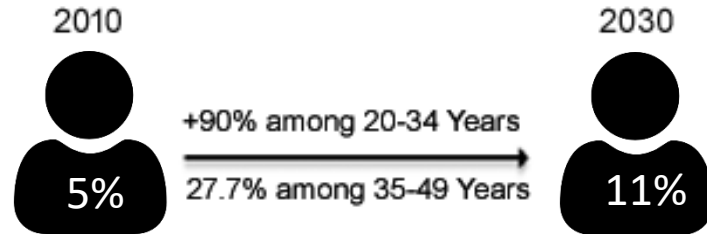


IMPACT OF COMBINATORIAL THERAPY ON METASTATIC COLON CANCER

Sharda N, Sokolov D, Singh D, Czinn SJ, Blanchard TG, Banerjee A
Department of Pediatrics, University of Maryland School of Medicine

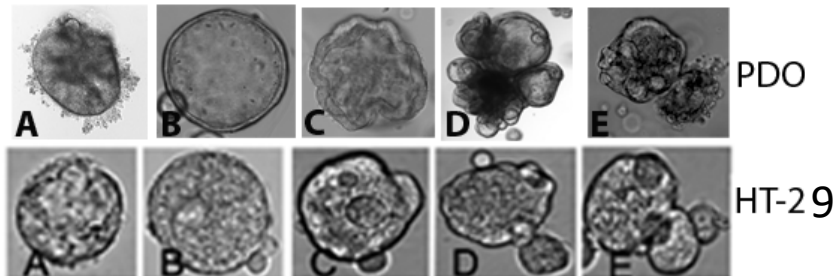
Young Colon Cancer



Problem of Young Colon Cancer

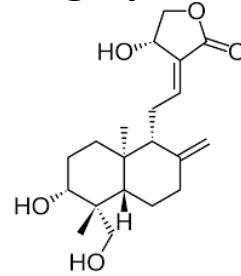
1. Delayed diagnosis causes metastasis
2. Conventional therapies target proliferating and differentiated cancer cells with limited killing of cancer stem cells which causes metastasis

Proposed Model

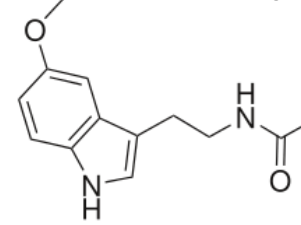


Results

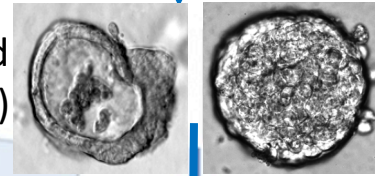
Andrographolide (AGP)



Melatonin (MLT)

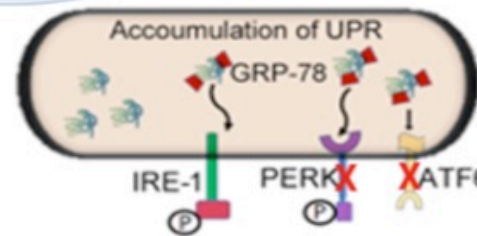


Patient-Derived Organoid (PDO)

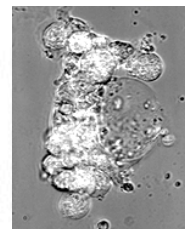


Colon Cancer Stem Cells (CSCs)

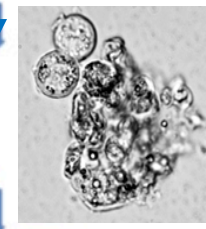
↑ ROS



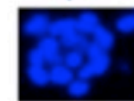
PDO Cell Death



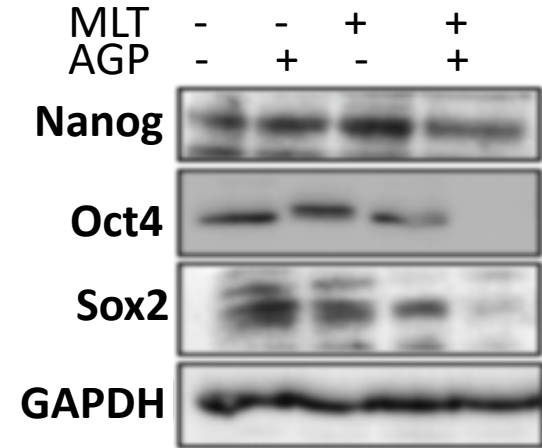
CSC Cell Death



Apoptotic Cell Death



Results (Contd.)



Significance

1. The pharmacological concentration of both compounds are significantly less (3-5 folds)
2. Significantly diminishes the stemness properties.
3. Absence of toxicological effect on normal cells.

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Department of Pediatrics,
UMB SOM.