

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)Author: Keyword: 

Search

[ADVANCED](#)Add to  
Favorite / Citation  
Articles AlertsAdd to  
Favorite  
PublicationsRegister  
AlertsMy J-STAGE  
HELP[TOP](#) > [Available Issues](#) > [Table of Contents](#) > Abstract

ONLINE ISSN : 1349-0923

PRINT ISSN : 1348-589X

**Journal of Pesticide Science**

Vol. 33 (2008) , No. 1 pp.17-20

[\[PDF \(463K\)\]](#) [\[References\]](#)

## Epoxyalkenyl sex pheromones produced by female moths in highly evolved groups: biosynthesis and its endocrine regulation

Tetsu Ando<sup>1)</sup>, Takeshi Kawai<sup>1)</sup> and Kanae Matsuoka<sup>1)</sup>

1) Graduate School of Bio-Applications and Systems Engineering (BASE), Tokyo University of Agriculture and Technology

(Received: June 20, 2007)

(Accepted for publication: September 13, 2007)

**Abstract:**

Polyunsaturated hydrocarbons with a C<sub>17</sub>-C<sub>23</sub> straight chain and the epoxy derivatives constitute a second major class of lepidopteran sex pheromones and are referred to as Type II pheromones. While regionspecific epoxidation proceeds in a pheromone gland, the hydrocarbons are biosynthesized from dietary polyunsaturated fatty acids outside the pheromone gland and transported into the gland after association with lipophorin. *In vivo* as well as *in vitro* experiments using Japanese giant looper (*Ascotis selenaria cretacea*, Geometridae) demonstrated that pheromone biosynthesis-activating neuropeptide (PBAN) accelerated precursor uptake by the gland but not the biosynthetic step, which was contrast with the biosynthesis of Type I pheromones. The neuropeptide of *A. s. cretacea*, Asc-PBAN, was characterized to clarify its mode of unique action.

**Keywords:**

lepidopteran sex pheromone, pheromone biosynthesis, lipophorin, neuropeptide hormone, cDNA of PBAN

[\[PDF \(463K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)

To cite this article:

Tetsu Ando, Takeshi Kawai and Kanae Matsuoka, "Epoxyalkenyl sex pheromones produced by female moths in highly evolved groups: biosynthesis and its endocrine regulation". *J. Pestic. Sci.* Vol. **33**, pp.17-20 (2008) .

---

doi:10.1584/jpestics.R07-06

JOI JST.JSTAGE/jpestics/R07-06

*Copyright (c) 2008 Pesticide Science Society of Japan*

---



---

[Japan Science and Technology Information Aggregator, Electronic](#)

