

Abstract

Protein synthesis is one of the most important processes that take place in a cell. Thus there are various mechanisms in a cell that regulate it. If that regulation fails it may lead to serious pathologies. An example of this is an abnormal increase in the production of eukaryotic translation initiation factor 4E1 which occurs in some types of cancer including head and neck squamous cell carcinoma, colorectal cancer, cervical cancer or lung cancer. Enhanced availability of factor 4E1 enables transformed cells to undertake a more intense translation. The expression of individual proteins is not increased to the same extent though. The enhancement in the level of factor 4E1 has a more significant effect on oncogenic proteins. Malignant transformation caused by an incorrect regulation of factor 4E1 can be precluded by an application of compounds that impair the activity of factor 4E1. A summarization of 4E1 inhibitors is the subject of this work.