Abstract

New Aminoacetylenic 2-methylindoline Anticipated as Angiogenesis Inhibitor in Cancer Treatment

By

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One of the most recent approach in cancer treatment is the angiogenesis inhibitors. This is represented by endothelial growth factor receptor inhibitors and vascular endothelial growth factor receptor inhibitors such as Thalidomide and Lenalidomide.

We invision structural analogues to lenalidomide namely aminoacetylenic-2-methylindoline series as novel and new angiogenesis inhibitors.

Aminoacetylenic 2-mthylindoline derivatives were synthesized from the reaction of 2-methylindoline with 3-bromoprop-1-yne to generate 2-methyl-1-(prop-2-yn-1-yl)-2,3-dihydro-1H-indole (AZ-1). A mixture of 2-methyl-1-(prop-2-yn-1-yl)-2,3-dihydro-1H-indole, paraformaldehyde, cyclic amine and cuprous chloride catalytic amount, in peroxide free dioxane through Mannich reaction yielded the desired Aminoacetylenic 2-methylindoline derivatives AZ2, AZ3, AZ4, AZ5, AZ6, AZ7.