#### **CURRICULUM VITAE**



#### PERSONAL DATA

Name: Fang-Chia Chang, Ph.D. Citizenship: Taiwan, Republic of China

Current Position: Professor

#### **EDUCATION**

1989 B.S. (Pharmacy) Kaoshiung Medical College, Kaoshiung, Taiwan ROC

1991 M.S. (Pharmacology) National Cheng-Kung University, Tainan, Taiwan ROC

1999 Ph.D. (Neuroscience) University of Texas Medical Branch at Galveston, Galveston, TX

### POSTDOCTORAL TRAINING

1999 – 2000 Postdoctoral Research Associate, Department of Pharmacology, Southern Illinois University School of Medicine, Springfield, IL

2000 – 2001 Associate Researcher, Department of Neurology, China Medical University Hospital, Taichung, Taiwan ROC

#### ACADEMIC APPOINTMENTS

2001 - 2004	Assistant Professor, Department of Chinese Medicine, China Medical University,
	Taichung, Taiwan ROC

- 2004 2005 Associate Professor, Department of Chinese Medicine, China Medical University, Taichung, Taiwan ROC
- 2005 2008 Assistant Professor, Department of Veterinary Medicine, School of Veterinary Medicine, National Taiwan University, Taipei, Taiwan ROC
- 2008 2012 Associate Professor, Department of Veterinary Medicine, School of Veterinary Medicine, National Taiwan University, Taipei, Taiwan ROC
- 2012 **Full Professor**, Department of Veterinary Medicine, School of Veterinary Medicine, National Taiwan University, Taipei, Taiwan ROC

### SCIENTIFIC ACTIVITIES

2002 - 2005	Executive Editor, Mid-Taiwan Journal of Medicine
2005 - 2010	Executive Editor, Taiwan Veterinary Journal
2009	Society Secretary in General, Society of Veterinary and Traditional Chinese
	Medicine
2009 –	Associate Editor, Asian Journal of Medical Sciences
2010 –	台灣睡眠醫學學會學術委員會委員
2005 –	國立臺灣大學、神經生物與認知科學學程委員會委員
2010 - 2013	國立臺灣大學、生物產業自動化教學及研究中心諮詢委員會委員
2011	Guest Editor, Journal of Biomedicine and Biotechnology
2012 –	Editorial Board, Far East Journal of Life Sciences
2012	Scientific Committee, The 7 <sup>th</sup> Asian Sleep Research Society Congress
2012-	Editorial Board, World Journal of Neurology
2013-	Editorial Board, Molecular & Cellular Enilensy

#### **Peer Reviewer for Journals:**

- \* Psychoneuroendocrinology
- \* Progress in Neuro-Psychopharmacology & Biological Psychiatry
- \* Neuroscience Letters
- \* Mid-Taiwan Journal of Medicine
- \* Journal of the Chinese Institute of Chemical Engineers
- \* Evidence Based Complementary and Alternative Medicine
- \* Neuroscience Letters
- \* Neuroscience Letters
- \* Neuroscience Letters
- \* Evidence Based Complementary and Alternative Medicine
- \* Psychoneuroendocrinology
- \* Neuroscience Letters
- \* Neuroscience Letters
- \* Sleep and Biological Rhythms
- \* Neuroscience Letters
- \* Neuroscience Letters
- \* Current Psychiatry Reviews
- \* Neuroscience Letters
- \* Evidence Based Complementary and Alternative Medicine
- \* Journal Neurotoxicity Research
- \* Current Psychiatry Reviews
- \* Evidence Based Complementary and Alternative Medicine
- \* Planta Medica
- \* African Journal of Pharmacy and Pharmacology
- \* Evidence Based Complementary and Alternative Medicine
- \* Neuroscience Letters

# **Peer Reviewer for Meeting Abstract:**

- \* SLEEP 2007
- \* SLEEP 2008

- \* SLEEP 2009
- \* SLEEP 2010
- \* SLEEP 2011
- \* SLEEP 2012
- \* SLEEP 2013

#### **Peer Reviewer for Academic Promotion**

- \* Faculty promotion review (College of Veterinary Medicine, National Chung Hsing University)
- \* Faculty promotion review (College of Veterinary Medicine, National Chia Yi University)

# **Advisory Committee Service:**

2005	NSC (National Science Council, Taiwan): grant application reviewer: Pharmacy
	& Chinese Medicine
2006	NSC (National Science Council, Taiwan): grant application reviewer: Pharmacy
	& Chinese Medicine
2008	NSC (National Science Council, Taiwan): grant application reviewer: Pharmacy
	& Chinese Medicine
2010	NSC (National Science Council, Taiwan): grant application reviewer: Pharmacy
	& Chinese Medicine; Veterinary Medicine; Biotechnology
2011	NSC (National Science Council, Taiwan): grant application reviewer: Physiology
2012	NSC (National Science Council, Taiwan): grant application reviewer:
	Psychology

# **GRANT SUPPORT**

Agency: China Medical University Hospital

Title: "The role of corticotropin -releasing hormone (CRH) in the regulation of kindling -induced

epileptiform activities"

Period: 8/1/2000 - 7/31/2001

P.I.: Fang-Chia Chang Effort: 60%

Agency: National Science Council in Taiwan

Title: "The involvement of cytokines in the epileptogenesis or in neuroprotection?"

Period: 8/1/2001 - 7/30/2002

P.I.: **Fang-Chia Chang** Effort: 80%

Agency: China Medical University Hospital

Title: "The effects of sleep deprivation on the epileptiform activity"

Period: 8/1/2001 - 7/31/2002

P.I.: Fang-Chia Chang Effort: 50%

Agency: China Medical University Hospital

Title: "The role of TNF-α and NGF in MPTP-induced Parkinsonism"

Period: 8/1/2002 - 7/31/2003

P.I.: Fang-Chia Chang Effort: 60%

Agency: China Medical University Hospital

Title: "Alteration in sleep pattern in MPTP-induced parkinsonism rats"

Period: 8/1/2002 - 7/31/2003

P.I.: Fang-Chia Chang Effort: 60%

Agency: China Medical University Hospital

Title: "The effects of sleep deprivation on the progression of amygdaloid-kindling epilepsy"

Period: 8/1/2002 - 7/31/2003

P.I.: Fang-Chia Chang Effort: 60%

Agency: National Science Council in Taiwan

Title: "Mechanisms involved in the alteration of sleep-wake activity in MPTP-treated

parkinsonism rats"

Period: 8/1/2003 - 7/30/2005

P.I.: **Fang-Chia Chang** Effort: 80%

Agency: China Medical University

Title: "The role of neurotrophins on sleep alterations in rotenone-induced parkinsonism rats"

Period: 4/1/2004 - 12/31/2005

P.I.: **Fang-Chia Chang** Effort: 50%

Agency: National Science Council in Taiwan

Title: "The effects of CRH and IL-1β on GABA<sub>A</sub> receptor-, nicotinic cholinergic receptor-,

NMDA- and AMPA receptor-mediated currents in nucleus basalis of Meynert after amygdaloid

kindling"

Period: 8/1/2005 - 7/30/2006

P.I.: **Fang-Chia Chang** Effort: 70%

Agency: National Science Council in Taiwan

Title: "The interactions between  $\beta$ -endorphin and cholinergic receptors in the nucleus tractus solitarius (NTS) mediates electroacupuncture-induced sleep alteration: *in vivo* behavioral and *in vitro* electrophysiological studies"

