

Mechanisms of environmental chemicals that enable the cancer hallmark of evasion of growth suppression

ABSTRACT

As part of the Halifax Project, this review brings attention to the potential effects of environmental chemicals on important molecular and cellular regulators of the cancer hallmark of evading growth suppression. Specifically, we review the mechanisms by which cancer cells escape the growth-inhibitory signals of p53, retinoblastoma protein, transforming growth factor-beta, gap junctions and contact inhibition. We discuss the effects of selected environmental chemicals on these mechanisms of growth inhibition and cross-reference the effects of these chemicals in other classical cancer hallmarks.