssens W, Vogiatzis I, et al. High-intensity exercise impairs extradiaphragmatic respiratory muscle perfusion in patients with COPD. *J Appl Physiol.* 2020; doi:10.1152/jappphysiol.00659.2020 **[Published: 29 Oct 2020] Q2**
8. **Dacha S**, Chuatrakoon B, Sornkaew K, Sutthakhun K, Weeranorapanich P. Effects of wearing different facial masks on respiratory symptoms, oxygen saturation, and functional capacity during six-minute walk test in healthy subjects. *Can J Respir Ther.* 2022 Jun 22;58:85-90. doi: 10.29390/cjrt-2022-014. PMID: 35800851; PMCID: PMC9212081. **[Published: 22 June 2022] Q2**
9. **Dacha S**, Chaiwong W, Tajarennmuang P. Association of cardiovascular disease with COPD: cardiac function and structure evaluation. *J Bras Pneumol.* 2022 Nov 14;48(5):e20220388. English, Portuguese. doi: 10.36416/1806-3756/e20220388. PMID: 36383782. **[Published: 14 Nov 2022] Q3**
10. Khamtue K, Silitertpisan P, **Dacha S**. Comparative effects of wearing N95, surgical, cloth, and PM2.5 masks during six-minute walk test on dyspnea, breathing effort, oxygen saturation, and functional capacity in pre-aging individuals. *Journal of Associated Medical Sciences.* 2023;56(2):8-17. **[Published: 5 Jan 2023] Scopus database**
11. Chaiut W, Sapbamrer R, **Dacha S**, et al. Characteristics of Respiratory Syncytial Virus Infection in Hospitalized Children Before and During the COVID-19 Pandemic in Thailand. *J Prev Med Public Health.* 2023;56(3):212-220. doi:10.3961/jpmph.23.019. **[Published: 23 Mar 2023] Q2**

12. Chaiut W, Sapbamrer R, **Dacha S**, Sudjaritruk T, Malasao R. Epidemiology and associated factors for hospitalization related respiratory syncytial virus infection among children less than 5 years of age in Northern Thailand. *Journal of Infection and Public Health*. 2023;16(10):1659-65. **[Published: 3 Aug 2023] Q1**
13. Ngamsutham T, Chaiwong W, **Dacha S**, Sittlerpisan P, Pothirat C, Duangjit P, Deesomchok A, Liwsrisakun C, Bumroongkit C, Theerakittikul T, Limsukon A, Trongtrakul K, Niyatiwatchanchai N, Tajarernmuang P. Pulmonary Function, Functional Capacity, Respiratory, and Locomotor Muscle Strength after Severe to Critically Ill COVID-19: A Long-Term Study. *Tuberc Respir Dis (Seoul)*. 2024 Aug 14. doi: 10.4046/trd.2024.0044. Epub ahead of print. **[Published: 14 Aug 2024] Q2**
14. Klaps S, Langer D, Gosselink R, **Dacha S**, Louvaris Z, Jacobs N, Janssens W, & Janssens L. (2025). The value of extra-diaphragmatic inspiratory muscle surface electromyography during postural control tasks in patients with chronic obstructive pulmonary disease. *Respiratory medicine*, 243, 108127. Advanced online publication. doi.org/10.1016/j.rmed.2025.108127 **[Published: 24 April 2025] Q1**
15. Parameyong A, Chawawisuttikool J, Boripuntakul S, **Dacha S**. Translation, cross-cultural adaptation and psychometric properties of the Thai version of the Trunk Control Measurement Scale for children with cerebral palsy. *J Assoc Med Sci [internet]*. 2025 Jul. 7;58(3):204-15. available from: <https://he01.tci-thaijo.org/index.php/bulletinAMS/article/view/276448> **[Published: 07 July 2025] Q4**
16. Rodrigues A, Louvaris Z, **Dacha S**, Pereira MC, Gojevic T, Schaeffer MR, Janssens L, Janssens W, Reid WD, Gayan-Ramirez G, Testelmans D, Brochard L, Gosselink R, Langer D. Pattern of extra-diaphragmatic respiratory muscle activity during exercise in patients with unilateral diaphragm dysfunction. *Physiol Rep*. 2025 Nov;13(21):e70635. doi: 10.14814/phy2.70635. **[Published: October 2025] Q2**