Period: 8/1/2006 - 7/30/2008

P.I.: **Fang-Chia Chang** Effort: 70%

Agency: National Science Council in Taiwan

Title: "The effects of baicalin and wogonin on the proteasome inhibitor-induced parkinsonism, the synaptic plasticity in striatum, and the parkinsonism-induced sleep alterations in rats — an investigation in molecular signal transduction and electrophysiology"

Period: 8/1/2007 - 7/30/2010

P.I.: Fang-Chia Chang Effort: 50%

Agency: National Science Council in Taiwan

Title: "To investigate the phase shifting of circadian gene expression in the suprachiasmatic

nucleus (SCN) in the kindled rats" Period: 8/1/2010 - 7/30/2013

P.I.: **Fang-Chia Chang** Effort: 50%

#### 11/9/2013

#### **Current:**

Agency: National Science Council in Taiwan

Title: "To investigate the phase shifting of circadian gene expression in the suprachiasmatic

nucleus (SCN) in the kindled rats" Period: 8/1/2010 - 7/30/2013

P.I.: **Fang-Chia Chang** Effort: 50%

Agency: National Taiwan University

Title: "針對閉鎖式抗癲癇腦刺激應用之可植入式生物醫療系統單晶片平台"

Period: 1/1/2010 - 7/30/2014

P.I.: Fang-Chia Chang Effort: 50%

Agency: National Taiwan University

Title: "Study on Dravet Syndrome: from clinic to basic science"

Period: 1/1/2010 - 7/30/2012

P.I.: **Fang-Chia Chang** Effort: 50%

Agency: National Taiwan University

Title: "以 Scn1a 基因替換小鼠(E1099X)為 Dravet Syndrome 之動物模式進行試種新型藥物

篩檢"

Period: 6/1/2011 - 5/30/2012

P.I.: Fang-Chia Chang Effort: 50%

Agency: National Taiwan University

Title: "Concordant antisense 對 *Scn1a* 基因替換小鼠(*E1099X*)自發性癲癇的作用 [The effects of a concordant antisense in the suppression of epilepsy occurred in the Scn1a (*E1099X*)

knock-in mice]

Period: 6/1/2012 - 12/31/2012

P.I.: Fang-Chia Chang Effort: 50%

Agency: National Taiwan University

Title: "Scnla 基因替換小鼠(E1099X)的特性分析及 Concordant Oligos 對高體溫誘發癲癇的

作用"

Period: 6/1/2012 - 12/31/2013

P.I.: Fang-Chia Chang Effort: 50%

Agency: National Science Council in Taiwan

Title: "植入式交感神經阻斷電刺激晶片在手汗症治療之應用一動物實驗 (1/3, 2/3, 3/3)"

Period: 8/1/2012 - 7/30/2015

P.I.: **Fang-Chia Chang** Effort: 50%

### HONORS AND AWARDS

2013 Teaching Award, National Taiwan University

2012 Teaching Award, College of Bioresources and Agriculture, National Taiwan University

- 2011 Teaching Award, National Taiwan University
- 2010 Teaching Award, National Taiwan University
- 2009 Teaching Award, National Taiwan University
- 2008 Teaching Award, College of Bioresources and Agriculture, National Taiwan University
- 2007 Young Investigator Award, College of Bioresources and Agriculture, National Taiwan University
- 1999 APSS Merit Award, 13<sup>th</sup> Annual Meeting of Associated Professional Sleep Society (APSS), Orlando, FL.
- 1998 Sleep Research Society (SRS) Trainee Travel Award, 12<sup>th</sup> Annual Meeting of Associated Professional Sleep Society (APSS), New Orleans, L.A.
- 1997 Sleep Research Society (SRS) First-Time Attendee Travel Award, 11<sup>th</sup> Annual Meeting of Associated Professional Sleep Society (APSS), San Francisco, CA
- 1990 Graduate Student Scholarship Awards, Ministry of Education, Taiwan
- 1989 Academic Graduate Award in Pharmacy, Department of Pharmacy, Kaoshiung Medical College, Taiwan

#### MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Sleep Research Society (USA)

Society for Neuroscience (USA)

Pharmacological Society (Taiwan ROC)

Taiwan Society of Sleep Medicine (Taiwan ROC)

Neuroscience Society of Taiwan (Taiwan ROC)

Society of Traditional Medicine and Veterinary Medicine (Taiwan ROC): Secretary in General

#### MENTORSHIP AND TEACHING

## Mentorship:

# China Medical University

Dissertation Supervisory Committees

- 2000 2002 Yun-Tson Tsao, MD, MSc, Title: "Electroacupuncture combined with NOS inhibitor on analgesia by the mode of formalin stimulation and measurement of Fos protein in animals", Graduate Institute of Chinese Medical Sciences, supervisory committee
- 2001 2003 Chung-Po Tung, MD, MSc. Title: "The therapeutic effects of valsartan on hypertensive patients according to the classification of Traditional Chinese Medicine constitution", Graduate Institute of Chinese Medical Sciences, supervisor
- 2003 2005 Chun-Pang Lin, MSc. Title: "The involvement of serotonin in suanzaorentanginduced sleep regulation", Graduate Institute of Chinese Medical Sciences, supervisor, current position: Physician, Shih-Hwa Chinese Medical Clinics, Tainan, Taiwan ROC
- 2003 2005 Wei-Ta Chen, MD, MSc, Title: "Therapeutic assessment of electroacupuncture of BL-40 (Wei-Chung) on extracorporeal shock wave lithotripsy (ESWL)-induced pain", Graduate Institute of Chinese Medical Sciences, supervisory committee

- 2004 2006 Wei-Shih Huang, MD, MSc, Title: "Altered movement-related cortical potentials in stroke patients with anterior cerebral artery territory infract", Graduate Institute of Medical Sciences, supervisory committee
- 2005 2007 Yu-Chin Lin, MD, MSc., Title: "The influence of scalp acupuncture on the motor-related cortical potential and cortical excitability in patients with Parkinson's disease", Graduate Institute of Chinese Medical Sciences, **supervisor**, current position: Attending physician, Chinese Medical University Hospital, Taichung, Taiwan ROC
- 2005 2007 Yi-Chung Lin, MSc., Title: "Age-associated analysis of movement-related cortical potential", Graduate Institute of Medical Sciences, supervisory committee

#### Medical Students and Residents

2003 – 2005 Ming-Kuei Lu, MD, Attending physician, Department of Neurology, China Medical University Hospital, Research Mentor

# National Taiwan University

Undergraduate Student Research Rotations

2005	Hang-Ting Chuang & Shih-Ting Huang, Clinical Conference - title: "Seizures in
	canine"
2005	Chan Wai Wu & Chia I an Wang Clinical Conference title: "Paying

Chen-Wei Wu & Chia-Lan Wang, Clinical Conference - title: "Bovine spongiform encephalopathy (BSE)"

