Alethia Biotherapeutics

Alethia Biotherapeutics Announces Promising In Vivo Results for its EMT Inhibitor AB-16B5 and Issuance of a Patent for the Role of Secreted Clusterin in EMT

MONTREAL, November 9, 2011 – Alethia Biotherapeutics Inc., a privately held pre-clinical stage biotechnology company, announced today the issuance of US patent number 8,044,179 entitled "Methods and compositions for modulating tumor cell activity". This key patent provides protection for a family of monoclonal antibodies that target the EMT-promoting region of secreted clusterin (sCLU). The Company also announced that it has obtained results in animal tumor xenograft studies showing that AB-16B5, a monoclonal antibody specific for the EMT-associated form of sCLU, inhibits the growth of human tumors by abrogating their ability to undergo EMT. Consequently, the increased epithelial nature of the resulting tumor cells renders them increasingly responsive to chemotherapy. Mr. Yves Cornellier, President & CEO of Alethia commented, "The issuance of this patent represents the third patent awarded to Alethia this year. This attests to the high level of scientific innovation being conducted in our Company and contributes to increasing our strong IP portfolio"

sCLU is a protein that normally functions as a chaperone to stabilize the activity of serum factors such as the human complement system where it acts as a control mechanism of the complement cascade. It was also found to interact with other apolipoproteins as well as leptin. Importantly, sCLU was found to be over-expressed in several cancer indications including prostate, NSCLC and breast cancer where it appears to promote proliferation and survival of tumor cells. More recently, a critical role of sCLU as a potent inducer of the epithelial-to-mesenchymal transition (EMT) was revealed. Alethia is developing AB-16B5, a monoclonal antibody that interacts with a specific sequence in sCLU that is required for its EMT-promoting activity. Treatment of human tumor xenografts resulted in a reduction in tumor invasion, a decrease in tumor growth and an increase in the effectiveness of cytotoxic drugs such as docetaxel and gemcitabine. Alethia findings also showed that sCLU is highly expressed in pancreatic cancer cells and AB-16B5 can reduce the growth of pancreatic tumors. This latter result strongly suggested that targeting sCLU with AB-16B5 might represent a novel strategy for pancreatic cancer patients, who have very few therapeutic options available to them. Finally, examination of tissue sections generated from human tumor xenografts exposed to AB-16B5 revealed that the expression of the epithelial specific protein, E-cadherin, was increased whereas the mesenchymal character of the tumors was markedly decreased, indicating that blocking the activity of sCLU in vivo leads to inhibition of EMT. Thus, AB-16B5 is one of the few true inhibitors of EMT that are currently under development.

Dr. Mario Filion, Chief Scientific Officer of Alethia commented, "Over the last decade, EMT was found to be a critical contributor to tumor progression where it mediates the transition of epithelial cells in primary tumors into mesenchymal cells showing increased migration, motility and a loss of E-cadherin expression thus making these cells more invasive to secondary metastatic sites. Recent evidence suggests that mesenchymal cells resulting from an EMT share many characteristics with cancer stem cells (CSCs). We believe that our inhibitor of EMT AB-16B5 represents a unique opportunity to not only make tumor cells more responsive to current chemotherapeutic agents but to also offers the possibility of targeting these elusive CSCs in order to achieve a more robust clinical response".

About Alethia Biotherapeutics Inc.
Alethia is a privately held, Montreal-based pre-clinical stage biotechnology company created in 2002. Alethia develops innovative therapeutic approaches in areas of unmet medical needs. The Company is currently focusing its development efforts on cancer-associated epithelial-to-mesenchymal transition (EMT), ovarian cancer, and cancer-induced bone loss, three areas for which there are very few therapeutic alternatives. Alethia capitalizes on its ability to identify and validate disease-specific targets for the development of highly focused antibody-based therapeutics.

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