

Ming-Tsung Tseng

CURRENT CONTACT

Dr. Ming-Tsung Tseng
Associate Professor
Graduate Institute of Brain and Mind Sciences,
National Taiwan University College of Medicine
No.1, Sec.1, Ren-ai Rd., Taipei 10051, Taiwan
Email: mingtsungtseng@ntu.edu.tw
Tel: +886-2-2312-3456 ext. 88870

EDUCATION

2004/9 – 2010/1 (PhD): Graduate Institute of Clinical Medicine, National Taiwan University, Taipei, Taiwan.
1992/9 – 1999/6 (MD): Department of Medicine, College of Medicine, National Taiwan University, Taipei, Taiwan.

PROFESSIONAL EXPERIENCE

2019/8 – Present: Associate professor in the Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taipei, Taiwan.
2014/2 – 2019/7: Assistant professor in the Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taipei, Taiwan.
2011/9 – 2013/9: Postdoctoral research fellow in the Pain Imaging Neuroscience Group supervised by Professor Irene Tracey, the director of FMRIB Center and head of Nuffield Division of Anaesthetics, University of Oxford, Oxford, UK.
2004/7 – 2011/6: Attending neurologist at Far Eastern Memorial Hospital, Taipei, Taiwan, and neurology clinic service at National Taiwan University Hospital, Taipei, Taiwan.
2000/7 – 2004/6: Neurology residency training at the Department of Neurology, National Taiwan University Hospital.

HONORS AND AWARDS

2011/1: Two-year Postdoctoral Research Abroad Program sponsored by the National Science Council of Taiwan (NSC 100-2917-I-564-028). Title: “Brain activation during the mnemonic processing for pain: a functional MRI study.”

PUBLICATIONS

1. Cheng-Wei Huang, Chin-Hsien Lin, Yi-Hsuan Lin, Hsin-Yun Tsai, Ming-Tsung Tseng* (2022, Mar). Neural Basis of Somatosensory Spatial and Temporal Discrimination in Humans: The Role of Sensory Detection. *Cerebral Cortex*, 32(7):1480-1493.
2. Chi-Chao Chao, Ming-Tsung Tseng, Yea-Huey Lin, Paul-Chen Hsieh, Chien-Ho Janice Lin, Shin-Leh Huang, Sung-Tsang Hsieh, Ming-Chang Chiang. (2021, May). Brain imaging signature of neuropathic pain phenotypes in small-fiber neuropathy: altered thalamic connectome and its associations with skin nerve degeneration. *Pain*, 162(5):1387-1399.
3. Yao-Wei Shih, Hsin-Yun Tsai, Feng-Sheng Lin, Yi-Hsuan Lin, Chun-Yen Chiang, Zheng-Liang Lu, Ming-Tsung Tseng* (2019, Feb). Effects of positive and negative expectations on human pain perception engage separate but interrelated and dependently regulated cerebral mechanisms. *The Journal of Neuroscience*, 39(7), 1261-1274.
4. Chiang Hao, Chang Kai-Chieh, Hung-Wei Kan, Shao-Wei Wu, Ming-Tsung Tseng, Hsueh

