# Etoposide Phosphate Enhances the Acetylation Level of Translation Elongation Factor 1A in PLC5 Cells

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Translation elongation factor 1A (eEF1A) is a factor critically involved in the process of protein synthesis. The activity of eEF1A has been shown by several studies to be regulated by post-translational modifications such as phosphorylation and dephosphorylation. However, until now less research has focused on other post-translational modifications of eEF1A, especially acetylation. In this report, we provide new evidence for the existence of eEF1A acetylation in PLC5 cells by immunoprecipitation and Western blotting. Using the histone deacetylase (HDAC) inhibitor trichostatin A (TSA), we found that the deacetylation of eEF1A is mainly attributable to classes I and II HDAC rather than class III HDAC, and, furthermore, that the antitumour agent etoposide phosphate (VP 16) enhances the acetylation of eEF1A in a synergistic way with TSA. Our data suggest the possibility that the increased acetylation of eEF1A could be a new mechanism for the antitumour effect of etoposide.

*Key words:* eEF1A, Acetylation