KUN-ZE LEE, PhD

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EDUCATION

Doctor of Philosophy 2002-2007
Department of Life Science, National Taiwan Normal University, Taiwan
Bachelor of Science 1998-2002
Department of Biology, National Taiwan Normal University, Taiwan

PROFESSIONAL EXPERIENCE

Postdoctoral Associate 2008-present
Department of Physical Therapy, University of Florida
Research & Teaching Assistant 2002-2007
Department of Life Science, National Taiwan Normal University, Taiwan

PROFESSIONAL ORGANIZATION

American Physiological Society	2005-present
The Chinese Physiological Society	2000-present
Neuroscience Society of Taiwan	2000-present

HONORS & AWARDS

1. Excellent Ph.D. Student Paper Award at College of Science, NTNU*	2007
2. Excellent Award of Participating Academic Activities at College of Science, NTNU	2007
3. NTNU Outstanding Doctorial/Ph.D. Student Scholarships	2006
4. Hsing Tian Kong Culture & Education Development Foundation Long Term Scholarship for Outstanding Students	2004-2007
5. The Best Award of Biology, Stream, Animal Behavior and Ecology Symposium of Taiwan	2004
6. The CTCI Foundation Dr. Kai-Ying King Scholarship	2004
7. Department of Life Science Scholarship for Excellent Research Paper	2004
8. NTNU Outstanding Graduate Student Scholarships	2003-2004
9. Department of Life Science Scholarship for Excellent Research Paper	2003
10. NTNU Outstanding Undergraduate Student Scholarships	2001
11. NTNU Outstanding Undergraduate Students	2000

*: NTNU: National Taiwan Normal University

PUBLICATION

Peer-reviewed Journals

1. **KZ Lee**, DD Fuller, IJ Lu, LC Ku and JC Hwang. Pulmonary C-fiber receptor activation abolishes uncoupled facial nerve activity from phrenic bursting during positive end-expired pressure in the rat. J. Appl. Physiol. 104(1): 119-129, 2008.
2. **KZ Lee**, DD Fuller, LC Tung, IJ Lu, LC Ku and JC Hwang. Uncoupling of upper airway motor activity from phrenic bursting by positive end-expired pressure in the rat. J. Appl. Physiol. 102(3): 878-889, 2007.
3. **KZ Lee**, DD Fuller, IJ Lu, JT Lin and JC Hwang. Neural drive to tongue protrudor and retractor muscles following pulmonary C-fiber activation. J. Appl. Physiol 102(1): 434-444, 2007.
4. IJ Lu, **KZ Lee** and JC Hwang. Capsaicin-induced activation of pulmonary vagal C-fibers produces reflex laryngeal closure in the rat. J. Appl. Physiol. 101(4):1104-1112, 2006.
5. SJ Yang, **KZ Lee**, CH Wu, KT Lu and JC Hwang. Vasopressin produces inhibition on phrenic nerve activity and apnea through V(1A) receptors in the area postrema in rats. Chin. J. Physiol. 49(6):313-325, 2006.
6. CY Tsai, CC Wu, **KZ Lee** and JC Hwang. Muscarinic M_2 receptor mediates bradycardai and hypotention induced by capsaicin administration in the rat. BioFormosa 40(1): 25-35, 2005.
7. IJ Lu, **KZ Lee**, JT Lin and JC Hwang. Capsaicin administration inhibits the abducent branch but excites the thyroarytenoid branch of the recurrent laryngeal nerves in the rat. J. Appl. Physiol. 98: 1646-1652, 2005.
8. **KZ Lee**, IJ Lu, LC Ku, JT Lin and JC Hwang. Response of respiratory-related hypoglossal nerve activity to capsaicin-induced pulmonary C-fiber activation in rats. J. Biomed. Sci. 10 (6 Pt 2): 706-717, 2003.
9. IJ Lu, LC Ku, JT Lin, **KZ Lee** and JC Hwang. Pulmonary C-fiber activation enhances respiratory-related activities of the recurrent laryngeal nerve in rats. Chinese J. Physiol. 45(4): 143-154, 2002.

Conference abstracts

1. **KZ Lee**, SJ Yang and JC Hwang. 2008. Effects of positive end-expired pressure on the upper airway motor outputs in spontaneously breathing adult rats. The 23th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P97.
2. HY Tsai, **KZ Lee**, IJ Lu, SJ Yang and JC Hwang. 2008. Lung deflation produces modulation on recurrent laryngeal nerve output in the rat. The 23th Joint Annual

Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P100.

