Investigating the Anticancer and Antioxidant Properties of Zingiber zerumbet and Piper methysticum

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Cancer has remained as one of the world's leading causes of death and although medical treatments exist, many of the current methods have cytotoxic effects to not only the cancer cells, but also to normal cells as well. Thus a safer and more effective solution is needed urgently. One such approach to this problem is through the usage of effective components from natural products. Through extensive screening, Zingiber zerumbet and Piper methysticum were found to be promising candidates due to its various documentation of anticancer activity. However, vital information behind its anticancer mechanisms are missing, hindering what could potentially be a successful anticancer cure. In this project, the mechanisms of Zingiber zerumbet and Piper methysticum's anticancer effects on neuroblastoma cancer cells (SK-N-BE(2)-C) were quantitatively studied through a series of in vitro assays. The results showed that both Zingiber zerumbet and Piper methysticum have significant anticancer effects through the inhibition of cancer cell proliferation and metastasis. In addition, the research showed that both herbs have significant antioxidant effects with similar patterns to their anti-metastasis effects. This presents a correlation between their antioxidant and anticancer activities, highly suggesting potential anticancer mechanisms. As such, the research above will work to provide valuable information for further anticancer treatment developments.

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