

Alba Therapeutics Announces the Presentation of Results of a Phase IIa Clinical Trial for Larazotide Acetate for the Treatment of Celiac Disease at the Digestive Disease Week Conference

BALTIMORE, MD, May 20, 2008/PRNewswire/ -- Alba Therapeutics Corporation announced today that data from its Phase IIa clinical trial were presented in the Clinical Advances in Celiac Disease session at the Digestive Disease Week (DDW) meeting in San Diego, California. Results of the randomized, double-blind, placebo controlled study of larazotide acetate for the prevention of celiac disease reactivation by gluten challenge in celiac subjects in remission¹ were presented by Daniel Leffler, MD from Beth Israel Deaconess Medical Center at the DDW today.

Celiac disease affects approximately 1% of individuals in the United States and Europe or approximately 6.5 million individuals. The only accepted therapy for the disease is a strict gluten-free diet; however, the response to therapy is poor or incomplete in up to 30% of patients. Dietary non-adherence is the chief cause of persistent or recurrent symptoms.² Over time, 30-50% of individuals are unable to maintain a strict gluten-free diet. Additionally, a gluten-free diet fails to induce clinical or histological improvement in 7-30% of celiac patients and such a lack of response should trigger a systematic evaluation.³ These facts suggest that there is a need for therapeutic modalities beyond dietary modification.

Alba's study, the first Phase IIa trial in celiac disease and the first to assess dosing requirements for larazotide acetate, was designed to evaluate the safety, tolerability and efficacy of multiple doses of larazotide acetate in celiac disease subjects during a 2 week gluten challenge. The randomized, double-blind, placebo-controlled clinical trial enrolled 86 patients who had a confirmed biopsy diagnosis for celiac disease and were in compliance with a gluten-free diet for at least six months prior to enrollment as demonstrated by a negative serology test of anti-transglutaminase (tTG). Patients were randomized into seven drug-treated and placebo groups and challenged three times a day with gluten or gluten placebo during a 14 day period. Four doses of the oral formulation of larazotide acetate, all less than 10 mg, were given prior to each gluten challenge. Study endpoints included intestinal permeability (IP), measured as lactulose-mannitol ratio (LAMA), as well as patient signs and symptoms and outcomes, measured by the Gastrointestinal Symptoms Rating Scale (GSRS; validated in several gastrointestinal diseases) and the Psychological General Well-Being Index (PGWBI).

Clinical Findings:

- In the primary study outcome, the prevention of increase in LAMA ratio from Day 0 to Day 14, the treatment groups showed a dose dependent protection from increase in intestinal permeability as measured by LAMA ratio versus placebo, however the difference was not statistically significant
- In the highest dose active treatment groups of 4 and 8 mg, the LAMA ratio did not increase after gluten exposure when compared with placebo

¹ A Randomized, Double-Blind, Placebo Controlled Study of Larazotide Acetate (AT-1001) for the Prevention of Celiac Disease Reactivation by Gluten Challenge in Celiac Subjects in Remission, Leffler, Daniel A., Kelly, Ciaran, Paterson, Blake, Abdullah, Hani, Colatrella, Anthony, Murray, Joseph A., presented at DDW, May 20, 2008.

² Green, P, and Cellier, C, Review Article, Medical Progress, Celiac Disease, *N ENGL J MED* 2007;357:1731-43

- Post-hoc analysis of change in LAMA ratio from Day 7 to Day 21 showed dose dependent prevention of increase in LAMA across the 4 and 8 mg treatment groups
- Changes in PGWBI scores and anti-tTG titers were not significant over the time course of this study
- An unexpected enrollment effect resulted in a fall in intestinal permeability from Day 0 to Day 7 across all groups suggesting the need for a run-in period
- Larazotide acetate conferred protection from gastrointestinal symptoms as measured by the GSRS as well as from expected signs and symptoms of gluten toxicity
- Follow-up studies of longer duration are currently ongoing

Safety:

- There was no difference in rate of adverse events between Placebo and Active Drug Groups (46% vs. 55%)
- No Serious Adverse Events (SAEs) were reported
- Headache was the most common AE (reported by 17/86 subjects), with no differences among the active drug group and the placebo group
- Plasma levels of larazotide acetate were below the limits of quantification (0.5 ng/ml) in all groups at days 0, 7 and 14

“Although the primary study outcome was not statistically significant, a great deal was learned about the potential effects of larazotide acetate and the secondary outcome data is very positive. Further, important new information was gained about the best way to run a celiac disease clinical trial. This trial marks the beginning of a new era in celiac therapeutics where modalities beyond diet alone have the ability to improve the lives of our patients,” stated Daniel Leffler, MD a gastroenterologist from Beth Israel Deaconess Medical Center.

“We are very encouraged by the clear trend in the reduction of intestinal permeability and the signs and symptoms of gluten exposure in patients with celiac disease. We have applied the knowledge gained in this Phase IIa clinical trial to a larger Phase IIb gluten challenge study which is currently ongoing. In addition, we have recently initiated a clinical trial in 106 active celiac disease patients. Alba is committed to developing and studying new treatment options for patients with celiac disease,” stated Dr. Francisco Leon, Head of Clinical Research and Development at Alba. For more information about Alba’s clinical trials, please visit the www.clinicaltrials.gov web site and search for Alba Therapeutics.

About Celiac Disease

Celiac disease is a lifelong T-cell mediated auto-immune disorder, which occurs in individuals who are genetically susceptible and is characterized by small intestinal inflammation, injury and intolerance to gluten. CD is a growing public health concern, affecting approximately 3 million people in the United States and over 6.5 million people worldwide. People with CD cannot

tolerate gluten proteins and have an inflammatory response to the gluten in wheat, barley and rye. This results in varying symptoms such as fatigue, skin rash, anemia, fertility issues, joint pain, weight loss, pale sores inside the mouth, tooth discoloration or loss of enamel, depression, chronic diarrhea or constipation, gas and abdominal pain. The immunology and nutritional abnormalities in celiac disease can potentially result in long-term complications such as osteoporosis, refractory sprue, small intestinal cancer, and lymphoma. The only current treatment for CD is complete elimination of gluten from the diet, which results in remission for most patients, but can be very difficult to implement in practice. “However, the response to the gluten-free diet is poor in up to 30% of patients and dietary nonadherence is the chief cause of persistent or recurrent symptoms.”³

About “Larazotide Acetate”

Larazotide acetate is an experimental medicine and an inhibitor of barrier dysfunction that has been shown to block abnormally increased intestinal permeability and the genesis of some autoimmune diseases, either as a result of reduction of antigen presentation to the body’s immune system, or through inhibitory, direct effects on gastrointestinal associated lymphoid tissue. Larazotide acetate is a non-absorbed peptide which improves mucosal barrier function by inhibiting cytoskeletal reorganization and tight junction disassembly. Larazotide acetate is orally formulated, has been granted “Fast Track” designation by the U.S. Food and Drug Administration for the treatment of celiac disease, and is also being evaluated for the treatment of Crohn’s Disease. Results of the Company’s first study in celiac patients are available online at: <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1365-2036.2007.03413.x>

About Alba

Alba Therapeutics Corporation is a privately held, clinical-stage biopharmaceutical company focused on the discovery, development, and commercialization of therapies to treat autoimmune and inflammatory diseases and is located in Baltimore, Maryland. Alba’s technology platform is based upon a key pathway that regulates the assembly and disassembly of tight junctions in cell barriers throughout the body. As a result of its unique technology platform, Alba is a leader in mucosal biology and has developed a pipeline of innovative therapeutic candidates that has the potential to modify the course of disease and significantly improve upon existing treatments for a wide range of diseases such as Celiac disease, Crohn’s disease, and Asthma/COPD or acute lung injury.

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³ Green, P, and Cellier, C, Review Article, Medical Progress, Celiac Disease, *N ENGL J MED* 2007;357:1731-43