2007 Ting-Chung Liu, Summer Research Internship2008 Chia-Ling Lee, Summer Research Internship

2008 Mei-Chung Chiu & Chi-Chen Jian, Clinical Conference – title: "Canine Narcolepsy"

2008 Chien-Chun Huang & Lun-Ling Liu, Clinical Conference – title: "Canine Cognitive Dysfunction Syndrome (CDS)"

2008 Chin-Mao Hsiao & Nien-Jen Tso, Clinical Conference – title: "Canine Epilepsy"

#### Dissertation Supervisory Committees

- 2003 2005 Wen-Yin Huang, MSc. Title: "Effects of light-to-dark transitions on sleep and waking in mice", Department of Psychology, National Chung-Chen University, Chia-Yi, Taiwan ROC, supervisory committee
- 2004 2006 Wen-Chih Tsai, DVM, MSc. Title: "The neuroprotective effects of lidocaine and methylprednisolone in a rat model of retinal ischemia-reperfusion injury", Department of Veterinary Medicine, National Taiwan University, supervisory committee
- 2006 2008 Ching-Yu Lu, MSc. Title: "The sleep disturbance in rats with parkinsonism", Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2006 2008 Chi-Ya Lee, MSc. Title: "A comparative study on cannabidiol-induced apoptosis in primary and transformed immune cells", Department of Veterinary Medicine, National Taiwan University, supervisory committee
- 2007 Yi-Tes Hsiao (PhD student), Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2007 Xin-Ying Wu (PhD student), Department of Veterinary Medicine, National Taiwan University, supervisory committee

- 2007 2009 Han-Han Chang, Title: "Effects of baicalin and wogonin in the regulation of spontaneous sleep", Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2007 2010 Hung-Li Lin, Title: "Areca nut extract induced inflammatory reactions and enhanced the development of myeloid-derived suppressor cells in ovalbumin-sensitized mice", Department of Veterinary Medicine, National Taiwan University, supervisory committee
- 2008 2010 Ying-Ju Chen, Title: "The role of orexin/hypocretin on circadian rhythm in a temporal lobe epilepsy (TLE) rat", Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2008 2010 Li-Ning Hsu, Title: "The role of corticotrophin-releasing hormone (CRH) in tail suspension test (TST)-induced sleep alterations", Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2009 2011 I-Ling Tseng, Title: "Peripheral nerve regeneration in nerve conduits across a 25-mm-long gap in rabbits", Department of Animal Science and Technology, National Taiwan University, supervisory committee.
- 2009 2011 Chia-Ling Li, Title: "The effect of REM sleep window in a successful consolidation of avoidance memory on facilitating the subsequent odor-reward associative memory", Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2010 2012 Yan-Shiu Wang, MSc. Title: "The analysis of acrylamide-induced toxicity on rat primary astrocyte and human glioblastoma cells", Department of Veterinary Medicine, National Taiwan University, supervisory committee
- 2010 2012 Yi-Hsuan Lin, MSc. Title: "The mechanism of cannabidiol-mediated oxidative stress and apoptosis in human monocytes", Department of Veterinary Medicine, National Taiwan University, supervisory committee
- 2010 2012 I-Feng Kao, Title: "Effect of deep brain stimulation for epilepsy in the rat model of temporal lobe epilepsy", Department of Veterinary Medicine, National Taiwan University, **supervisor**
- 2011 2013 Yu-Ju Wu, MSc. Title: "Palmitic acid-induced lipotoxicity and its protection by (+)-catechin in rat cortical astrocytes", Graduate Institute of Neuroscience and Cognitive Sciences, China Medical University, Taichung, Taiwan ROC, supervisory committee

## **Teaching:**

# China Medical University Hospital

- 2001 2005 Neuroscience course, Graduate Institute of Medical Sciences (5 lectures/10 contact h)
- 2001 2005 Application techniques for Neuroscience Research, Graduate Institute of Medical Sciences (3 lectures/6 contact h)
- 2002 2004 Introduction of Nobel Laureates in Medicine, School of Chinese Medicine (2 lecture/4 contact h)
- 2004 2006 Special topics in Neuroscience, Graduate Institute of Medical Sciences (1 lecture/2 contact h)

# National Taiwan University

2005 (fall) – Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 4 lectures/48 contact h)

- 2005 (fall) Animal Histology and Lab; Department of Veterinary Medicine (Credits: 4; 5 lectures/60 contact h)
- 2005 (fall) Veterinary seminar series, Master Program (30 contact h)
- 2005 (fall) Veterinary seminar series, PhD Program (30 contact h)
- 2005 (fall) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2005 (fall) Special Topics of Neuroscience; Neurobiology and Cognitive Science Center (Credits: 2; 1 lectures/1 contact h)
- 2005 (fall) Neuroelectrophysiology; Department of Veterinary Medicine & Neurobiology and Cognitive Science Center (Credits: 2; 16 lectures/32 contact h)
- 2006 (spring) –Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 3 lectures/36 contact h)
- 2006 (spring) Veterinary Genetics; Department of Veterinary Medicine (Credits: 2; 2 lectures/6 contact h)
- 2006 (spring) –Embryology; Department of Veterinary Medicine (Credits: 2; 8 lectures/16 contact h)
- 2006 (spring) Veterinary seminar series, Master Program (30 contact h)
- 2006 (spring) Veterinary seminar series, PhD Program (30 contact h)
- 2006 (spring) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2006 (fall) Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 4 lectures/48 contact h)
- 2006 (fall) Animal Histology and Lab; Department of Veterinary Medicine (Credits: 4; 5 lectures/60 contact h)
- 2006 (fall) Veterinary seminar series, Master Program (30 contact h)
- 2006 (fall) Veterinary seminar series, PhD Program (30 contact h)
- 2006 (fall) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2006 (fall) Special Topics of Neuroscience; Neurobiology and Cognitive Science Center (Credits: 2; 1 lectures/1 contact h)
- 2006 (fall) Neuroelectrophysiology; Department of Veterinary Medicine & Neurobiology and Cognitive Science Center (Credits: 2; 16 lectures/32 contact h)
- 2007 (spring) Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 3 lectures/36 contact h)
- 2007 (spring) Veterinary Genetics; Department of Veterinary Medicine (Credits: 2; 2 lectures/6 contact h)
- 2007 (spring) –Embryology; Department of Veterinary Medicine (Credits: 2; 8 lectures/16 contact h)
- 2007 (spring) Veterinary seminar series, Master Program (30 contact h)
- 2007 (spring) Veterinary seminar series, PhD Program (30 contact h)
- 2007 (spring) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2007 (fall) Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 4 lectures/48 contact h)
- 2007 (fall) Animal Histology and Lab; Department of Veterinary Medicine (Credits: 4; 5 lectures/60 contact h)
- 2007 (fall) Veterinary seminar series, Master Program (30 contact h)

- 2007 (fall) Veterinary seminar series, PhD Program (30 contact h)
- 2007 (fall) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2007 (fall) Special Topics of Neuroscience; Neurobiology and Cognitive Science Center (Credits: 2; 1 lectures/1 contact h)
- 2007 (fall) Neuroelectrophysiology; Department of Veterinary Medicine & Neurobiology and Cognitive Science Center (Credits: 2; 16 lectures/32 contact h)
- 2008 (spring) Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 3 lectures/36 contact h)
- 2008 (spring) Veterinary Genetics; Department of Veterinary Medicine (Credits: 2; 2 lectures/6 contact h)
- 2008 (spring) Embryology; Department of Veterinary Medicine (Credits: 2; 8 lectures/16 contact h)
- 2008 (spring) Veterinary seminar series, Master Program (30 contact h)
- 2008 (spring) Veterinary seminar series, PhD Program (30 contact h)
- 2008 (spring) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2008 (fall) Veterinary Physiology and Lab; Department of Veterinary Medicine (Credits: 4; 4 lectures/48 contact h)
- 2008 (fall) Animal Histology and Lab; Department of Veterinary Medicine (Credits: 4; 5 lectures/60 contact h)
- 2008 (fall) Veterinary seminar series, Master Program (30 contact h)
- 2008 (fall) Veterinary seminar series, PhD Program (30 contact h)
- 2008 (fall) Clinical Conference for Undergraduate; Department of Veterinary Medicine (Credits: 2; 30 contact h)
- 2008 (fall) Special Topics of Neuroscience; Neurobiology and Cognitive Science Center (Credits: 2: 1 lectures/1 contact h)
- 2008 (fall) Neuroelectrophysiology; Department of Veterinary Medicine & Neurobiology and Cognitive Science Center (Credits: 2; 16 lectures/32 contact h)
- \*\*\* Similar courses and lectures have been offered every year \*\*\*

