

Ascitic Zajdela Hepatoma as a Continuum for Tumor Cells at Transit State

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Previously, from the adhesive cell line of rat ascitic Zajdela hepatoma, we obtained its daughter sublines of two types – holoclonal and meroclonal, whose cells differed in morphology (fibroblast-like and epithelial-like, respectively), clonogenicity in tests *in vitro* and tumorigenicity *in vivo*. To identify potential roles of attaching Zajdela hepatoma cells in the process of metastasis, we compared all its sublines to monolayer lines of other hepatocellular tumors by parameters that determine cell's invasive and migration properties. We found that the cells of holoclonal sublines were characterized by increased activity of matrix metalloproteinase 1, individual type of migration and high speed of movement in comparison with cells of other lines. Cells of all monolayer lines of Zajdela hepatoma secreted active forms of matrix metalloproteinase 9 and translocated the intracellular domain of epithelial cell adhesion molecule (EpCAM) into the nucleus, which indicates that they acquired an invasive phenotype and activated the Wnt- β -catenin signaling pathway. We assume that the clonal sublines obtained from Zajdela's ascitic hepatoma are represented by cells in transit states between the epithelial and mesenchymal phenotypes.

Keywords: ascitic hepatoma, holoclones, matrix metalloproteinase, meroclones, metastasis, tumor stem cells, epithelial cell adhesion molecule, epithelial-mesenchymal transition