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ANTI-ANGIOGENIC ACTIVITY OF AN EXTRACT OF A MARINE GASTROPOD *EUCHELUS ASPER*

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Euchelus asper belongs to the Phylum-Mollusca, Class-Gastropoda, Subclass- Prosobranchia, order- Archaeogastropoda, Series- Trochacea, Family -Trochidae, Genus- *Euchelus* (Phillipi, 1847) , Species – *asper* (Gmelin,1791) and is commonly found on the west and south-east rocky coasts near low tide marks.

The whole body ether extract of a marine gastropod *Euchelus asper* obtained by cold percolation was tested for its effect on anti-angiogenic activity.

On silica column 15 fractions were obtained from *E. asper* ether soluble fraction (EAE). They were labeled as fractions A to O. Out of these fraction C gave a shiny whitish- yellow powder on drying which on further washing with ethanol gave white shiny flakes. This sub-fraction was labeled as C_1 and it showed the anti-angiogenic activity. Fraction D, greenish yellow in colour oily in nature, also proved to be anti-angiogenic. The C1 subfraction and D fraction was subjected to NMR and GC-MS analysis.

Crude EAE fraction showed ID_{50} 50 mg while those for sub fractions C and C_1 gave ID_{50} value at 30 ng and 3ng respectively. Fraction D showed ID_{50} value at 50 ng. Our study reveals sub fraction C_1 to be potent angiogenesis inhibitor.

INTRODUCTION

Angiogenesis or neo-vascularization is a physiological process involving the growth of new blood vessels from pre-existing vessels which differs from vasculogenesis used for spontaneous blood-vessel formation, while intussusception is a term used for new blood vessel formation by splitting off existing ones [1]. Angiogenesis is a beneficial natural process occurring during the healing of wounds or in response to other kinds of tissue offense. It occurs in women during both the monthly reproductive cycle and during pregnancy[2] while in many angiogenic diseases such as diabetic retinopathy, rheumatoid arthritis, hemangiomas, psoriasis, atherosclerosis it appears to be associated with persistent upregulated angiogenesis [3].

Judah Folkman (1970) proposed that tumor growth can be halted if the tumor was deprived of its blood supply leading to inhibition of angiogenesis or anti-angiogenesis.

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