#### **Presented Papers, Invited Lectures & Invited Seminars:**

- 1. Topic: The sleeping brain as a window on the immune system: the neuroimmunomodulation. Monthly Meeting of Mid-Taiwan Neurology Society, Taichung, Taiwan, 2002
- 2. Topic: Diurnal and nocturnal amygdaloid-kindled epilepsies induce diverse sleep alterations. MacKay Memorial Hospital, Taipei, Taiwan, 2003
- 3. Topic: Kindling stimuli delivered at different times in sleep-wake cycle produce diverse patterns of sleep disruption. The 13<sup>th</sup> Bimonthly Meeting of Movement Disorders Club in Mid-Taiwan, Taichung, Taiwan, 2003
- 4. Topic: New perspective in Parkinson's disease. Cardinal Tien Hospital, Taipei, Taiwan, 2005

- 5. Topic: Immuno-endocrine interface as a regulator in physiological sleep and neurological disease-induced sleep alterations, Chang-Gung Memorial Hospital, Sleep Group Meeting, Taipei, Taiwan, 2006
- 6. Topic: How does Chinese Medicine treat insomnia? China Medical University, Department of Acupuncture Science, Taichung, Taiwan, 2007.
- 7. Topic: How does Chinese Medicine treat insomnia? Jen-Teh Junior College of Medicine, Nursing and Mangement, Mioali, Taiwan, 2007.
- 8. Topic: MALDI mass imaging analysis on the peptides and proteins of rat brain tissue with parkinsonism induced by proteasome inhibitor, Conference for the 100<sup>th</sup> Formosan Medical Association, Taipei, Taiwan 2007.
- 9. Topic: Cytokines, Daytime Somnolence & Parkinson's Disease, Annual Meeting for Taiwan Society of Sleep Medicine 2008, Taipei, Taiwan 2008.
- 10. Topic: Cytokines, Daytime Somnolence & Parkinson's Disease, Kaohsiung Medical University, Kaohsiung, Taiwan 2008.
- 11. Topic: Animal Studies of Sleep Medicine, Department of Neurology, Kaohsiung Medical University, Kaohsiung, Taiwan, 2009, Oct.
- 12. Topic: Cytokines, Daytime Somnolence & Parkinson's Disease, Chung-Shan Medical University, Taichung, Taiwan 2009.
- 13. Topic: The role of proinflammatory cytokines in Parkinson's disease-induced daytime somnolence, BIT's 2<sup>nd</sup> Annual International Congress of Antibody 2010 (ICA 2010), Beijing, China, 2010.
- 14. Topic: Homeostasis in sleep. Department of Neurology, Kaohsiung Medical University, Kaohsiung, Taiwan, 2010, Nov.
- 15. Topic: Animal study of sleep neuroscience. Department of Neurology, Kaohsiung Medical University, Kaohsiung, Taiwan, 2010, Nov.
- 16. Topic: Epilepsy alters sleep homeostasis, Department of Psychology, National Chung Cheng University, Chia-Yi, Taiwan, 2010 Dec.
- 17. Topic: Epilepsy alters sleep homeostasis, Graduate Institute of Neural and Cognitive Sciences, China Medical University, Taichung, Taiwan, 2011 June.
- 18. Topic: Opioid receptors in the nucleus tractus solitarius (NTS) mediate electroacupuncture-induced sleep alteration, Graduate Institute of Acupuncture Science, China Medical University, Taichung, Taiwan, 2012 January.

- 19. Topic: Neuroendocrines on epilepsy-induced sleep disruptions, The 7<sup>th</sup> Asian Sleep Research Society Congress, Taipei, Taiwan, 2012, December.
- 20. The 7th Asian Sleep Research Society Congress, Moderator, Taipei, Taiwan, 2012, December
- 21. Topic: Epilepsy, sleep, and the effect of acupuncture, Graduate Institute of Acupuncture Science, China Medical University, Taichung, Taiwan, 2013, January.
- 22. Topic: 認識睡眠:讓您一夜好眠, National Taiwan University & National Science Council, Taipei, Taiwan 2013, January.
- 23. The 11<sup>th</sup> Taiwan Society of Sleep Medicine Annual Meeting, Moderator, Taipei, Taiwan, 2013, March.

#### COMMITTEE AND ADMINISTRATIVE SERVICE

# China Medical University

Departmental:

2004 – 2005 Budget Control Committee

#### Institutional:

2003 – 2005 Institutional Animal Care and Use Committee

# National Taiwan University

- 2005 Graduate Program Admission Committee (Master Program), Department of Veterinary Medicine
- 2005 Graduate Program Admission Committee (PhD Program), Department of Veterinary Medicine
- 2005 Undergraduate Program Admission Committee, Department of Veterinary Medicine
- 2005 International Student Association Committee, College of Bio-Resources & Agriculture
- 2006 神經生物與認知科學中心、學術委員會委員
- 2008 共同儀器中心、委員 Core Laboratory Committee, College of Bio-Resources & Agriculture
- 2010 2011 導師工作委員會, Department of Veterinary Medicine
- 2010 生物產業自動化教學及研究中心、諮詢委員會委員
- 2010 Research Committee, Taiwan Society of Sleep Medicine
- 2013 國立台灣大學生物資源暨農學院、院教評委員