- Hsueh-Wen, Yea-Huey Lin, Sung-Tsang Hsieh (2018, Jul). Physiological and pathological characterization of capsaicin-induced reversible nerve degeneration and hyperalgesia. *European Journal of Pain*, 22(6), 1043-1056.
5. Sung-Ling Yang, Ting-Wei Wu, Ming-Tsung Tseng* (2018, Feb). Vigilance-related attention systems subserve the discrimination of relative intensity differences between painful stimuli. *Pain*, 159(2):359-370.
 6. Ming-Tsung Tseng*, Yazhuo Kong, Falk Eippert, Irene Tracey (2017, Dec). Determining the neural substrate for encoding a memory of human pain and the influence of anxiety. *The Journal of Neuroscience*, 37(49):11806-11817.
 7. Ming-Tsung Tseng, Chin-Hsien Lin (2017, Aug). Pain in early-stage Parkinson's disease: Implications from clinical features to pathophysiology mechanisms. *Journal of the Formosan Medical Association*, 116(8), 571-581.
 8. Shao-Wei Wu, Yi-Chia Wang, Paul-Chen Hsieh, Ming-Tsung Tseng, Ming-Chang Chiang, Chih-Pang Chu, Fang-Ping Feng, Yea-Huey Lin, Sung-Tsang Hsieh, Chi-Chao Chao (2017, Mar). Biomarkers of neuropathic pain in skin nerve degeneration neuropathy: contact heat-evoked potentials as a physiological signature. *Pain*, 158(3), 516-525.
 9. Ming-Tsung Tseng*, Yazhuo Kong, Ming-Chang Chiang, Chi-Chao Chao, Wen-Yih I. Tseng, Sung-Tsang Hsieh* (2015, Nov). Brain imaging signatures of the relationship between epidermal nerve fibers and heat pain perception. *Neuroimage*, 122, 288-97.
 10. Paul-Chen Hsieh, Ming-Tsung Tseng, Chi-Chao Chao, Yea-Huey Lin, Wen-Yih I. Tseng, Kuan-Hong Liu, Ming-Chang Chiang, Sung-Tsang Hsieh (2015, May). Imaging signatures of altered brain responses in small-fiber neuropathy: reduced functional connectivity of the limbic system after peripheral nerve degeneration. *Pain*, 156(5), 904-16.
 11. Ming-Chang Chiang, Ming-Tsung Tseng, Chun-Liang Pan, Chi-Chao Chao, Sung-Tsang Hsieh (2015, Mar). Progress in the treatment of small fiber peripheral neuropathy. *Expert Review of Neurotherapeutics*, 15(3), 305-13.
 12. Ming-Tsung Tseng, Ming-Chang Chiang, Chi-Chao Chao, Wen-Yih I. Tseng, Sung-Tsang Hsieh (2013, Oct). fMRI evidence of degeneration-induced neuropathic pain in diabetes: Enhanced limbic and striatal activations. *Human Brain Mapping*, 34(10), 2733-46.
 13. Ming-Tsung Tseng, Ming-Chang Chiang, Kong Yazhuo, Chi-Chao Chao, Wen-Yih I. Tseng, Sung-Tsang Hsieh (2013, Oct). Effect of aging on the cerebral processing of thermal pain in the human brain. *Pain*, 154(10), 2120-9.
 14. Chi-Chao Chao, Vin-Cent Wu, Chun-Hsiang Tan, Yi-Mei Wang, Ming-Tsung Tseng, Pei-Chen Wu, Yea-Huey Lin, Whei-Min Lin, Kwan-Dun Wu, and Sung-Tsang Hsieh (2011, Feb). Skin denervation and its clinical significance in late-stage chronic kidney disease. *Archives of Neurology*, 68(2),200-6.
 15. Chi-Chao Chao, Ming-Tsung Tseng, Ya-Ju Lin, Wei-Shiung Yang, Song-Chou Hsieh, Yea-Huey Lin, Ming-Jang Chiu, Yang-Chyuan Chang and Sung-Tsang Hsieh (2010, Dec). Pathophysiology of neuropathic pain in type 2 diabetes: skin denervation and contact heat-evoked potentials. *Diabetes Care*, 33(12),2654-9.
 16. Ming-Tsung Tseng, Wen-Yih I. Tseng, Chi-Chao Chao, Huai-En Lin, Sung-Tsang Hsieh (2010, May). Distinct and shared cerebral activations in processing innocuous versus noxious contact heat revealed by functional magnetic resonance imaging. *Human Brain Mapping*, 31(5):743-57.
 17. Chi-Chao Chao, Song-Chou Hsieh, Ming-Tsung Tseng, Yang-Chyuan Chang, Sung-Tsang Hsieh (2008, Mar). Patterns of contact heat evoked potentials (CHEP) in neuropathy with skin denervation: correlation of CHEP amplitude with intraepidermal nerve fiber density. *Clinical Neurophysiology*, 119(3), 653-61.
 18. Chi-Chao Chao, Sung-Tsang Hsieh, Ming-Jang Chiu, Ming-Tsung Tseng, Yang-Chyuan Chang (2007, Jul). Effects of aging on contact heat-evoked potentials: the physiological assessment of

thermal perception. *Muscle & Nerve*, 36(1), 30-8.

19. Ming-Tsung Tseng, Song-Chou Hsieh, Chia-Tung Shun, Kuang-Lun Lee, Chun-Liang Pan, Whei-Min Lin, Yea-Hui Lin, Chia-Li Yu, Sung-Tsang Hsieh (2006, Apr). Skin denervation and cutaneous vasculitis in systemic lupus erythematosus. *Brain*, 129(Pt 4), 977-85.
20. Chi-Chao Chao, Li-Kai Tsai, Yih-Hua Chiou, Ming-Tsung Tseng, Sung-Tsang Hsieh, S-C Chang, Yang-Chyuan Chang (2003, Dec). Peripheral nerve disease in SARS: report of a case. *Neurology*, 61(12):1280-1281.

BOOK CHAPTER

1. Ming-Tsung Tseng, Chun-Liang Pan, Sung-Tsang Hsieh. Overview of small fiber neuropathy. In Hsieh ST, Anand P, Gibbons C, Sommer C, editors. *Small Fiber Neuropathy and Related Syndromes: Pain and Neurodegeneration*. Singapore: Springer, 2019.

