

Abstract

Leukemia is the most common cancer of children, moreover it is also not uncommon of elderly patients. Research has focused on the development of specific antileukemic drugs in recent years. Abnormalities in tumor cell metabolism that can be targeted during treatment appear to be the key.

Natural 1,4-naphthoquinones, including quambalarin B produced as a secondary metabolite by the basidiomycetes of *Quambalaria cyanescens*, are known for their therapeutic effects. Not surprisingly, Quambalarine B has also been shown to inhibit cell proliferation in some leukemic cell lines and subsequently caused cell death.

In the present thesis, I tried to observe changes in amino acid metabolism by monitoring amino acid levels in the intracellular and extracellular environment of leukemic cells after treatment with Quambalarine B using amino acid analysis with fluorescence detection. The observation was performed in Jurkat, Ramos and THP-1 cell lines, each of these lines represents another type of leukemic disease.

[IN CZECH]

Key words

Amino acid analysis, amino acid metabolism, Quambalarine B, leukemia