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Recent studies show that activation of transcriptional factors NF-E2 related factor 2 (Nrf2) is a key initiation step in the cellular response against chemical stress and Nrf2 involves in the regulation of expression of gamma-glutamylcysteine synthetase heavy (GCSH) and light subunit (GCSI). To our knowledge, however, there is no study reported whether disruptions in Nrf2 and GCS occur in oxidative stress induced by Deltamethrin (DM). Wistar male rats were administrated (daily dose is respectively 0, 3.1, 12.50 mg/Kg BWT) with i.p. for five days. The relative amount of mRNA expression of genes was measured by RT-PCR. The protein level was immunohistochemistry detected. There was no effect on mRNA expression level of GCSH and Nrf2 gene in both cerebral cortex and hippocampus tissue in rats administrated with DM. However, the mRNA level of GCSI gene in cerebral cortex of high dose group as well as in both cerebral cortex and hippocampus of low dose group was significantly lower than that in corresponding tissue of control group, decreased to 71.1%, 63.6%, and 75.2% of mRNA level of corresponding tissue of control group ($P < 0.001$). There was no obvious effect on protein level of both GCSH and Nrf2 in hippocampus as well as on that in cerebral cortex in rat treated with DM [supported by National Natural Science Foundation in China (30371225)].

757. TIME COURSE OF GENE EXPRESSION OF GAMMA-GLUTAMYL-CYSTEINE SYNTHETASE SUBUNIT AND NRF2 IN BRAIN TISSUES OF RATS TREATED WITH DELTAMETHRIN

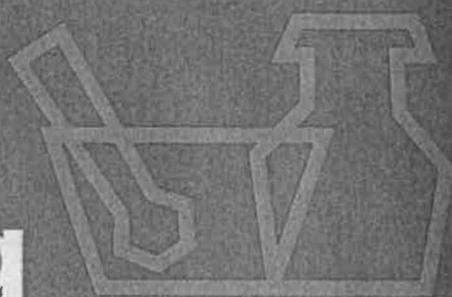
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Recent studies show that activation of transcriptional factors Nrf2 is a key initiation step in the cellular response against chemical stress and Nrf2 involves in regulation of expression of gamma-glutamylcysteine synthetase heavy (GCSH) and light subunit (GCSI). To our knowledge, however, there is no study reported whether disruptions in Nrf2 and γ -GCS occur in neurotoxicity induced by Deltamethrin (DM). Wistar male rats were administrated with DM (single dose is respectively 0, 12.50 mg/Kg BWT) with i.p. for one time. At various time points post-exposure, the relative amount of mRNA expression of these genes was measured by the method of RT-PCR and the protein level was detected by the method of immunohistochemistry and image analysis system. After single dose of DM exposure, there are up-regulation of mRNA expression of both GCSH and GCSI gene in rats hippocampus, down-regulation of mRNA expression of GCSH gene and up-regulation of mRNA expression of Nrf2 gene in rats cerebral cortex under the experimental condition. However, there is no obvious change on protein level of both GCSH and Nrf2 in hippocampus and cerebral cortex [supported by National Natural Science Foundation in China (30371225)].



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