3. TL Chen, **KZ Lee** and JC Hwang. 2008. Glycinergic transmission participates in the modulation of uncoupling activities of upper airway motor nerves during phrenic apnea induced by positive end-expired pressure in rats. The 23th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P300.
4. CJ Lin, **KZ Lee** and JC Hwang. 2008. Hypercapnia modulates uncoupled activity of upper airway motor nerves during elevation of positive end-expired pressure in rats. The 23th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P293.
5. MW Lin, **KZ Lee**, YC Chang, HM Hsieh-Li, GJ Lee-Chen, LS Ro and JC Hwang. 2008. Respiratory varaibility and dysfuncion in spinocerebellar ataxia 17 transgenic mice. The 23th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P301.
6. YF Chen, **KZ Lee**, IJ Lu, SJ Yang and JC Hwang. 2008. Clonidine reduces uncoupled activity of upper airway motor outputs during phrenic apnea induced by positive end-expired pressure in rats. The 23th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P302.
7. **KZ Lee**, IJ Lu, SJ Yang and JC Hwang. 2007. Inhibition of respiratory-related activity of the facial nerve by pulmonary vagal C-fiber activation in the rat. FASEB J. 21: 918.1.
8. **KZ Lee**, IJ Lu and JC Hwang. 2007. Decrease in tongue force-development with activation of pulmonary vagal C-fibers in rats. The 22th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P013.
9. **KZ Lee** and JC Hwang. 2007. Neural drive to the tongue muscles reduces following activation of pulmonary vagal C-fiber receptors. Physiology Symposium, Taipei, Taiwan. Abstract: Oral presentation.
10. CY Tsai, **KZ Lee**, IJ Lu and JC Hwang. 2007. Neural mechanism of glottal closure evoked by anandamide in the rat. FASEB J. 21: lb590.
11. CY Tsai, **KZ Lee**, IJ Lu and JC Hwang. 2007. Responses of the adducent and abducent branches of the recurrent laryngeal nerve to anandamide administration in the rat. The 22th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P450.
12. MW Lin, **KZ Lee**, HH Wang, HM Hsieh-Li, GJ Lee-Chen, LS Ro and JC Hwang. 2007. Recurrent laryngeal nerve response to capsaicin treatment in transgenic mice with symptom of spinocerebellar ataxia 17. The 22th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P448.
13. YF Chen, **KZ Lee**, CY Tsai, HY Tsai, IJ Lu and JC Hwang. 2007. Inhibition of clonidine on pre-inspiratory activity of the upper airway motor nerves in the rat. FASEB J. 21: lb591.
14. YF Chen, **KZ Lee**, CY Tsai, IJ Lu and JC Hwang. 2007. Modulation of clonidine on the upper airway motor nerve activities in the rat. The 22th Joint Annual

Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P454.

15. MW Lin, HH Wang, **KZ Lee**, YC Chang, HM Hsieh-Li, GY Lee-Chen, LS Ro and JC Hwang. 2007. Respiratory variation in transgenic mice with spinocerebellar ataxia 17. FASEB J. 21: lb587.
16. MW Lin, HH Wang, **KZ Lee**, CY Chin, HM Hsieh-Li, GJ Lee-Chen, LS Ro and JC Hwang. 2007. Studies on the respiratory functions in transgenic mice with spinocerebellar ataxia 17. Physiology Symposium, Taipei, Taiwan. Abstract: P39.
17. **KZ Lee**, IJ Lu, SJ Yang and JC Hwang. 2006. Characterization of pre-inspiratory and decoupled activities of upper airway motoneurons in the rat. Experimental Biology 2006 Annual Meeting, San Francisco, USA. Abstract: 230.12. FASEB J. 20 (4): A371.
18. **KZ Lee** and JC Hwang. 2006. Responses of phasic hypoglossal motoneuron activities to different levels of positive end-expired pressure in the rat. The 21th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P244.
19. CY Tsai, **KZ Lee**, IJ Lu and JC Hwang. 2006. Responses of the adducent branch of the recurrent laryngeal nerve to anandamide administration in the rat. The 21th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P250.
20. PJ Lin, CC Wu, **KZ Lee** and JC Hwang. 2006. Role of muscarinic receptor subtypes in reflexive pulmonary plasma extravasation induced by capsaicin in the rat. The 21th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P393.
21. **KZ Lee,** IJ Lu, SJ Yang and JC Hwang. 2005. Glycinergic inhibition is essential for the preceding properties of respiratory-related hypoglossal nerve discharge in rats. The 35th International Congress of Physiological Sciences, San Diego, USA. Abstract: 371.5. FASEB J. 19 (4): A653-A654.
22. **KZ Lee** and JC Hwang. 2005. Contribution of glycinergic inhibition to the preceding onset of the hypoglossal branches. The 20th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan. Abstract: P453.
23. **KZ Lee** and JC Hwang. 2005. Positive end-expired pressure produces alternation of the onset of upper airway motor nerves in the rat. 2005 Neuroplasticity symposium and the 2nd TMU neuroscience symposium. Abstract: P27.
24. **KZ Lee** and JC Hwang. 2004. Response of the medial and lateral branches of the hypoglossal nerve to hypercapnia, hypocapnia, and activation of pulmonary C-fibers in the rat. The 19th Joint Annual Conference of Biomedical Sciences, Taiwan. Abstract: P403.
25. **KZ Lee** and JC Hwang. 2004. Capsaicin-induced activation of pulmonary C-fibers produces changes in hypoglossal motoneuron discharge in rats. The 19th Joint Annual Conference of Biomedical Sciences, Taiwan. Abstract: P405.
26. **KZ Lee** and JC Hwang. 2004. Co-inactivation of the medial and lateral hypoglossal activities in response to pulmonary C-fiber activation in rats. Annual Symposium on Biology, Stream, Behavior and Ecology. Abstract: O75.

27. **KZ Lee** and JC Hwang. 2004. Responses of respiratory-related hypoglossal activity to changes in ventilatory volume, frequency and end-expired pressure in rats. Taiwan-Hong Kong International Symposium on Neural Physiology. Abstract: P21.
28. **KZ Lee** and JC Hwang. 2003. Response of the hypoglossal nerve to activation of pulmonary C-fiber in the rat. The 18th Joint Annual Conference of Biomedical Sciences, Taiwan. Abstract: P271.
29. **KZ Lee** and JC Hwang. 2002. Response of neurons in the nucleus of the tractus solitarius to stimulation of pulmonary C-fibers in the rat. The 17th Joint Annual Conference of Biomedical Sciences, Taiwan. Abstract: O30.