

P#34

**Toxicological Screening of
Short-Term Exposure of Sidestream
Cigarette Smoke on Angiogenesis**

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Angiogenesis is a fundamental process that ensures adequate metabolic supply to tissues in numerous biological and pathological states, including tumorigenesis. Cigarette smoking causes numerous adverse effects, some of which are associated with disruption of normal process of angiogenesis. It is believed that sidestream cigarette smoke severely affects the normal process of angiogenesis by effecting different components that help in normal process of angiogenesis. Sidestream cigarette smoke is composed primarily of smoke that emanates from the burning end of cigarette, smoke that the smoker exhales, and contaminants that diffuse through the cigarette paper. The aim of the present study was to ascertain the toxicological effects of different sidestream cigarette smoke solution (SSCSS) on angiogenesis by using chicken chorioallantoic membrane (CAM) assay. Decrease in total vascular area, diameter of secondary and tertiary blood vessels, cell proliferation, migration of blood vessels towards ectoderm and number of capillary plexuses formation was observed by application of SSCSS.

Scanning microscopy also revealed deviation in pattern formed by the major capillary plexuses and the fibrillar elements of the mesoderm in treated CAMs. It is concluded that SSCSS inhibit processes that may hinder normal process of angiogenesis resulting in abnormal blood supply to tissues, decreased repair and remodeling, which are common problems among smoke-exposed individuals. Further study is required to delineate the effects of different chemicals in SSCSS on angiogenesis.

Key words: Angiogenesis, SSCSS, CAM

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P#35

**Impaired Wound Healing by
Exposure of Different Mainstream
Whole Smoke Solutions of
Commercial Cigarettes**

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Cigarette smoke has been shown to potentiate wound damage and delayed ulcer healing. The chicken dorsum excisional wound assay was used to elucidate the deleterious effects of different mainstream whole smoke solutions (MSWSS) on the fundamental