#### **BIBLIOGRAPHY**

# Completed Publications in Scientific Journals Peer Reviewed

- 1 Pei-Lu Yi, Chin-Yu Lu, Chiung-Hsiang Cheng, Yi-Fong Tsai, Chung-Tien Lin, <u>Fang-Chia Chang\*</u>. Amygdala opioid receptors mediate the electroacupuncture-induced deterioration of sleep disruptions in epilepsy rats. *Journal of Biomedical Science* 2013 (under revised)
- 2 Pei-Lu Yi, Chin-Yu Lu, Chiung-Hsiang Cheng, Yi-Fong Tsai, Chung-Tien Lin, <u>Fang-Chia Chang\*</u>. Activation of Amygdala Opioid Receptors by Electroacupuncture of Feng-Chi (GB20) Acupoints Exacerbates Focal Epilepsy. *BMC Complementary and Alternative Medicine* 2013; 13:290.
- 3 Yi-Tse Hsiao, Pei-Lu Yi, Chiung-Hsiang Cheng, <u>Fang-Chia Chang\*</u>. Disruption of footshock-induced theta rhythms by stimulating median raphe nucleus reduces anxiety in rats. *Behavioural Brain Research* 2013; 247:193-200.
- 4 Shuo-Bin Jou, I-Feng Kuo, Pei-Lu Yi, <u>Fang-Chia Chang\*</u>. Electrical stimulation of left anterior thalamic nucleus with high-frequency and low-intensity currents reduces the rate of pilocarpine-induced epilepsy in rats. *Seizure* 2013; 22:221-229.
- 5 Yi-Tse Hsiao, Chiung-Hsiang Cheng, Pei-Lu Yi, <u>Fang-Chia Chang\*</u>. GABAergic neurons in the median raphe nucleus (MRN) modulate footshock-induced rapid eye movement (REM) sleep disturbance in rats. *Taiwan Veterinary Journal* 2013; 39(1): 27-38.
- 6 Pei-Lu Yi, Ying-Ju Chen, Chung-Tien Lin, <u>Fang-Chia Chang\*</u>. Occurrence of Epilepsy at Different Zeitgeber Times Alters Sleep Homeostasis Differently in Rats. *Sleep* 2012; 35(12):1651-1665.
- 7 Chung-Yao Hsu, <u>Fang-Chia Chang\*</u>, Hwee-Yeong Ng, Chien-Chun Kuo, Yueh-Ting Lee, Chin-Yu Lu, Chien-Te Lee. Disrupted circadian rhythm in rats with nephrectomy-induced chronic kidney disease. *Life Sciences* 2012; 91:127-131.
- 8 Yi-Tse Hsiao, Shuo-Bin Jou, Pei-Lu Yi, <u>Fang-Chia Chang</u>\*. Activation of GABAergic pathway by hypocretin in the median raphe nucleus (MRN) mediates stress-induced theta rhythm in rats. *Behavioural Brain Research* 2012; 233:224-231.
- 9 Chiung-Hsiang Cheng, Pei-Lu Yi, Han-Han Chang, <u>Fang-Chia Chang\*</u>. Morphology Alterations of Synapses in the Ventromedial Nucleus (VM) of Thalamus and Caudal Nucleus Tractus Solitarius (NTS) after 10 Hz Electroacupuncture in Rats. *Taiwan Veterinary Journal* 2012; 38(2):75-83.
- 10 Yi-Tse Hsiao, Pei-Lu Yi, Chia-Ling Li, <u>Fang-Chia Chang\*</u>. Effect of Cannabidiol on Sleep Disruption Induced by the Repeated Combination Tests consisting of Open Field and Elevated Plus-maze in Rats. *Neuropharmacology* 2012; 62:373-384.
- 11 Chiung-Hsiang Cheng, Pei-Lu Yi, Han-Han Chang, Yi-Fong Tsai, <u>Fang-Chia Chang\*</u>. Kappa-opioid Receptors in the Caudal Nucleus Tractus Solitarius (NTS) Mediate 100 Hz Electroacupuncture-induced Sleep Activities in Rats. *Evidence-based Complementary and Alternative Medicine* 2012; Article ID715024, doi: 10.1155/2012/715024.
- 12 <u>Fang-Chia Chang\*</u>. Effects of traditional Chinese medicine in insomnia treatment: the possible physiological mechanisms. In: Leon V. Berhardt, editor. *Advances in Medicine and Biology: Volume 22*. Nova Science Publishers:New York, 2011; Chapter 3.
- 13 Han-Han Chang, Pei-Lu Yi, Chiung-Hsiang Cheng, Chin-Yu Lu, Yi-Tse Hsiao, Yi-Fong Tsai, Chia-Ling Li, **Fang-Chia Chang\***. Biphasic effects of baicalin, an active constituent of *Scutellaria baicalensis* Georgi, in the spontaneous sleep-wake regulation. *Journal of Ethnopharmacology* 2011; 135:359-368.
- 14 Chiung-Hsiang Cheng, Pei-Lu Yi, Jaung-Geng Lin, <u>Fang-Chia Chang\*</u>. Endogenous opiates in the nucleus tractus solitaries mediate electroacupuncture-induced sleep activities in rats. *Evidence-based Complementary and Alternative Medicine* 2011; Article ID159209, doi: 10.1093/ecam/nep132.

- 15 Chiung-Hsiang Cheng, Yun-Feng Ku, Chun-Han Hou, Lih-Seng Yeh, and <u>Fang-Chia Chang\*</u>. Nerve re-innervations by an end-to-side neurorrhaphy of myocutaneous transplantation in rats. *Taiwan Veterinary Journal* 2011; 37(3):143-151.
- 16 Han-Han Cang, Chiung-Hsiung Cheng, Pei-Lu Yi, Chin-Yu Lu, Yi-Fong Tsai, Yi-Tse Hsiao, <u>Fang-Chia Chang\*</u>. Biphasic Effects of Wogonin in the Regulation of Spontaneous Sleep. *Taiwan Veterinary Journal* 2011;37 (3):180-190.
- 17 Jong-Hang Chen, Tong-Rong Jan, **Fang-Chia Chang**, Chin-Chen Chou. Metabolism, neurotoxicity, and food safety influences of acrylamide. *Taiwan Veterinary Journal* 2011; 37(1):63-73.
- 18 Chin-Yu Lu, Pei-Lu Yi, Chon-Haw Tsai, Chiung-Hsiang Cheng, Han-Han Chang, Yi-Tse Hsiao, **Fang-Chia Chang\***. TNF-NF-κB signaling mediates excessive somnolence in hemiparkinsonian rats. *Behavioural Brain Research* 2010; 208:484-496.
- 19 **Fang-Chia Chang\***. Minireview: canine insomnia. *Journal of Veterinary Clinical Sciences* 2009; 2(4):100-107.
- 20 Shiaw-Pyng Wey, Hsin-Ying Wu, <u>Fang-Chia Chang</u>, Tong-Rong Jan. Methamphetamine and diazepam suppress antigen-specific cytokine expression and antibody production in ovalbumin-sensitized BALB/c mice. *Toxicology Letters* 2008; 181:157-162.
- 21 Pei-Lu Yi, Yi-Tes Hsiao, Chon-Haw Tsai, Tong-Rong Jan, Chin-Yu Lu, <u>Fang-Chia Chang</u>\*. Serotonergic system in the central nucleus of amygdala mediates cannabidiol-induced sleep alteration. *The Open Sleep Journal* 2008; 1:58-68.
- 22 Ming-Kuei Lu, Hsu-Tzu Shih, Kai-Ju Huang, Ulf Ziemann, Chon-Haw Tsai, <u>Fang-Chia Chang\*</u>, Ya-Chu Chen, Yi-Tsung Lin, Wei-Shih Huang, Cheng-Chun Lee, Chin-San Liu. Movement-Related Cortical Potential in Patients with Machado-Joseph Disease. *Clinical Neurophysiology* 2008; 119:1010-1019.
- 23 Pei-Lu Yi, Chun-Pang Lin, Chon-Haw Tsai, Jaung-Geng Lin & **Fang-Chia Chang\***. The involvement of serotonin receptors in suanzaorentang-induced sleep alteration. *Journal of Biomedical Science* 2007; 14:829-840.
- 24 Pei-Lu Yi, Chon-Haw Tsai, Ming-Kuei-Lu, Hsu-Jan Liu, Ya-Chu Chen, **Fang-Chia Chang\***. Interleukin-1β mediates sleep alteration in rats with rotenone-induced parkinsonism. *Sleep* 2007; 30(4):413-425.
- 25 Pei-Lu Yi, Chon-Haw Tsai, Ya-Chu Chen, <u>Fang-Chia Chang</u>\*. Gamma-aminobutyric acid (GABA) receptor mediates suanzaorentang, a traditional Chinese herb remedy, -induced sleep alteration. *Journal of Biomedical Science* 2007; 14:258-297.
- 26 Ming-Kuei Lu, <u>Fang-Chia Chang</u>, Yu-Wan Yang, Yu-Chin Lin, Cheng-Chun Lee, Chon-Haw Tsai. Abnormal movement-related cortical potential in patients with subcortical heterotopia. *Brain & Development* 2006; 28:560-565.
- 27 Yu-Wan Yang, Chon-Haw Tsai, <u>Fang-Chia Chang</u>, Ming-Kuei Lu, Paiyi Chiu. Reversible Paraneoplastic Limbic Encephalitis Caused by a Benign Ovarian Teratoma: Report of a Case and Review of literatures. *Journal of Neuro-Oncology* 2006; 80:309-312.
- 28 CH Tsai, <u>FC Chang</u>, YT Huang, RS Chen, CC Chen, T Wu, YH Weng, SZ Lee, ZD Lee, CY Lieu, HC Chang, MK Lu, CC Lee, CS Lu. Pallidotomy effect on the central excitability in patients with severe Parkinson's disease. *Movement Disorders* 2005; 20(4):463-470.
- 29 Yu-Wan Yang, <u>Fang-Chia Chang</u>, Chon-Haw Tsai, Jui-Chen Wu, Chin-Song Lu, Chi-Chung Juo, Ming-Kuei Lu, Wei-Liang Chen, Chen-Chun Lee. Clinical and magnetic resonance imaging manifestations of Holmes Tremor. *Acta Neurologica Taiwanica* 2005; 14(1):9-15.