Participation in international meetings

1. **Dacha S**, Langer D, Ciavaglia C, Webb K, Preston M, O'Donnell DE. Effect of Inspiratory Muscle Training on Respiratory Muscle Function and Diaphragm Activation in Patients with COPD. A109. HIGHLIGHTS IN PULMONARY REHABILITATION: ILD, ADJUNCTS, AND INSPIRATORY MUSCLE TRAINING. American Thoracic Society International Conference Abstracts: American Thoracic Society; 2017. p. A2860-A.
2. **Dacha S**, Langer D, Ciavaglia C, Webb K, Preston M, O'Donnell DE. Effect of inspiratory muscle training (IMT) on static and dynamic respiratory muscle function in patients with COPD. *Eur Respir J*. 2017;50(suppl 61):OA2923. **[Oral presentation]**
3. **Dacha S**, Janssens L, Louvaris Z, Janssens L, Gosselink R, Langer D. Comparison between manual and automated analyses of esophageal diaphragm electromyography during endurance cycling in patients with COPD. *Eur Respir J*. 2018;52(suppl 62):PA1714.
4. Janssens L, Langer D, **Dacha S**, Louvaris Z, Brumagne S, Goossens N, et al. Inspiratory muscle training decreases ankle proprioceptive use during balance control in patients with COPD. *Eur Respir J*. 2018;52(suppl 62):PA1708.
5. Louvaris Z, **Dacha S**, Janssens L, Gosselink R, Vogiatzis I, Langer D. Inspiratory muscle effort, perfusion and oxygenation responses to inspiratory muscle training (IMT) with Tapered Flow Resistive Loading (TFRL) and Normocapnic Hyperpnea (NH) in COPD. *Eur Respir J*. 2018;52(suppl 62):OA3634.

6. **Dacha S**, Louvaris Z, Janssens L, Testelmans D, Gosselink R, Langer D. Effect of an Inspiratory Muscle Training (IMT) Program on Respiratory Muscle Function, Symptoms of Dyspnea, Respiratory Muscle Activation and Tissue Oxygen Delivery During Exercise Breathing in a Patient with Idiopathic Unilateral Diaphragmatic Paralysis: A Case Report. B60. PULMONARY REHABILITATION: GENERAL. American Thoracic Society International Conference Abstracts: American Thoracic Society; 2019. p. A3744-A.
7. **Dacha S**, Rodrigues A, Louvaris Z, Janssens L, Janssens W, Gosselink R, et al. Effects of inspiratory muscle training (IMT) on dyspnea, respiratory muscle function and respiratory muscle activation in patients with COPD during endurance cycling. 2019;54(suppl 63):PA2199.
8. Caleffi Pereira M, **Dacha S**, Rodrigues A, Testelmans D, Gosselink R, Langer D. Diaphragm function during exercise in unilateral diaphragmatic dysfunction. 2019;54(suppl 63):PA2191.
9. Caleffi Pereira M, **Dacha S**, Testelmans D, Gosselink R, Langer D. Inspiratory muscle training (IMT) in unilateral diaphragmatic dysfunction: case reports. 2019;54(suppl 63):PA1150.
10. Rodrigues A, Louvaris Z, **Dacha S**, Janssens W, Gosselink R, Langer D. Respiratory muscle activation, breathing pattern and respiratory muscle oxygen availability during Tapered Flow Resistive Loading and Normocapnic Hyperpnea in COPD. 2019;54(suppl 63):PA2205.
11. Louvaris Z, Rodrigues A, Dierckx S, **Dacha S**, Janssens W, Gosselink R, et al. Late Breaking Abstract - Heterogeneity of metabolism and activation in lower limb muscles during exercise in COPD: a preliminary data analysis. 2019;54(suppl 63):OA3565.
12. Louvaris Z, **Dacha S**, Rodrigues A, Janssens W, Gosselink R, Langer D. Respiratory muscle perfusion limitations and dyspnoea during cycling in chronic obstructive pulmonary disease. 2020;56(suppl 64):2557.
13. Gojevic T, Caleffi Pereira M, **Dacha S**, Louvaris Z, Testelmans D, Gayan-Ramirez G, et al. Mechanisms of exertional dyspnea in unilateral diaphragmatic dysfunction. 2020;56(suppl 64):2965.
14. Janssens L, Langer D, **Dacha S**, Louvaris Z, Brumagne S, Goossens N, et al. Enhanced balance strategy after inspiratory muscle training in patients with COPD, an interim analysis. 2020;56(suppl 64):2967.
15. **Dacha S**, Chuatrakoon B, Sornkaew K, Sutthakhun K, Weeranorapanich P. Impact of wearing different facial masks on respiratory symptoms, oxygen saturation, and functional capacity during six-minute walk test (6MWT) in healthy young adults. 2021;58(suppl 65):OA1183. ***“ERS Best Abstract Grant in Physiotherapy 2021” [Oral presentation]***
16. Janssens L, Jacobs N, Langer D, **Dacha S**, Louvaris Z, Brumagne S, et al. Does the diaphragm contribute to balance control in patients with COPD? 2021;58(suppl 65):PA2211.
17. **Dacha S**, Chuatrakoon B, Parameyong A, Chalermboon C, Thumpunya N. Physical therapists' opinions on the effect of the COVID-19 pandemic on physical therapy management in government and private hospitals in Thailand: Preliminary results of a survey. 2022;60(suppl 66):2372.
18. Rodrigues A, Janssens L, **Dacha S**, Louvaris Z, Gojevic T, Janssens W, et al. Timing of inspiratory muscle activity in patients with unilateral diaphragm dysfunction. 2022;60(suppl 66):1299.
19. **Dacha S**, Wonglangka K, Kanthain R, Chuatrakoon B, Parameyong A, Chaiwong W, et al. Reliability and validity of Thai version of Baseline Dyspnea Index (BDI) and Transitional Dyspnea Index (TDI) in patients with COPD. 64(suppl 68):PA619.
20. Suraprapapich P, Chuaychoo B, Watanapa WB, **Dacha S**. Effects of inspiratory muscle training on cardiovascular autonomic functions in patients with COPD. 64(suppl 68):PA4130
21. Chitmeta A, **Dacha S**, and Aramphianlert W. Evaluation of Mother Wavelets for ECG Artifacts Suppression in Diaphragmatic EMG Using Singlelevel Discrete Wavelet Transform. *2026 18th International Conference on Knowledge and Smart Technology (KST)*, Pattaya, Thailand, 2026, pp. 213-218, doi: 10.1109/KST67832.2026.11432363.

