

FAUSTIAN BARGAIN: FIELD EFFECT OF CELLULAR SENESENCE

Ana Krtolica

Buck Institute, Novato CA

Cellular senescence is a virtually irreversible growth arrest that is induced in cells at risk for malignant transformation. This tumor suppressive response is induced by variety of procarcinogenic cellular events including presence of the critically short or dysfunctional telomeres, overexpression of protooncogenes and DNA damage. Cells that undergo senescence response exhibit changes in their secretory phenotype and thus, alter the microenvironment. These senescence-induced changes in microenvironment affect the proliferation and differentiation of surrounding cells and may promote tumorigenesis. Molecular mechanisms involved in these effects will also be discussed.