1-5. Basic Studies on the Apoptosis Mechanism of *Trichoplusia ni* cell line

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To elucidate the apoptosis mechanism of *Trichoplusia ni* cell, fundamental studies for apoptosis induction and suppression were performed. Hygromycin B, a known inducer of apoptosis, started the inhibition of *T. ni* cell growth at 200 ㎍/㎖ concentration. Furthermore, at 400 ㎍/㎖ concentration, DNA fragmentation was detected on day 2 of incubation. Although both dexamethasone and sodium butyrate inhibited *T. ni* cell growth, DNA fragmentation was not detected by both treatments. Also, when apoptosis induced *T. ni* cells with 200 ㎍/㎖ hygromycin B were treated with caspase inhibitor (Ac-DEVD-CHO), the apoptosis was suppressed by 36%. In addition, N-acetylcysteine, another apoptosis repressor, also inhibited the apoptosis of *T. ni* cells. In order to express the anti-apoptosis gene (*bcl*-2), *T. ni* cells were transiently transformed with *bcl*-2 and its expression was confirmed by western blot analysis. These results showed the potential of developing new insect cell lines with suppressed apoptosis.