

CURRICULUM VITAE

Kevin K. Kwong, Ph.D.

Revised, 09/2007

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointment: Instructor in Medicine
Department of Medicine
Division of Allergy and Clinical Immunology
The Johns Hopkins Medical Institutions
Baltimore, Maryland

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Education and Training:

1987 – 1993	B.A. in Classics (Honors) University of Kentucky
1996 – 2003	Ph.D. in Physiology University of Kentucky
2003 – 2005	Postdoctoral Fellowship University of Kentucky
2005 – 2007	Postdoctoral Fellowship Johns Hopkins Allergy & Clinical Immunology

Professional Experience:

2007 – present	Instructor in Medicine Department of Medicine The Johns Hopkins Asthma & Allergy Center
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RESEARCH ACTIVITIES

Publications: *peer-reviewed articles*

1. Hong JL, Kwong K, and Lee LY. Stimulation of pulmonary C fibres by lactic acid in rats: contributions of H⁺ and lactate ions. *J Physiol (Lond)* 1997, 500: 319–29.

2. Kwong K, Hong JL, Morton RF, and Lee LY. Role of pulmonary C fibers in adenosine-induced respiratory inhibition in anesthetized rats. *J Appl Physiol* 1998, 84: 417–24.
3. Hong JL, Ho CY, Kwong K, Lee LY. Activation of pulmonary C fibres by adenosine in anaesthetized rats: role of adenosine A₁ receptors. *J Physiol (Lond)* 1998, 508: 109–18.
4. Kwong K, Wu ZX, Kashon ML, Krajnak KM, Wise PM, and Lee LY. Chronic smoking enhances tachykinin synthesis and airway responsiveness in guinea pigs. *Am J Respir Cell Mol Biol* 2001, 25: 299–305.
5. Chung E, Gu Q, Kwong K, Arden WA, and Lee LY. Comparison of capsaicin-evoked calcium transients between rat nodose and jugular ganglion neurons. *Auton Neurosci* 2002, 97: 83–88.
6. Kwong K and Lee LY. PGE₂ sensitizes cultured pulmonary vagal sensory neurons to chemical and electrical stimuli. *J Appl Physiol* 2002, 93: 1419–1428.
7. Gu Q, Kwong K, and Lee LY. Calcium transient evoked by chemical stimulation is enhanced by PGE₂ in cultured rat vagal sensory neurons: role of cAMP/PKA transduction cascade. *J Neurophysiol* 2003, 89: 1985–1993.
8. Kwong K, Vaishnav RA, Liu Y, Subhedar N, Stromberg AJ, Getchell ML, and Getchell TV. Target ablation-induced regulation of macrophage recruitment into the olfactory epithelium of *Mip-1α*^{-/-} mice and restoration of function by exogenous MIP-1α. *Physiol Genomics* 2004, 20: 73–86.
9. Kwong K and Lee LY. Prostaglandin E₂ potentiates a TTX-resistant sodium current in rat capsaicin-sensitive vagal pulmonary sensory neurons. *J Physiol (Lond)* 2005, 564: 437–450.
10. Getchell TV, Liu H, Vaishnav RA, Kwong K, Stromberg AJ, and Getchell ML. Temporal profiling of gene expression during neurogenesis and remodeling in the olfactory epithelium at short intervals after target ablation. *J Neurosci Res* 2005, 80: 309–329.
11. Getchell TV, Kwong K, Saunders CP, Stromberg AJ, and Getchell ML. Leptin regulates olfactory-mediated behavior in *ob/ob* mice. *Physiol Behav.* 2006, 87: 848-856.

Publications: review articles

1. Lee LY, Kwong K, Lin YS, and Gu Q. Hypersensitivity of bronchopulmonary C-fibers induced by airway mucosal inflammation: cellular mechanisms. *Pulm Pharmacol Ther* 2002, 15: 199–204.

Publications: manuscripts in press, submitted, or in preparation

1. **Kwong K**, Carr MJ, and Udem BJ. Sodium Channels in Nociceptive versus Non-nociceptive Nodose Neurons Innervating Guinea Pig Lungs. (Original article; *in preparation*)
2. Udem BJ and **Kwong K**. The Sensory and Autonomic Nervous System in Asthma and Rhinitis. (Review article; *submitted*)

Publications: abstracts

1. **Kwong K**, Hong JL, Morton RF, and Lee LY. Role of pulmonary C-fibers in adenosine-induced apnea. *FASEB J* 11: A132, 1997.
2. **Kwong K**, Wu ZX, Kashon ML, Krajnak KM, Wise PM, and Lee LY. Chronic cigarette smoke exposure induces airway hyperresponsiveness by increasing substance P synthesis and release. *FASEB J* 13: A167, 1999.
3. **Kwong K** and Lee LY. PGE₂ potentiates capsaicin sensitivity in vagal bronchopulmonary sensory neurons cultured from adult rats. *FASEB J* 14: A602, 2000.