- 30 Pei-Lu Yi, Chon-Haw Tsai, Jaung-Geng Lin, Hsu-Jan Liu and **Fang-Chia Chang\***. Effects of electroacupuncture of "Anmian" acupoints on sleep activities in rats: the implication of caudal nucleus tractus solitarius. *Journal of Biomedical Science* 2004; 11:579-590.
- 31 Pei-Lu Yi, Chon-Haw Tsai, Ming-Kuei Lu, Ya-Ju Chen, Yu-Wan Yang and <u>Fang-Chia Chang\*</u>. The Effects of a Brief Light Pulse and Intracerebroventricular Injection on Sleep-Wake Activity in Rats, *Mid-Taiwan Journal of Medicine*. 2004; 9(4):211-218.
- 32 Pei-Lu Yi, Mark R. Opp, <u>Fang-Chia Chang\*</u>. Increase of corticotropin-releasing hormone (CRH) in the central nervous system mediates stressors-induced sleep alteration, *Mid-Taiwan Journal of Medicine* 2004; 9(3):80-86.
- 33 Pei-Lu Yi, Chon-Haw Tsai, Jaung-Geng Lin, Cheng-Chun Lee and <u>Fang-Chia Chang\*</u>. Kindling stimuli delivered at different times in the sleep-wake cycle. *Sleep* 2004; 27(2):203-212.
- 34 **Fang-Chia Chang**, Huei-Yann Tsai, Ming-Chien Yu, Pei-Lu Yi, and Jaung-Geng Lin. Central serotonergic system mediates analgesic effect of electroacupuncture on Zusanli (ST36) acupoint. *Journal of Biomedical Science* 2004; 11:179-185.
- 35 CH Tsai, **FC Chang**, YC Su, FJ Tsai, MK Lu, CC Lee, CC Kuo, YW Yang, CS Lu. Two novel mutations of the glycine receptor gene and electrophysiological manifestation in a family with autosomal recessive hereditary hypereklpexia. *Neurology* 2004; 63(5):893-896.
- 36 <u>Fang-Chia Chang</u> and Mark R. Opp. A corticotropin-releasing hormone antisense oligodeoxynucleotide reduces spontaneous waking in the rats. *Regulatory Peptides* 2004; 117(1):43-52.
- 37 PC Tsai, <u>FC Chang</u>, CH Tsai, FR Jang, AN Shen, YT Huang, SC Lai, TH Yeh, MK Lu, CS Lu. Focal hand myoclonus caused by a small hematoma underneath the cerebral motor cortex. *European Neurology* 2003; 50:114-117.
- 38 Tzung-Chang Tsai, Jer-Yuam Wu, Cheng-Chung Lee, Chon-Haw Tsai, Fuu-Jen Tsai, **Fang-Chia Chang**, Chi-Chung Kuo. No association between the dopamine transproter gene polymorphism and sporadic Parkinson's disease among Chinese in Taiwan. *Mid-Taiwan Journal of Medicine* 2003; 8(Supplement 2):S75-8.
- 39 **Fang-Chia Chang** and Mark R. Opp. The role of corticotropin-releasing hormone (CRH) in stressor-induced alterations of sleep in the rat. *American J. Physiology* 2002; 283:R400-R407.
- 40 C.H. Tsai, S.K. Lo, L.C. See, H.Z. Chen, R.S. Chen, Y.H. Weng, **F.C. Chang**, CS Lu. Environmental risk factors of young onset Parkinson's disease: a case-control study. *Clinical Neurology and Neurosurgery* 2002; 104:328-333.
- 41 <u>Fang-Chia Chang\*</u> and Mark R. Opp. Corticotropin-releasing hormone (CRH) as a regulator of waking [Review], *Neuroscience and Biobehavioral Reviews* 2001; 25(5):445-453.
- 42 **Fang-Chia Chang** and Mark R. Opp. IL-1 is a mediator of increases in slow wave sleep induced by CRH receptor blockade. *American Journal of Physiology* 2000; 279:R793-R802.
- 43 **Fang-Chia Chang** and Mark R. Opp. Pituitary CRH receptor blockade reduces waking in the rat. *Physiology & Behavior* 1999; 67:691-696.
- 44 **Fang-Chia Chang** and Mark R. Opp. Blockade of corticotropin-releasing hormone (CRH) receptors reduces spontaneous waking in the rat. *American Journal of Physiology* 1998; 275:R793-R802.
- 45 Pei-Lu Yi, Fang-Chia Chang, Jing-Jane Tsai, Chen-Road Hung and Po-Wu Gean. The involvement of metabotropic glutamate receptors in long-term depression of N-methyl-D-

- aspartate receptor-mediated synaptic potential in the rat hippocampus. *Neuroscience Letters* 1995; 185:207-210.
- 46 Po-Wu Gean, <u>Fang-Chia Chang</u>, Pei-Lu Yi, Jju-Home Lin and Jing-Jane Tsai. Activation of metabotropic glutamate receptors in conjunction with postsynaptic depolarization triggers a long-term depression of the N-methyl-D-aspartate receptor-mediated synaptic potential in the rat hippocampus. *J. Biomedical Science* 1995; 2:166-173.
- 47 Po-Wu Gean, <u>Fang-Chia Chang</u>, Chiung-Chun Huang, Jju-Home Lin and Long-Joy Way. Long-term enhancement of EPSP and NMDA receptor-mediated synaptic transmission in the amygdala. *Brain Research Bulletin* 1993; 31:7-11.
- 48 P.-W. Gean, <u>F.-C. Chang</u> and C.-R. Hung. Use-dependent modification of a slow NMDA receptor-mediated synaptic potential in rat amygdalar slices. *Journal of Neuroscience Research* 1993; 34:635-641.
- 49 Po-Wu Gean and <u>Fang-Chia Chang</u>. Pharmacological characterization of excitatory synaptic potentials in rat basolateral amygdaloid neurons. *Synapse* 1992; 11:1-9.
- 50 Po-Wu Gean and <u>Fang-Chia Chang</u>. Ketamine suppresses synchronized discharges in the disinhibited amygdala slice. *Brain Research Bulletin* 1991; 26:923-927.
- 51 P.-W. Gean and **F.-C. Chang**. Bursting discharges in disinhibited amygdala slices: the role of excitatory amino acid receptors. *Neuropharmacology* 1991; 30:797-803.
- 52 Po-Wu Gean, Shui-Mei Chou and <u>Fang-Chia Chang</u>. Epileptiform activity involved by 4-aminopyridine in rat amygdala neurons: the involvement of N-methyl-D-aspartate receptors. *European Journal of Pharmacology* 1990; 184:213-221.

