

# Curriculum Vitae

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### EDUCATION

1997 B.Sc. (Physiotherapy), Mahidol University, Bangkok, Thailand  
2002 M.Sc. (Physiology), Chulalongkorn University, Bangkok, Thailand  
2009 Ph.D. (Pharmaceutical Sciences), University of Toyama, Toyama,  
Japan  
2010-2011 Postdoctoral Fellow, Graduate School, Chulalongkorn University,  
Bangkok, Thailand

### HONORS AND AWARDS

2007-2009 Research Student Scholarship, Ministry of Education, Culture, Sports,  
Science and Technology (Monbukagakusho), Japan  
2008-2009 Research Assistant Scholarship, Institute of Natural Medicine,  
University of Toyama, Toyama, Japan  
2010-2011 Postdoctoral Fellowship, Graduate School, Chulalongkorn University,  
Bangkok, Thailand

### PROFESSIONAL APPOINTMENT

2011-2018 Instructor, Department of Physiology, Faculty of Medicine, Chiang  
Mai University, Chiang Mai, Thailand  
2019-present Assistant professor, Department of Physiology, Faculty of Medicine,  
Chiang Mai University, Chiang Mai, Thailand

### ORGANIZATION AND PARTICIPATION

2002-present Thai Neuroscience Society

## PRESENTATIONS AT INTERNATIONAL MEETINGS

### Poster presentations

- August 7-11, 2019 The 1<sup>st</sup> International Conference on Natural Toxicology and Pharmacology, Guangzhou, China “Chatuphalatika aqueous extract ameliorate obesity and hyperlipidemia in high-fat diet fed mice.”
- February 10, 2017 The 6<sup>th</sup> International Graduate Research Conference 2017, Chiang Mai, Thailand “Effect of rosuvastatin on the development of depression-like behaviors in rats fed with high-fat diet.”
- November 17-19, 2016 The 10<sup>th</sup> International Dental Collaboration of the Mekong River Region Congress, Malaysia “Modulation of neuronal activity of intercalated cells of amygdala might underlie anxiolytic activity of ECa233 (a standardized extract of *C. asiatica*).”
- December 20, 2013 The International Graduate Research Conference 2013, Chiang Mai, Thailand “Effect of alpha lipoic acid on hyperemia induced by cortical spreading depression.”
- March 16-18, 2010 The 83<sup>rd</sup> Annual Meeting of the Japanese Pharmacological Society, Osaka, Japan “Ameliorative effects of Yokukansan, a Kampo prescription, on memory deficits in olfactory bulbectomized mice.”
- March 16-18, 2009 The 82<sup>nd</sup> Annual Meeting of the Japanese Pharmacological Society, Yokohama, Japan “Investigations of novel depression-related factors in a mouse model of learned helplessness.”
- March 17-19, 2008 The 81<sup>st</sup> Annual Meeting of the Japanese Pharmacological Society, Yokohama, Japan “Fluoxetine exacerbates conditioned fear-induced response in mice: possible involvement of 5HT<sub>2C</sub> receptor.”
- August 28-31, 2004 The 5<sup>th</sup> Asian & Oceanian Epilepsy Congress, Bangkok, Thailand “Microiontophoretic study of effects of valproyl hydroxamic acid on cerebellar Purkinje neurons in rats.”

## ACADEMIC ACTIVITIES

### Graduate Student’s Dissertation Committee

1. Sirijit Chorsuwan, B.S., Member of the master’s degree committee  
Topic: Effects of Physical Fitness on Sweating in Prepubertal boys. (Physiology)
2. Jutamas Ruanpang, B.S., Member of the master’s degree committee  
Topic: Effect of Rosuvastatin on Oxidative Stress and The Development of Depression-like Behaviors in Rats Fed with High-fat Diet. (Physiology)

3. Kanlaya Sangchawee, B.S., Member of the master's degree committee  
Topic: Mechanism of active constituents of derris indica on proliferation, migration and invasion of colon adenocarcinoma and hepatocellular carcinoma cells. (Biopharmaceutical sciences)
4. Patchrapon Boonsin, B.S., Member of the master's degree committee  
Topic: Pharmacological activity of gryllus bimaculatus extracts on alzheimer's disease. (Biopharmaceutical sciences)

### **Special Academic Appointments**

2011-present	Graduate School Faculty, Chiang Mai University, Chiang Mai, Thailand
2011-present	Committee, Human Musculoskeletal Section for Medical Curriculum, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2011-present	Committee, Human Nervous Section for Medical Curriculum, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand
2016-present	Committee, Human Special Senses Section for Medical Curriculum, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

### **RESEARCH GRANT SUPPORT**

6/9/2019-6/9/2020	The Faculty Endowment Fund for Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Studies of acute toxicity and learning and memory deficit improving effect of Dictyophora indusiata extract". (PI)
1/7/2019-30/6/2020	The University Endowment Fund for Research, Chiang Mai University, Chiang Mai, Thailand. "Study model of biological activities investigation of <i>Phallus indusiatus</i> extract to be translated into the commercial dietary supplement and cosmetic products". (Co-PI)

### **PREVIOUS GRANT SUPPORT**

14/11/2018-14/11/2019	The Faculty Endowment Fund for Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Effect of high-fat diet on brain-derived neurotrophic factor and depression-like behaviors in rats". (Co-PI)
14/2/2018-14/2/2019	The Faculty Endowment Fund for Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "The role of antioxidant in depression-like behavior induced by high-fat diet in rats". (Co-PI)
6/6/2017-6/6/2019	The Faculty Endowment Fund for Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. "Hypothalamic-