4. **Kwong K** and Lee LY. Prostaglandin E₂ enhances the excitability of small-diameter vagal ganglia neurons cultured from adult rats. *FASEB J* 15: A798, 2001.
5. Chung E, **Kwong K**, Arden WA, and Lee LY. Capsaicin-evoked calcium transients in rat nodose and jugular ganglion neurons. *Am J Respir Crit Care Med* 163: A285, 2001.
6. Gu, Q, **Kwong K**, and Lee LY. Prostaglandin E₂ potentiates capsaicin-induced calcium influx in cultured rat vagal sensory neurons. *Soc Neurosci Abstr* 27: Program No. 818.10, 2001.
7. Gu Q, **Kwong K**, Lin YS, and Lee LY. EP₂ and EP₄ prostanoid receptors mediate prostaglandin E₂-induced hypersensitivity in rat vagal capsaicin-sensitive neurons: *in vivo* and *in vitro* studies. *FASEB J* 16: A454, 2002.
8. **Kwong K** and Lee LY. Butaprost increases the sensitivity of pulmonary C neurons to chemical stimuli. *FASEB J* 16: A454, 2002.
9. **Kwong K**, Satin J, and Lee LY Involvement of TTX-R I_{Na} in the sensitization of cultured rat vagal pulmonary C neurons by prostaglandin E₂. *FASEB J* 17: 2003.
10. **Kwong K**, Vaishnav RA, Liu Y, Stromberg AJ, Getchell TV, and Getchell ML. Gene regulation in the olfactory epithelium of MIP-1 α knock-out mice and restoration of function by MIP-1 α protein injection. *Soc Neurosci Abstr*: Program No. 178.7, 2004
11. Getchell TV, **Kwong K**, Saunders CP, Etscheidt J, Rozenova KA, Liu H, Vaishnav RA, Stromberg AJ, and Getchell ML. Leptin modulates olfactory-mediated behavior in *ob/ob* mice. *Soc Neurosci Abstr*, Program No. 613.13, 2005
12. **Kwong K**, Carr MJ, and Udem BJ. TTX-R INa Expression in Sensory Neurons Innervating the Lungs Correlates with Their Embryonic Origin in Adult Guinea Pigs. American Thoracic Society meeting: A666, 2007

RESEARCH GRANT PARTICIPATION:

Grants pending:

- Submitted, September 2007: "Protease-Activated Receptor-Mediated Activation of Bronchopulmonary Afferent C-Fibers"
Biomedical Research Grant, ALA; P.I.: Kwong, Kevin K
Direct Total Costs requested: \$80,000
- Submitted, September 2007: "Activation of Brochopulmonary Afferent C-fibers by Serine Protease Allergens"
Interest Section Award, AAAA; P.I.: Kwong, Kevin K
Direct Total Costs requested: \$25,000

EDUCATIONAL ACTIVITIES

Teaching

Classroom instruction:

Fall Semester, 1998 Case Studies in Physiology
Teaching assistant
University of Kentucky

ORGANIZATIONAL ACTIVITIES

Professional Societies:

American Physiological Society (Regular Member since 2006)

American Thoracic Society (In-Training Member since 2006)

RECOGNITION

Awards:

- 1992 Latin Award
University of Kentucky, Classics Department
- 1993 Undergraduate Assistantship Award
Award to translate works by Cotton Mather on the tapeworm
University of Kentucky, Gaines Center for the Humanities
- 2003 Professional Opportunity Award
Travel award for Experimental Biology Meeting
Sponsored by Proctor & Gamble
- 2003 – 2005 NIH NIDCD Training Grant Trainee (T32-DC-00065)
Cellular and Molecular Neuroscience of Sensory Systems
University of Kentucky

Invited Talks:

- April 2003 Experimental Biology Meeting (San Diego)
Featured Topic: Reflex Regulation of Airway Function and Breathing
“Involvement of TTX-R INa in the sensitization of cultured rat vagal
pulmonary C neurons by prostaglandin E2”