# Manuscripts submitted for publication

1. Tsai, Chon-Haw; Lu, Ming-Kuei; Huang, Ying-Zu; Huang, Kai-Ju; Chen, Chun-Ming; Yang, Yu-Wan; Chang, Fang-Chia; Shih, Hsu-Tzu. The Effect of Continuous Theta Burst Magnetic Stimulation on the Movement-Related Cortical Potential. (submitted).

#### Review Papers

1 <u>Fang-Chia Chang\*</u> and Mark R. Opp, Corticotropin-releasing hormone (CRH) as a regulator of waking [Review], *Neuroscience and Biobehavioral Reviews* 2001; 25 (5): 445-453.

## Abstracts

- 1. Yi P, Cheng C, <u>Chang F</u>. Opioid receptors in the caudal nucleus tractus solitaries mediates electroacupuncture-induced sleep enhancement. 26<sup>h</sup> Annual Meeting of Associated Professional Sleep Societies, Boston, Massachusetts, SLEEP Vol. 35, Abstract supplement, pp. A61, 2012.
- 2. Chun-Ying Fang, <u>Fang-Chia Chang</u>. The Somnogenic Effect of T1-11 via the Mediation of Adenosine 2A Receptors. *The 27<sup>th</sup> Joint Annual Conference Biomedical Science, Taipei, Taiwan*, 2012.
- 3. Cheng-Yu Ma, Pei-Lu Yi, **Fang-Chia Chang**. The Role of SCN Hypocretin in the Alteration of Sleep Circadian Fluctuation. *The 27<sup>th</sup> Joint Annual Conference Biomedical Science, Taipei, Taiwan*, 2012.

- 4. I-Feng Kao, Pei-Lu Yi, <u>Fang-Chia Chang</u>. Unilateral Deep Brain Stimulation of Anterior Thalamic Nucleus in the Suppression of Pilocarpine-induced Epilepsy. *The 27<sup>th</sup> Joint Annual Conference Biomedical Science*, *Taipei*, *Taiwan*, 2012.
- 5. **F.-C. Chang**, P.-L. Yi. Kindling stimuli delivered at distinct zeitgeber time points alter homeostatic factor and circadian rhythm. *Worldsleep 2011, Sleep and Biological Rhythms Vol. 9, pp. 363-364.*
- 6. Y.-T. Hsiao, **F.-C. Chang**. Effects of stimulation of median raphe nucleus on stress and stress-induced sleep alterations. *Worldsleep 2011, Sleep and Biological Rhythms Vol. 9, pp. 345-346.*
- 7. Yi P, <u>Chang F</u>. Epilepsy alters sleep homeostasis. 25<sup>h</sup> Annual Meeting of Associated Professional Sleep Societies, Minneapolis, Minnesota, SLEEP Vol. 34, Abstract supplement, pp. A53-54, 2011.
- 8. Hsiao Y, <u>Chang F</u>. The relationship between theta oscillation and REM sleep disturbance induced by stressors. 25<sup>h</sup> Annual Meeting of Associated Professional Sleep Societies, Minneapolis, Minnesota, SLEEP Vol. 34, Abstract supplement, pp. A47, 2011.
- 9. Li C, <u>Chang F</u>. Avoidance learning-induced sleep alteration in rats. 25<sup>h</sup> Annual Meeting of Associated Professional Sleep Societies, Minneapolis, Minnesota, SLEEP Vol. 34, Abstract supplement, pp. A90, 2011.
- 10. Chia-Ling Li, <u>Fang-Chia Chang</u>. Sleep alteration induced by avoidance training in rats. *The* 26<sup>th</sup> *Joint Annual Conference Biomedical Science*, *Taipei*, *Taiwan*, 2011.
- 11. Yi-Tse Hsiao, <u>Fang-Chia Chang</u>. Disruption of theta oscillation in anxiety: Relief anxiety and the effects of REM sleep. *The 26<sup>th</sup> Joint Annual Conference Biomedical Science*, *Taipei*, *Taiwan*, 2011.
- 12. Chen Y, Yi P, <u>Chang F</u>. The circadian expression of PER1 protein within the suprachiasmatic nucleus of temporal lobe epilepsy (TLE) rats. 24<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, San Antonio, Texas, SLEEP Vol. 33, Abstract supplement, pp. A67, 2010
- 13. Hsiao Y, <u>Chang F</u>. Cannabidiol reduces anxiety and anxiety-induced sleep disruption. 24<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, San Antonio, Texas, SLEEP Vol. 33, Abstract supplement, pp. A76, 2010
- 14. Hsu L, Yi P, Li C, <u>Chang F</u>. The role of CRH in tail suspension test (TST)-induced sleep alterations. 24<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, San Antonio, Texas, SLEEP Vol. 33, Abstract supplement, pp. A77, 2010
- 15. Ying-Ju Chen, Pei-Lu Yi, **Fang-Chia Chang**. The expression of clock protein, PER1, within the suprachiasmatic nucleus in temporal lobe epilepsy (TLE) rats. *The 25<sup>th</sup> Joint Annual Conference Biomedical Science*, *Taipei*, *Taiwan*, 2010
- 16. Li-Ning Hsu, Pei-Lu Yi, **Fang-Chia Chang**. Effect of CRH in sleep alterations induced by tail suspension test. *The 25<sup>th</sup> Joint Annual Conference Biomedical Science, Taipei, Taiwan,* 2010
- 17. Chang H, Yi P, <u>Chang F</u>. Effects of Baicalin & Wogonin in the Regulation of Spontaneous Sleep. 23<sup>rd</sup> Annual Meeting of Associated Professional Sleep Societies, Seattle, Washington, SLEEP Vol. 32, Abstract supplement, pp. A38, 2009
- 18. Han-Han Chang, Pei-Lu Yi, **Fang-Chia Chang**, Effects of Baicalin & Wogonin in the Regulation of Spontaneous Sleep. *The 24<sup>th</sup> Joint Annual Conference Biomedical Science*, *Taipei*, *Taiwan*, 2009

