

Curriculum Vitae

Je Won Jung

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EDUCATION

Ph.D.

Department of Agricultural Biotechnology,
Seoul National University

Seoul, Rep. of Korea
2015.08

- Thesis Title: Molecular and electrophysiological characterization of olfactory and gustatory perception of honeybee and cockroach for application as biosensor (Pf. Young-Joon Ahn and Hyung Wook Kwon)

B.S.

College of Agriculture and Life Science
Seoul National University

TECHNICAL & EXPERIMENTAL SKILLS

- Electrophysiology
 - Electroantennogram, Single sensilla recording
 - Tip recording
 - Two voltage clamp recording
- Immunohistochemistry, *in situ* hybridization, and imaging
 - Peripheral organs: Antennae, Proboscis, Maxillary palps, Fat body (Honeybees, mosquitoes, fruit flies, Cockroach)
 - Central organ: Brain (Honeybees, mosquitoes, fruit flies, Cockroach)
- Calcium imaging analysis:
 - *In vitro*: Cell culture and transfection & Overexpression
 - *In vivo*: honeybees brain
- Molecular cloning
- Confocal microscopy
- Transcriptome analysis(DEG analysis)
- Reverse transcriptase (RT) PCR
- Real-time PCR (qPCR)
- Western blot
- *Drosophila* genetics
- Gene silencing (dsRNA injection)

PUBLICATIONS

1. Young-eun Na, **Je Won Jung**, and Hyung Wook Kwon. Identification and expression patterns of two TRPV channel genes in antennae and Johnston's organ of the dengue and Zika virus vector mosquito, *Aedes aegypti*. *Journal of Asia Pacific entomology*, 2016 (1st author).
2. Minju Lee, **Je Won Jung**, Daesan Kim, Young-Joon Ahn, Seunghun Hong, and Hyung Wook Kwon. Discrimination of Umami Tastants Using Floating Electrode-Based Bioelectronic Tongue Mimicking Insect Taste Systems. *ACS Nano*, 2015 (1st author).
3. Murukarthick Jayakodi, **Je Won Jung**, Doori Park, Young-Joon Ahn, Sang-Choon Lee, Sang-Yoon Shin, Chanseok Shin, Tae-Jin Yang and Hyung Wook Kwon. Genome-wide characterization of long intergenic non-coding RNAs (lincRNAs) provides new insight into viral diseases in honey bees *Apis cerana* and *Apis mellifera*. *BMC Genomics*, 2015
4. **Je Won Jung**, Kun Woong Park, Young-Joon Ahn, Hyung Wook Kwon. Functional characterization of sugar receptors in the western honeybee, *Apis mellifera*. *Journal of Asia Pacific entomology*, 2015.
5. **Je Won Jung**, Seung-Jae Baeck, Haribalan Perumalsamy, Bill S. Hansson, Young- Joon Ahn, and Hyung Wook Kwon. A novel olfactory pathway is essential for fast and efficient blood-feeding in mosquitoes. *Scientific Reports*, 2015.
6. Doori Park, **Je Won Jung**, Beom-Soon Choi, Murukarthick Jayakodi, Jeongsoo Lee, Jongsung Lim, Yeisoo Yu, Yong-Soo Choi, Myeong-Lyeol Lee, Yoonseong Park, Ik-Young Choi, Tae-Jin Yang, Owain R Edwards, Gyoungju Nah and Hyung Wook Kwon. Uncovering the novel characteristics of Asian honey bee, *Apis cerana*, by whole genome sequencing. *BMC Genomics*, 2015.
7. **Je Won Jung**, Kun Woong Park, Hyun-Woo Oh, Hyung Wook Kwon, Structural and functional differences in the antennal olfactory system of worker honey bees of *Apis mellifera* and *Apis cerana*. *Journal of Asia Pacific entomology*, 2014.
8. Doori Park, **Je Won Jung**, Mi Ok Lee, Si Young Lee, Boyun Kim, Hye Jun Jin, Jiyoung Kim, Young-Joon Ahn, Ki Won Lee, Yong Sang Song, Seunghun Hong, James E. Womack, and Hyung Wook Kwon. Functional characterization of naturally occurring melittin peptide isoforms in two honey bee species, *Apis mellifera* and *Apis cerana*. *Peptides*, 2014.
9. Trung Tran Hieu, **Je Won Jung**, Soon il Kim, and Hyung Wook Kwon. Behavioural and electroantennogram responses of the stable fly (*Stomoxys calcitrans* L.) to plant essential oils and their mixtures with attractants. *Pest management science*. 2013.
10. **Je Won Jung**, Jin-Hee Kim, Rita Pfeiffer, Young-Joon Ahn, Terry L. Page, and Hyung Wook Kwon. Neuromodulation of olfactory sensitivity in the peripheral olfactory organs of the American cockroach, *Periplaneta americana*. *Plos one*, 2013.
11. Haribalan Perumalsamy, Jun-Ran Kim, Sang Mi Oh, **Je Won Jung**, Young-Joon Ahn, and Hyung Wook Kwon. Novel histopathological and molecular effects of natural compound pellitorine on larval midgut epithelium and anal gills of *Aedes aegypti*. *Plos one*, 2013.
12. Young ho Kim, Deok Jea Cha, Je Won Jung, and Hyung Wook Kwon, Si Hyeock Lee.