Supervision of PhD students

2019-2025 (co-supervisor)

1. Consequences of Pulmonary Performance after the Severe Respiratory Syncytial Virus Infection in Children
2. Effect of Inspiratory Muscle Training on Cardiovascular Autonomic Functions in Chronic Obstructive Pulmonary Disease Patients

Supervision of Master students

2024-present (main supervisor)

1. Correlation between Inspiratory muscle Strength and Physiological Parameters in Patients with Chronic Obstructive Pulmonary Disease (COPD)

2019-2023 (main supervisor)

1. Comparative Effects of Wearing N95, Surgical, Cloth, and PM2.5 Masks During Six-Minute Walk Test on Dyspnea, Breathing Effort, Oxygen Saturation, and Functional Capacity in Pre-Aging Individuals

2015-2017 (co-supervisor)

1. Effects of inspiratory muscle training on shortness of breath (dyspnea) in patients with COPD.
2. Lung volume specificity of two different inspiratory muscle training protocols.
3. Effects of inspiratory muscle training on exercise capacity, blood flow distribution, and peripheral muscle fatigue in COPD.

2016-2018 (co-supervisor)

1. Effects of inspiratory muscle training on blood flow distribution between respiratory and locomotor muscles during exercise in patients with COPD.
2. Effects of inspiratory muscle training on dyspnea and respiratory muscle activity in patients with COPD.
3. Prevalentie van spierdysfunctie en symptomen van dyspneu bij borstkankerpatiënten.

2017-2019 (co-supervisor)

1. Effects of inspiratory muscle training on exertional breathlessness in patients with unilateral diaphragm paralysis.
2. Effects of inspiratory muscle training on shortness of breath (dyspnea) in patients with COPD.

2018-2020 (co-supervisor)

1. Effects of inspiratory muscle training on the symptoms of dyspnea in patients with chronic obstructive pulmonary disease.

CMU-RL 4-7

1. 3D Lung bronchial tree model

Design Patent

1. Right upper lung branch: Patent application number 2502000667
Filing date: February 18, 2025
2. Right lower lung branch: Patent application number: 2502000668
Filing date: February 18, 2025
3. Left upper lung branch: Patent application number 2502000669
Filing date: February 18, 2025
4. Left Lower Lung Branch: Patent Application No. 2502000670
Filing Date: February 18, 2025

Experience

03/2006-01/2008 Thai- American Cultural exchanged Student, American Institute for Foreign Study (AIFS), VA, United States

Research Experience:

- Healthy Khun Chan Khian: An Epidemiological Study of Health Status in a Hmong Village
- Effects of Inspiratory Muscle Training on respiratory muscle activation, locomotor muscle function, and affective dyspnea response related brain activation patterns during exercise in patients with COPD
- Prevalence and factors associated with frailty in the community dwelling aging in Chiang Mai
- Inspiratory muscle strength after COVID-19 severe pneumonia admitted to medical ICU

Memberships:

Member of the Thailand Physical Therapy Council
Member of the European Respiratory Society (ERS)
Former member of the American Thoracic Society (ATS)
Former member of the BVP-SBP (Belgian Society for Pneumology)