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Inhibition of CD146 in Breast Cancer Stem Cells and Tumorigenesis to Control Breast Cancer Metastasis

Akshita Sharma
The London College UCK, U.K.

Breast cancer is the second most common cancer after lung cancer and contributes to 15% of total cancer death; being treated by surgery, radio and target therapy still it relapse after sometime. It has been found that angiogenesis plays central role in cancer and cancer cells with stem like properties are main culprit for relapse of cancer, thereby making them the new target of treatment. CD146, 113 KDa surface glycoprotein has been found to have key role in angiogenesis and cancer stem cells, thus we hypothesized that CD46 is playing a key role in regulating both angiogenesis and cancer stem cells thereby targeting growth and metastasis of breast cancer. Based on our hypothesis we have conducted our research on MDA MB 231 triple negative cell line by performing various in-vitro and in-vivo experiments and also inhibited the CD146 expression to study its effect. So we found that CD146 is key molecule which when targeted can inhibit breast cancer growth and metastasis.