CHAPTER 11

Promising Anticancer Potentials of Natural Chalcones as Inhibitors of Angiogenesis

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ABSTRACT

This chapter focuses on the budding perspective of chalcone (prop-2-ene-1-one)-based natural inhibitors (isoliquiretigenin, butein, garcinol, hydroxysafflor yellow A, broussochalcone A, 2,4-dihydroxy-6-methoxy-3,5-dimethylchalcone, 4′-hydroxy chalcone, and Parasiticin-A, -B, and -C) and synthetic inhibitors (4-(*p*-toluenesulfonylamino)-4′-hydroxy chalcone, 4-maleamide peptidyl chalcone, and quinolyl-thienyl chalcone) that will prevent angiogenic switching (fibroblast growth factor angiogenin, TGF-β) by directly inhibiting the three vital therapeutic targets: vascular endothelial growth factor, vascular endothelial growth factor receptor-2, and matrix metalloproteinases-2/9, which will block neovascularization, vascular formation, and network formation by completely depriving the cells from the required nutrients, fluid, signaling molecules, and oxygen. The highlighted studies will positively motivate young minds, medicinal chemists, future researchers, and allied scientists for developing or exploring