

봉독의 PKC- $\alpha$  발현저해를 통한 NO/iNOS 생성저해 효과  
대구가톨릭의과대학, 의용생체공학연구소 : 조현지, 박관규, 장영채\*  
농촌진흥청 국립농업과학원 : 이광길, 여주홍, 한상미

**Bee venom suppresses LPS-mediated NO/iNOS induction through inhibition of PKC- $\alpha$  expression**

<sup>a</sup>Research Institute of Biomedical Engineering and Catholic University of Daegu School of Medicine, <sup>b</sup>Department of Agricultural Biology, National Institute of Agricultural Science and Technology

Hyun-Ji Cho<sup>a</sup>, Kwang-Gill Lee<sup>b</sup>, Joo-Hong Yeo<sup>b</sup>, Sang-Mi Han, Kwan-Kyu Park<sup>a</sup> and Young-Chae Chang<sup>a\*</sup>

**실험목적 (Objectives)**

The purpose of this study is to elucidate the molecular mechanism underlying the anti-inflammatory effects of bee venom, which is used in the treatment of various inflammatory diseases in oriental medicine. We evaluated the anti-inflammatory effect of bee venom on NO generation and iNOS expression by LPS in C6 glioma cells.

**재료 및 방법 (Materials and Methods)**

○ 실험재료

Bee venom was obtained from the National Institute of Agricultural Science and Technology (NIAST) of Korea. Rat C6 glioma cells were obtained from the American type culture collection (Rockville, MD).

○ 실험방법

Nitrite Assay, Western blots, RT-PCR and Electrophoretic mobility shift assay were used for assessment.

**실험결과 (Results)**

Bee venom suppresses the LPS-induced expression of both NO and iNOS and that it also inhibits the expression of most other LPS-induced pro-inflammatory molecules in C6 glioma cells, including Cox-2 and IL-1 $\beta$ . Moreover, bee venom suppresses LPS-induced expression of PKC- $\alpha$ , which has been implicated in IL-1 $\beta$ -dependent signaling and iNOS expression. These results indicate that bee venom suppresses LPS-promoted iNOS activation through regulation of PKC- $\alpha$ . Accordingly, bee venom exerts a potent suppressive effect on pro-inflammatory responses in C6 glioma cells.

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(Corresponding author) : 장영채 E-mail:ycchang@cu.ac.kr Tel : 053-650-4848

\* 시험성적

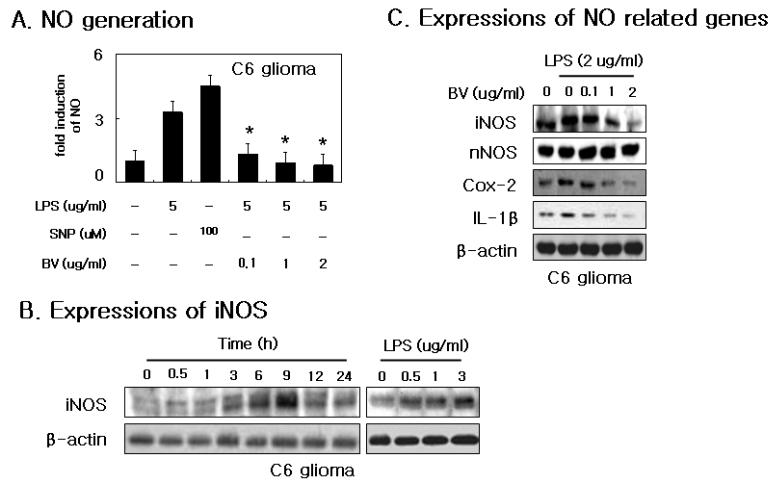


그림1. NO 생성 및 유전자 발현에 대한 봉독의 효과

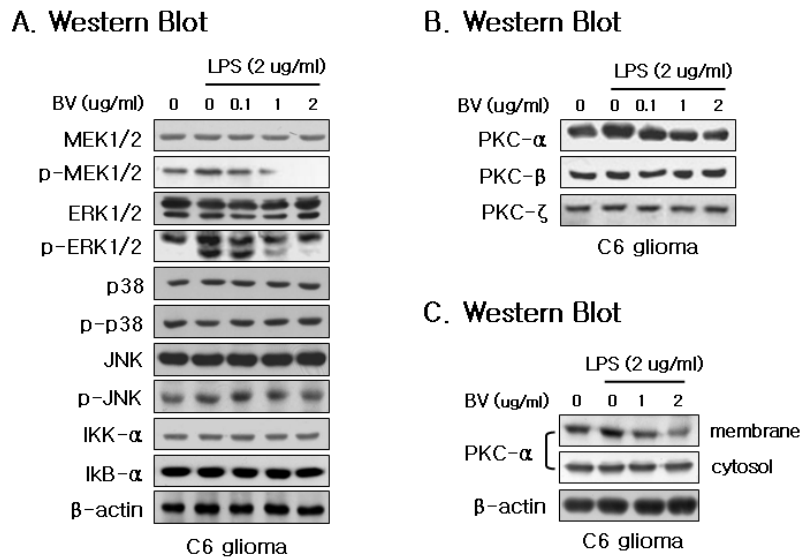


그림2. LPS에 의해 활성화된 MAP kinase에 대한 봉독의 저해효과

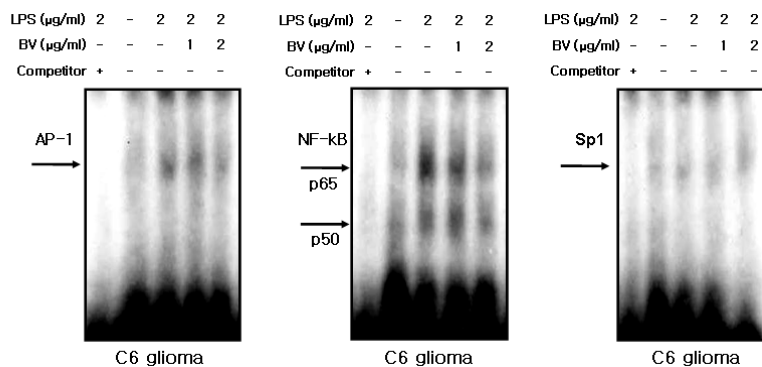


그림3. LPS에 의해 활성화된 전사인자의 DNA 결합에 대한 봉독의 저해효과