



Alethia Biotherapeutics

## **Alethia Biotherapeutics Announces Issuance of a Patent for the Use of Anti-Resorptive Antibodies for Treatment of Severe Bone Loss**

**MONTREAL, May 1, 2012** – Alethia Biotherapeutics Inc., a privately held pre-clinical stage biotechnology company, announced today the issuance of US patent number 8,168,181 entitled “Methods of Impairing Osteoclast Differentiation Using Antibodies that Bind Siglec-15”. This key patent provides protection for methods of treatment using antibodies that target Siglec-15, a cell surface receptor that is specifically expressed on osteoclasts, the cells that are responsible for bone degradation. Mr. Yves Cornellier, President & CEO of Alethia commented, “The issuance of this patent represents the second patent awarded to Alethia for the Siglec-15 target. This attests to the high level of scientific innovation being conducted in our Company and underscores the high success of our STAR discovery platform to identify novel therapeutic targets.”

Bone density and structure is maintained through a balance of bone resorption by osteoclasts and bone deposition by osteoblasts. The combination of simultaneous resorption and deposition permits continual remodeling of bone but excessive osteoclast activity leads to an imbalance and a loss of bone density, causing bone loss. Siglec-15 was identified by Alethia as a new regulator of osteoclast differentiation with improved specificity and novel mechanisms of action. Functional studies have confirmed the importance of Siglec-15 for the resorptive activity of osteoclasts and *in vivo* results showed that inhibiting Siglec-15 with an antibody results in significant increases in bone mineral density. The Company already obtained a first patent last year covering the use of Siglec-15 for screening for inhibitors. This second US patent covers methods of treatment and consolidates the stronghold that Alethia has for this target in bone-related diseases.

Dr. Mario Filion, Chief Scientific Officer of Alethia commented, “We are pleased to be awarded this new patent as it represents an important asset in our product development efforts. We believe that Siglec 15 is a critical therapeutic target for the development of new bone anti-resorptives with improved specificity”.

### **About STAR**

Alethia exploits a technology called Subtractive Transcription-based Amplification of mRNA (STAR) especially for the discovery of differentially expressed mRNA sequences including the rarest ones. What distinguishes the STAR technology is its capability to discover differentially expressed sequences in a completely opposite manner from that of previously developed methods. STAR is distinct among all of the other commercial methods for differential expression analysis in its use of an RNA amplification process with linear kinetics, rather than DNA amplification with exponential kinetics. This minimizes the biased amplification of preferred sequences in a mixture that has been reported for techniques using PCR. Since STAR is a preparative technology, it has distinct advantages over the various commercial versions of expression profiling, which are generally used for analytical purposes. The information on changes to the disease model resulting in differential expression is actually conveyed by the products of the STAR process. Thus, where other methods provide only expression data, STAR delivers informative material, *infomaterial*, which can be used directly for the validation of new therapeutic targets.

### **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.

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