

(6). Such morphological changes may be an indication that B<sub>2</sub> can induce differentiation, which is evidently not in the lineage of granulocyte, or phenotypic changes toward non-malignant phenotypes. In this regard, B<sub>2</sub> deserves further intensive study.

The relationship of B<sub>2</sub> and cancer has been studied by Rivlin (15). The biological role of B<sub>2</sub> as coenzymes has been so overwhelming that all biological effects and consequences elicited by B<sub>2</sub> were interpreted in the context as coenzymes. The promotion of growth was attributed to enhanced functions of flavoprotein enzymes (2, 3), the inhibition of neoplastic growth was attributed to the shift from anaerobic to aerobic metabolic preference (4, 5), and the prevention of chemical carcinogenesis was attributed to the inactivation of chemical carcinogens (16–19). Now one must also look beyond coenzymes to examine the relationship of B<sub>2</sub> to cancer. The proposal of B<sub>2</sub> as a chemopreventive agent is perhaps less controversial.

Lane *et al.* have successfully applied a B<sub>2</sub> analogue, galactoflavin, in the treatment of lymphoma (20). The extreme sensitivity of HL-60 cells toward B<sub>2</sub> warrants further study of B<sub>2</sub> and its derivatives as chemotherapeutic agents of such sensitive cells, if not other types. It is particularly interesting to investigate B<sub>2</sub> as an anticancer agent, because the majority of cancer patients were found to have deficiency of B<sub>2</sub> in the plasma (15).

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