Ⅱ-24

가바에 의한 마우스에서의 세로토닌 분비 효과

강원대학교: 김승섭, 하지혜, 정향숙, 정명훈, 오성호, 김영, 한재건, 이현용*
바이오벤: 조석철, 국무창

The Effect of GABA(Gamma Aminobutyric Acid) on Serotonin Secretion in Mice

Seung-Seop Kim[1], Ji-Hye Ha[1], Hyang-Suk Jeong[1], Myung-Hoon Jeong[1], Sung-Ho Oh[1], Young Kim[1], Jae-Gun Han[1], Seok-cheol Cho[2], Moo-Chang Kook[2], Hyeon-Yong Lee[1,3*]

[1] Dept. of Biomaterials Engineering, College of Bioscience and Biotechnology, Kangwon National university. Korea

[2] R&D Division, Biovan Co., Ltd., Korea

[3] Research Institute of Bioscience and Biotechnology, Kangwon National University. Korea

Objectives

This study was to know the effect of GABA(ɣ-aminobutyric acid) from rice bran on sleep inductive activities. It is also the foundation data for the studies in the anti-insomnia.

Materials and Methods

○ Materials

The GABA fermented from rice with embryo buds and rice bran.

○ Methods

GABA was administered to mice by different concentrations. After extract the blood from mice by retro-orbital sinus bleeding method. Serotonin in the serum were quantitated by using a serotonin kit.

Results

○ Serotonin secretion was high in feeding 120 ㎎/㎖ of GABA than the control group. The control group secreted 4.73±0.67 ng/㎖ of serotonin, and in order of concentration(60 ㎎/㎖, 120 ㎎/㎖, 120 ㎎/㎖ in milk), the serotonin contents was measured as 4.71±1.22, 5.37±0.963, 6.34±0.586 ng/㎖. The secretion of serotonin were increased up to 34.99%, compare to the control. We can conclude that the GABA induces the serotonin secretion, and results in sleep inductive activity.

주저자 연락처 (Corresponding author) : 이현용 E-mail : Hyeonl@kangwon.ac.kr Tel : 033-250-6455

Obtain

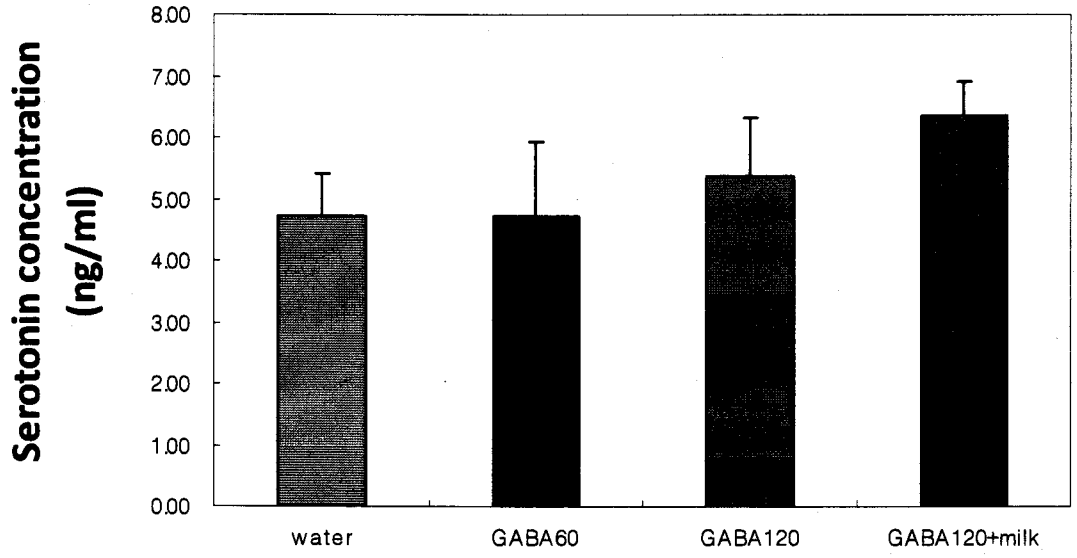

Fig. 1. Serotonin concentration of mice that administered orally by gamma aminobutyric acid(GABA).

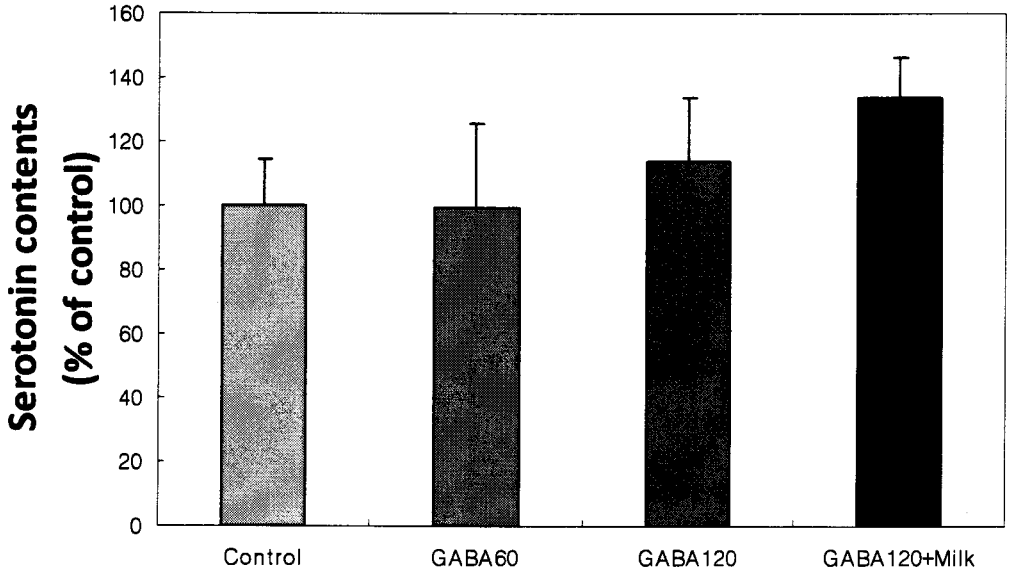

Fig. 2. Serotonin contents of mice that administered orally by gamma aminobutyric acid(GABA).