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Author:  ADVANCED | Volume  Page

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[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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### Ethyl 4-[(1-substituted indol-2-yl)methoxy]benzoates and indoline derivatives: Anti-juvenile hormone and juvenile hormone activities

[Kenjiro Furuta](#)<sup>1)</sup>, [Shuheii Yoshida](#)<sup>1)</sup>, [Norihiiro Fujita](#)<sup>1)</sup>, [Naotaka Yamada](#)<sup>1)</sup> and [Eiichi Kuwano](#)<sup>1)</sup>

1) Laboratory of Pesticide Chemistry, Department of Applied Genetics and Pest Management, Faculty of Agriculture, Kyushu University

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#### Abstract:

A number of ethyl 4-[(1-substituted indol-2-yl)methoxy]benzoates and indoline derivatives were prepared as rigid congeners of ethyl 4-(2-benzylhexyloxy)benzoate (KF-13), an anti-juvenile hormone (anti-JH) agent, and tested for both anti-JH and JH activities in silkworm larvae. In contrast to KF-13, the precocious metamorphosis-inducing activity of which decreased by increasing the applied doses, 1-*n*-propyl, 1-*n*-butyl (**1c**) and 1-benzyl (**1d**) derivatives were found to induce higher percentages of precocious metamorphosis at high doses. Compounds **1c** and **1d** also exhibited JH activity when topically applied to allatectomized 4th instar larvae. Ethyl 4-[(*S*)-(1-*n*-butylindolin-2-yl)methoxy]benzoate, which showed precocious metamorphosis-inducing activity at high doses, had no JH activity.

#### Keywords:

[anti-juvenile hormone](#), [juvenile hormone](#), [indole](#), [indoline](#), [precocious metamorphosis](#)

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