Molecular and kinetic properties of two acetylcholinesterases from the western honey bee, *Apis mellifera*. Plos one, 2013.

13. Ji Hyun Park, **Je Won Jung**, Young-Joon Ahn, and Hyung Wook Kwon. Neuroprotective properties of phytochemicals against paraquat-induced oxidative stress and neurotoxicity in *Drosophila melanogaster* (1st author). Pesticide Biochemistry and Physiology. 2012.
14. Soon-Il Kim, **Je Won Jung**, Young-Joon Ahn, and Hyung Wook Kwon. Drosophila as a model system for studying lifespan and neuroprotective activities of plant-derived compounds. Journal of Asia Pacific entomology, 2011.
15. Soon-Il Kim, June-Sun Yoon, **Je Won Jung**, Ki-Bae Hong, Young-Joon Ahn, and Hyung Wook Kwon. Toxicity and repellency of origanum essential oil and its components against *Tribolium castaneum* (Coleoptera: Tenebrionidae) adults. Journal of Asia Pacific entomology, 2010.

AWARDS

2010	Biomodulation Symposium 2010	Poster	(1 st prize)
2011	Biomodulation Symposium 2011	Poster	(1 st prize)
2012	The 28 th conference of the Apicultural Society of Korea, Daejeon, Korea	Presentation	

PRESENTATIONS

Oral presentation:

- Korean Society of Applied Entomolgy. 2016. Jeju, Korea.
- Apimondia. 2015. Dajeon, Korea.
- The 28th conference of the Apicultural Society of Korea. 2013. Daejoen, Korea.
- Asia-Pacific Drosophila Research Conference (APDRC). 2013. Seoul, Korea.

Poster presentation:

- The 13th Intenational Symposium on molecular and neural mechanisms of taste and olfactory perception. 2015.11. Fukuoka, Japan.
- The Seventh International Symposium on Molecular Insect Science. 2014.6. Amsterdam, The Netheralnd.
- Asia-Pacific Drosophila Research Conference (APDRC). 2013. 06. Seoul, Korea.
- The 42nd SfN annual meeting. 2012. 11. Snadiego. USA
- International Congresses of Entomology. 2012.08. Daegu, Korea.
- The Sixth International Symposium on Molecular Insect Science. 2012.4. Amsterdam, The Netheralnd.
- The 40th SfN annual meeting. 2010. 11. Snadiego. USA

Advisors

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Mentor

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