



Alethia Biotherapeutics

Alethia Biotherapeutics Announces the Filing of a US Provisional Patent Application Covering New Treatment Methods for its EMT Inhibitor AB-16B5

MONTREAL, March 9, 2012 – Alethia Biotherapeutics Inc., a privately held pre-clinical stage biotechnology company, announced today the filing of provisional new patent application entitled “Pharmaceutical combinations”. In particular, this patent application describes results showing that inhibition of sCLU with AB-16B5, a monoclonal antibody that inhibits the function of secreted clusterin (sCLU), affects the status of the epidermal growth factor receptor (EGFR) in lung and breast cancer cells. This molecular change, conferred through the inhibition of EMT by AB-16B5, is predicted to increase the responsiveness of tumors to EGFR inhibitors. Mr. Yves Cornellier, President and CEO commented: “We are actively building a strong IP portfolio with additional patent applications that will cover the broad range of disease applications the company has created around epithelial to mesenchymal transition”.

One of the most important targets in lung cancer is EGFR, a member of the ErbB family of receptor tyrosine kinases, that is a cell membrane receptor that plays important roles that influence cell proliferation, invasiveness, motility, survival and apoptosis. Although EGFR is ubiquitously expressed, it is often modified in tumors cells. Several agents against EGFR were developed which include monoclonal antibodies that target the extracellular domain or small molecule tyrosine kinase inhibitors that inhibit EGFR’s intracellular activating functions. Although many patients are initially responsive to these EGFR-targeted therapies, resistance invariably develops leading to rapid recurrence and metastasis. This decreased efficacy is often accompanied by the appearance of EGFR activating mutations or tumors that lose EGFR expression. In addition, these molecular changes are also associated with EMT, which can contribute to drug resistance, increased invasiveness and changes in EGFR status. Therefore, the ability to block EMT in cancer cells will likely contribute to a stabilization of the EGFR status resulting in increased responsiveness to EGFR-targeted therapies.

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. 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 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. Examination of tissue sections generated from the 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 is currently under development.

Dr. Mario Filion, Chief Scientific Officer of Alethia commented, “The new findings broaden the spectrum of therapeutic interventions for AB-16B5 and create an opportunity to address important limitations faced by patients with lung cancer and other cancers that develop resistance to EGFR therapy”.

About Alethia Biotherapeutics Inc. Alethia is a privately held, Montreal-based pre-clinical stage biotechnology company created in 2002. Alethia develops monoclonal antibody therapeutics to novel clinically relevant targets identified using its patented STAR discovery technology. BDC Capital and Go Capital provided seed financing to Alethia in 2008 and, in conjunction with AgeChem Venture Fund, provided Alethia’s Series A financing in 2010.

Contacts

Yves Cornellier
President and CEO
ycornellier@alethiabio.com

Tel: (514) 858-7666 ext. 206
Fax: (514) 858-5333

Mario Filion, Ph.D.
Executive VP, CSO
mariof@alethiabio.com

Tel: (514) 858-7666 ext.207
Fax: (514) 858-5333