- pituitary-adrenal axis dysfunction mediates depression-like behaviors induced by high-fat diet in rats”. (PI)
- 30/9/2016-30/9/2017 The Faculty Endowment Fund for Preliminary Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “Anxiety-related behaviors in rats fed with high-fat diet”. (Co-PI)
- 17/6/2015-17/6/2016 The Faculty Endowment Fund for Preliminary Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “Study of antidepressive effect of standardized *Centella Asiatica* extract ECa233 on depression model in mice”. (PI)
- 1/12/2014-1/12/2015 The Faculty Endowment Fund for Preliminary Research, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. “Analgesic effect of *Leucaena Leucophala* in rat”. (Co-PI)
- 1/6/2014-31/5/2016 TRF Grant for New Researcher, The Thailand Research Fund, Bangkok, Thailand. “Preclinical evaluation of lipid lowering effect and acute toxicity of Thai Herbal Formulary, Chatuphalatika”. (Co-PI)

## RESEARCH FIELDS OF INTEREST

1. Depression
2. Migraine headache
3. Alzheimer’s disease

## PEER REVIEWED ARTICLES

1. Ruanpang J, Pleumsamran A, Pleumsamran J, and **Mingmalairak S**. Effect of high-fat diet on depression-like behavior and the relationship between cholesterol level and depression-like behavior in mice. *CMU J Nat Sci* 2018; 17(2): 161-173.
2. Pleumsamran J, Ronran H, LaGrand SM, **Mingmalairak S**, and Pleumsamran A. Effect of alpha lipoic acid on hyperemia and trigeminovascular nociceptive activity induced by cortical spreading depression. *Chiang Mai Med J* 2015; 54(4): 185-196.
3. Doknark S, **Mingmalairak S**, Vattanajun A, Tantisira B, and Tantisira MH. Study of ameliorating effects of ethanolic extract of *Centella asiatica* on learning and memory deficit in animal models. *J Med Assoc Thai* 2014; 97 (Suppl 2): S68-S76.
4. Tohda M, and **Mingmalairak S**. Evidence of antidepressive effects of a Wakan-yaku, Hochuekkito, in depression model mice with learned-helplessness behavior. *Evid Based Complement Alternat Med* 2013; Article ID 319073, 4 pages.
5. Tantisira MH, Tantisira B, Patarapanich C, Suttisri R, Luangcholatan S, **Mingmalairak S**, Wanasuntronwong A, and Saifah E. Effects of a standardized extract of *Centella asiatica* ECa 233 on learning and memory impairment induced by transient bilateral common carotid artery occlusion in mice. *Thai J Pharmacol* 2010; 32(2): 22-33.

6. **Mingmalairak S**, Tohda M, Murakami Y, and Matsumoto K. Possible involvement of signal transducers and activators of transcription 3 system on depression in the model mice brain. *Biol Pharm Bull* 2010; 33(4): 636-640.
7. Tohda M, **Mingmalairak S**, Murakami Y, and Matsumoto K. Enhanced expression of BCL2/adenovirus E1B 19-kDa-interacting protein 3 mRNA, a candidate for intrinsic depression-related factor, and the effects of imipramine in the frontal cortex of stressed mice. *Biol Pharm Bull* 2010; 33(1): 53-57.

#### CONFERENCE SHORT PAPERS AND ABSTRACTS

1. **Mingmalairak S**, Tantisira MH, Rinthong P. Chatuphalatika aqueous extract ameliorate obesity and hyperlipidemia in high-fat diet fed mice. *Proceeding of the 1<sup>st</sup> International Conference on Natural Toxicology and Pharmacology* 2019: 78.
2. Ruanpang J, **Mingmalairak S**, Pleumsamran J, and Pleumsamran A. Effect of rosuvastatin on the development of depression-like behaviors in rats fed with high-fat diet. *Proceeding of the 6<sup>th</sup> International Graduate Research Conference 2017* 2017: HS14-HS20.
3. Wanasuntronwong A, Wanakhachornkrai O, **Mingmalairak S**, Tantisira B, and Tantisira MH. Modulation of neuronal activity of intercalated cells of amygdala might underlie anxiolytic activity of ECa233 (a standardized extract of *C. asiatica*). *Proceeding of the 10<sup>th</sup> International Dental Collaboration of the Mekong River Region Congress* 2016: 26.
4. Ronran H, Pleumsamran A, LaGrand SM, **Mingmalairak S**, and Pleumsamran J. Effect of alpha lipoic acid on hyperemia induced by cortical spreading depression. *Proceeding of the International Graduate Research Conference 2013* 2013: HS163-HS169.
5. Hayashida M, **Mingmalairak S**, Murakami Y, Zhao Q, Tohda M, and Matsumoto K. Ameliorative effects of Yokukansan, a Kampo prescription, on memory deficits in olfactory bulbectomized mice. *Proceeding of the 83<sup>rd</sup> Annual Meeting of the Japanese Pharmacological Society* 2010: 168P.
6. **Mingmalairak S**, Tohda M, Murakami Y, and Matsumoto K. Investigations of novel depression-related factors in a mouse model of learned helplessness. *Proceeding of the 82<sup>nd</sup> Annual Meeting of the Japanese Pharmacological Society* 2009: 226P.
7. Murakami Y, Maeda K, **Mingmalairak S**, and Matsumoto K. Fluoxetine exacerbates conditioned fear-induced response in mice: possible involvement of 5HT2C receptor. *Proceeding of the 81<sup>st</sup> Annual Meeting of the Japanese Pharmacological Society* 2008: 192P.
8. **Mingmalairak S**, Patarapanich C, Tantisira MH, and Tantisira B. Microiontophoretic study of effects of valproyl hydroxamic acid on cerebellar Purkinje neurons in rats. *Proceeding of the 5<sup>th</sup> Asian & Oceanian Epilepsy Congress* 2004: 50.