Study of Chick Chorioallantoic membrane to test anti-angiogenesis Activity

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Angiogenesis is the term which describes the sequence of events involved in the formation of new blood vessels by damaged tissues. However, a large amount of angiogenesis factors leads to excessive angiogenesis. This is the key factor responsible for the onset of the deadly disease, Cancer. Various anti-angiogenesis therapies are being developed to inhibit the process of angiogenesis, thus, depriving the cancer cells of essential nutrients and finally leading to their death. One such therapy involves the use of plant extracts with anti-angiogenesis properties as an angiogenesis inhibitor. Research is being carried out to improve the efficiency of this therapy. Plants can be regarded as a chemical cocktail composed of diverse chemical components with various biological activities. In order to improve the effectiveness of the therapy and to reduce the cytotoxic effects of the plant products, the different components of the plant extract can be isolated and various combinations of these components can be tested for their anti-angiogenesis property. Our work involves the study of the chick chorioallantoic membrane of the egg to analyze the anti-angiogenesis activity of test substances. The anti-angiogenesis property of the formulations composed of the different parts of Allium cepa (onion), Fabaceae (Flame of the forest), Mentha (mint) and Calotropis were studied.

Key words: Anti-angiogenesis, plant extracts, Formulation, Chick chorioallantoic membrane, Cancer.