

E117

The Study of Motor Activity of Reserpinized Rat with Monosodium Glutamate

신익재*, 김극찬¹,

부산대학교 자연대학 생물학과, ¹부산대학교 자연대학 생물학과

Glutamate is the principal excitatory neurotransmitter in brain. Monosodium glutamate, a well-known food additive, promotes neural and behavioral disturbances after systemic administration in rat. Male Sprague-Dawley rats, 200-300 g in weight, were used for the experiments. Each rat was housed in the cage connected the sensor of the electronic activity monitor for measuring motor activity. Rats were kept in an air-conditioned room at $23 \pm 2^\circ\text{C}$ with 6 a.m. to 6 p.m. light-dark cycle. The subcutaneous injection of monosodium glutamate(MSG, 4g/kg body weight) has been shown to increase motor activity in rats. Reserpine interferes with the storage of 5-hydroxytryptamine and of catecholamines thereby producing a characteristic syndrome of central behavioral effects. Rats treated with reserpine(5mg/kg body weight) were tested motor activity. After 12 hours, motor activity of the reserpinized rats treated with MSG was slowly increased and loss of body weight was slightly decreased. These results suggest that glutamatergic-monoaminergic interactions are involved in motor activity in rat.

E118

흰불나방 저장단백질 유전자에 대한 염기서열과 구조결정

서숙재*, 전향미, ¹황인환

경상대학교 자연과학대학 생물학과, ¹식물분자생물학과

흰불나방 유충으로부터 저장단백질-1을 분리정제하여 N-말단 아미노산 서열 분석과 일부 펩티드 서열을 결정하였다. 결정된 아미노산 서열을 이용하여 두개의 degenerate probe를 만들어 plaque hybridization으로 이를 encoding하는 저장단백질 유전자의 cDNA를 클로닝하였다. cDNA 클론 분석으로 저장단백질-1의 핵산서열을 결정하고 아미노산서열을 연역하였다. 흰불나방 저장단백질-1은 Methionine rich storage protein, Sex specific storage protein, Basic juvenile hormone suppressible protein 과 높은 상동성을 보였다.