ABSTRACTS

1. Chiang CY, Tsai HY, Tseng MT (2018). Behavioral Interaction between Electrically Evoked Pain and Itch in Humans [PFR253]. Presented at the 17th World Congress on Pain, Boston, USA.
2. Tsai HY, Chiang CY, Tseng MT (2018). The role of emotion in the effect of expectation on pain [PTH279]. Presented at the 17th World Congress on Pain, Boston, USA.
3. Chiang CY, Tsai HY, Tseng MT (2017). Behavioral Interaction between Electrically Evoked Pain and Itch in Humans [P-07]. Presented at the 7th Asian Pain Symposium, Taipei, Taiwan.
4. Tsai HY, Chiang CY, Tseng MT (2017). The role of emotion in the effect of expectation on pain [P-08]. Presented at the 7th Asian Pain Symposium, Taipei, Taiwan.
5. Yang SL, Wu TW, Lu ZL, Huang CW, Shih YW, Lin YH, Tseng MT (2016). Neural Correlates for the discrimination of pain intensity: an fMRI study [PW-078]. Presented at the 16th World Congress on Pain, Yokohama, Japan.
6. Wu TW, Yang SL, Lu ZL, Huang CW, Shih YW, Lin YH, Tseng MT (2016). Cerebral Mechanisms for the Short-term Habituation to Pain: an fMRI Study [PW-400]. Presented at the 16th World Congress on Pain, Yokohama, Japan.
7. Lin YH, Wu TW, Yang SL, Lu ZL, Huang CW, Shih YW, Tseng MT (2016). How Attention Modulates Pain Habituation [PTH-395]. Presented at the 16th World Congress on Pain, Yokohama, Japan.
8. Shih YW, Yang SL, Wu TW, Lu ZL, Huang CW, Lin YH, Tseng MT (2016). Effects of uncertain expectation on the experience of pain [PTH-402]. Presented at the 16th World Congress on Pain, Yokohama, Japan.
9. Tseng MT, Kong Y, Eippert F, Tracey I (2014). Neural correlates for the working memory encoding of pain [PF-317]. Presented at the 15th World Congress on Pain, Buenos Aires, Argentina.
10. Tseng MT, Kong Y, Chiang MC, Chao CC, Tseng WY, Hsieh ST (2014). Functional coupling between anterior insula and primary somatosensory cortex mediates the influence of cutaneous afferent nerves on heat pain perception [PH-116]. Presented at the 15th World Congress on Pain, Buenos Aires, Argentina.
11. Tseng MT, Chiang MC, Chao CC, Tseng WY, Hsieh ST (2012). fMRI evidence of degeneration-induced neuropathic pain in diabetes: enhanced limbic and striatal activations [PH-133]. Presented at the 14th World Congress on Pain, Milan, Italy.
12. Tseng MT, Tseng WY, Chao CC, Lin HE, Hsieh ST (2010). Unique spatial patterns of cerebral activations to innocuous versus noxious heat on functional magnetic resonance imaging [P18-16]. Presented at the 29th International Congress of Clinical Neurophysiology, Kobe, Japan.

KEY TALKS

- 2022/9/2: Aversive prediction errors in pain perception. Presented in the 2nd Taiwan Society for Neuroscience TSfN Congress at Academia Sinica, Taipei, Taiwan.
- 2021/9/11: Functional neuroimaging approach to the cognitive neuroscience of pain. Presented at the Graduate Institute of Mind, Brain and Consciousness (GIMBC), Taipei Medical University, Taipei, Taiwan.
- 2020/12/29: Neural systems underlying the impact of cognition and emotion on subjective pain perception. Presented at the Institute of Neuroscience, National Yang Ming Chiao Tung University, Taipei, Taiwan.
- 2020/9/11: Nociceptive processing in the human brain. Presented in the 1st Taiwan Society for Neuroscience TSfN Congress at Academia Sinica, Taipei, Taiwan.
- 2019/12/5: Brain mechanisms for cognitive evaluation and modulation of pain in humans. Presented in the 8th Asian Pain Symposium in Incheon, Republic of Korea.
- 2019/4/28: Cognitive evaluation and modulation of pain in humans. Presented in the Pain Symposium of Taiwan Society for Clinical Neurophysiology in Taipei, Taiwan.
- 2019/2/16: Pain processing in Parkinson's disease. Presented in the meeting of Taiwan Society for Clinical Neurophysiology in Taipei, Taiwan.
- 2019/1/23: Cognitive evaluation and modulation of pain in humans. Presented in the retreat meeting at Academia Sinica, Taipei, Taiwan.
- 2018/11/30: The affective-motivational aspect of pain. Presented in the Institute of Philosophy of Mind and Cognition at National Yang-Ming University, Taipei, Taiwan.
- 2016/4/1: Neuroimaging insights into the mechanisms of physiological and pathological pain. Presented in the National Health Research Institutes in Miaoli County, Taiwan.
- 2014/9/23: Neuroimaging insights into the mechanisms of physiological and pathological pain. Presented in the Institute of Neuroscience at National Yang-Ming University, Taipei, Taiwan.
- 2012/3/20: Imaging Mnemonic Processing for Pain in the Human Brain. Presented in FMRIB Center, University of Oxford, Oxford.
- 2010/10/25: Distinct brain responses to thermal stimuli on functional magnetic resonance imaging. Presented in the 2010 International Symposium on Thalamic and Cortical Processing of Pain at National Taiwan University, Taipei, Taiwan.