- 19. Huang HC, Lu MK, Yang YW, Yi PL, <u>Chang FC</u>, Lee CC, Tsai CH, Movement-Related Cortical Potentials in Congenital Mirror Movement. 2009 Annual Meeting for Taiwan Neurological Society.
- 20. Yi-Tse Hsiao, Pei-Lu Yi, Chin-Yu Lu and Fang-Chia Chang, Serotoninergic system mediates sleep-wake alteration induced by cannabidiol in the central nucleus of amygdala. 22<sup>nd</sup> Annual Meeting of Associated Professional Sleep Societies, Baltimore, Maryland, SLEEP Vol. 31, Abstract supplement, pp. A36-37, 2008
- 21. Lu MK, Huang KJ, Shih HT, Yang YW, Huang WS, <u>Chang FC</u>, Tsai CH, Different manifestations of movement-related cortical potentials in patients with Parkinson's disease with and without rest tremor. 12<sup>th</sup> International Congress of Parkinson's Disease and Movement Disorders, Chicago, IL, Movement Disorders Vol. 23 (1), Abstract supplement, pp. \$295-296, 2008
- 22. Lin YC, <u>Chang FC</u>, Tsai CH, Lu MK, The Short-term Effect of Acupuncture on Cortical Excitability in Patients with Parkinson's Disease. 2008 Annual Meeting for Taiwan Neurological Society.
- 23. <u>Fang-Chia Chang</u>, Chin-Yu Lu, Pei-Lu Yi and Yi-Tes Hsiao, TNF-NF-kappa B signaling pathway mediates sleep alteration in rats with proteasome inhibitor. *The 5th World Congress of the World Federation of Sleep Research and Sleep Medicine Societies*, 2007
- 24. Fang-Chia Chang, Yi-Tes Hsiao, Pei-Lu Yi, and Chin-Yu Lu, Serotoninergic system mediates sleep-wake alteration induced by cannabidiol in the central nucleus of amygdala. The 5th World Congress of the World Federation of Sleep Research and Sleep Medicine Societies, 2007
- 25. Fang-Chia Chang, Pei-Lu Yi and Chin-Yu Lu, TNF-α mediates sleep alteration in proteasome inhibitor, MG-132, -induced Parkinsonism rats. 21<sup>st</sup> Annual Meeting of Associated Professional Sleep Societies, Minneapolis, Minnesota, SLEEP Vol. 30, Abstract supplement, pp. A15, 2007
- 26. Fang-Chia Chang, Pei-Lu Yi, Chon-Haw Tsai and Ya-Ju Chen, GABA mediates suanzaorentang, a traditional Chinese compound medication, -induced sleep alteration. 20<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, Salt Lake City, SLEEP Vol. 29, Abstract supplement, pp. A6, 2006
- 27. Fang-Chia Chang, Pei-Lu Yi, Chon-Haw Tsai and Ya-Ju Chen, Interleukin-1 (IL-1) mediates Parkinsonism-induced sleep alterations. 19<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, Denver, SLEEP Vol. 28, Abstract supplement, pp. A1, 2005
- 28. <u>Fang-Chia Chang</u>, Pei-Lu Yi, Chon-Haw Tsai and Ya-Ju Chen, Cytokines, in addition to dopamine and gaba, are involved in Parkinsonism-induced sleep alterations. *The 20<sup>th</sup> Joint Annual Conference Biomedical Science*, *Taipei*, *Taiwan*, 2005
- 29. <u>Fang-Chia Chang</u>, Pei-Lu Yi, Chon-Haw Tsai, Ming-Kuei Lu, Ya-Ju Chen, Yu-Wan Yang, The Effects of Brief Light Pulse and Intracerebroventricular Injection on Sleep-Wake Activity in Rats. *The 2005 Annual Meeting of Taiwan Society of Sleep Medicine*, *Taipei*, *Taiwan*, 2005
- 30. Yu-Wan Yang, Chon-Haw Tsai, Ming-Kuei Lu, Chi-Chong Kuo, <u>Fang-Chia Chang</u>, Chen-Chun Lee, Fu-Jen Tsai, Essential Tremor- The Clinical And Electrophysiological Features. *The 2005 Annual Meeting of Taiwan Neurological Society, Taipei, Taiwan*, 2005
- 31. Chung-Bai Yang, Yu-Wan Yang, Chi-Chong Kuo, <u>Fang-Chia Chang</u>, Ming-Kuei Lu, Chon-Haw Tsai, Vigorous Leg Clonus Mimicking Tremor. *The 2005 Annual Meeting of*

- Taiwan Neurological Society, Taipei, Taiwan, 2005
- 32. Yu-Chin Lin, <u>Fang-Chia Chang</u>, Chon-Haw Tsai, Epilepsia Partialis Continua Result From A Cerebral Vascular Anomaly. *The 2005 Annual Meeting of Taiwan Neurological Society*, *Taipei*, *Taiwan*, 2005
- 33. Fang-Chia Chang, Pei-Lu Yi, Chon-Haw Tsai, Ming-Kuei Lu, Ya-Chu Chen, Yu-Wan Yang, A Brief Light Pulse And Intracerebroventricular Injection Alter Sleep-Wake Activity In Rats. *The 2005 Annual Meeting of Taiwan Neurological Society, Taipei, Taiwan*, 2005
- 34. <u>Chang, Fang-Chia</u>; Yi, Pei-Lu; Liu, Hsu-Jan; Tsai, Chon-Haw, Caudal nucleus tractus solitarius involves in the electroacupuncture-induced sleep-wake regulation. *18<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies*, *Philadelphia*, *SLEEP Vol.* 27, *Abstract supplement*, pp. A4-5, 2004
- 35. **F.C. Chang**, P.L. Yi, C.H. Tsai, Epilepsy occurred at different circadian times produced diverse sleep disruptions. 19<sup>th</sup> Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan, Abstract supplement, pp 282, April 10 & 11, 2004
- 36. <u>Chang, FC</u>, Yi, PL, Tsai CH, Corticotropin-releasing hormone (CRH) mediates amygdaloid-kindling induced sleep wake alteration in the rat. 17<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, Chicago, SLEEP Vol. 26, Abstract supplement, pp. A2, 2003
- 37. Mark R. Opp and **Fang-Chia Chang**, The increase in SWS sleep induced by a corticotropin-releasing hormone (CRH) receptor antagonist is mediated by the somnogenic cytokine interleukine-1β. World Federation of Sleep Research Societies (WFSRS), 3<sup>rd</sup> international congress, 1999.
- 38. <u>Fang-Chia Chang</u> and Mark Opp, The role of corticotropin-releasing hormone (CRH) in stressor-induced alterations of sleep in the rat., *13<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies*, abstract No.B049.A, pp29, 1999.
- 39. M. R. Opp and **Fang-Chia Chang**, Corticotropin-releasing hormone receptor antagonists reduce waking in the rat., *14*<sup>th</sup> *European Congress on Sleep Research*, abstract No. 389, pp195, 1998.
- 40. **Fang-Chia Chang** and Mark R. Opp, Blockade of CRH receptors by α-hCRH or astressin reduces spontaneous waking in the rat., 12<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, abstract No.273.A, pp29, 1998.
- 41. Fang-Chia Chang and Mark R. Opp, CRH receptor blockade by α-hCRH and astressin reduces spontaneous waking in the rat., 27<sup>th</sup> Annual Meeting of Neuroscience, abstract No.310.8, pp739, 1997.
- 42. <u>Fang-Chia Chang</u> and Mark R. Opp, A corticotropin-releasing hormone antisense oligodeoxynucleotide reduces spontaneous waking in the rat., 11<sup>th</sup> Annual Meeting of Associated Professional Sleep Societies, abstract No.220, pp110, 1997.