

BIOLEX PRESENTS PHASE 2B RESULTS AT EASL SHOWING REDUCED RATES OF DEPRESSION IN HCV PATIENTS TREATED WITH LOCTERON[®]

Locteron Next-Generation Controlled-Release Mechanism is Designed to Provide Key Tolerability and Dosing Advantages Over Currently Marketed Interferons

Locteron May Address One of the Most Significant Side Effects Associated with the Use of Current Interferon Products in the Treatment of HCV

PITTSBORO, NORTH CAROLINA, March 31, 2011 - Biolex Therapeutics, Inc. announced that results demonstrating reduced rates of depression from its SELECT-2 Phase 2b trial of Locteron[®] for the treatment of hepatitis C are being presented today at the 46th Annual Meeting of the European Association for the Study of the Liver (EASL) in Berlin, Germany. In SELECT-2, patients treated with Locteron within the expected commercial dose range experienced substantially lower rates of depression and depressive symptoms than patients treated with the PEG-Intron[®] control. Locteron, the only controlled-release interferon alpha, is designed to offer key tolerability and dosing advantages over currently marketed pegylated interferons and serve as a core component of new combination therapies as the treatment of hepatitis C evolves to triple- and quad-drug regimens.

In a survey of hepatitis C patients published in the *Journal of Viral Hepatitis* in 2010, depression was cited as the number one adverse event impacting patient adherence to treatment, and studies have shown that patients who develop depression during treatment have a reduced chance of achieving a cure. The expected progression of treatment for hepatitis C to triple and quad regimens with potentially shorter durations of treatment are unlikely to eliminate the problem of depression as the SELECT-2 results presented today show that the majority of all episodes of depression occur by the 12th week of treatment.

Locteron is administered once every other week and requires half as many injections as the currently marketed pegylated interferons, each of which are injected once per week. In SELECT-2, three different doses of Locteron were studied (320, 480 and 640 µg). All three doses of Locteron in SELECT-2 demonstrated viral kinetics and sustained virologic response (SVR) rates that were comparable with or exceeded the PEG-Intron control while also achieving a statistically significant reduction in flu-like adverse events and lower use of concomitant medications. The Company expects the commercial dose of Locteron to be in the 320 to 480 µg range as the SVR rates for these two doses were comparable with or exceeded the control, and the tolerability advantages (including lower discontinuation rates due to adverse events) were greatest within this dose range.

In SELECT-2, depression was assessed by two methods, including patient self reporting using a validated instrument and adverse event assessments performed by medical personnel at the clinical sites during weekly visits by the patients. The SELECT-2 results demonstrated that patients experienced depression early in the study, with 75% of cases occurring within the



first 12 weeks of the trial under each of the reporting methodologies. Under both reporting methodologies, depression was less frequent for the Locteron doses encompassing the expected commercial dose range compared to the PEG-Intron control.

Throughout the 48 weeks of treatment in SELECT-2, patients self reported their status using the Beck Depression Inventory (BDI), one of the most widely used instruments for measuring the severity of depression. Higher BDI scores indicate more severe depressive symptoms. Mean BDI scores peaked by week 12 of treatment for all Locteron doses and for the PEG-Intron control group. The increase in peak mean BDI scores was substantially less for all three Locteron doses compared to the PEG-Intron group. In addition, the results demonstrated that fewer patients reported scores greater than 16 using the BDI (the threshold for mild depression) in the 320 and 480 µg Locteron dose groups compared to the PEG-Intron group.

SELECT-2
BDI Depression Results Self Reported by Patients¹

	<u>Locteron</u>			<u>PEG-Intron</u>
	<u>640 µg</u>	<u>480 µg</u>	<u>320 µg</u>	
Peak Increase in Mean BDI Scores Compared to Baseline	31%	30%	67%	124%
Patients Reporting Score Greater than 16 Using BDI (Mild Depression Threshold)	34%	21%	14%	37%

The patient-reported BDI results were confirmed independently by adverse event assessments performed by medical personnel at the clinical sites. Consistent with the BDI results, the majority of patients who experienced an adverse event characterized as depression did so by week 12 of the trial. Fewer patients in the 320 and 480 µg Locteron dose groups were identified with depression compared to the PEG-Intron group as highlighted in the table below:

SELECT-2
% of Patients with Adverse Events of Depression Identified By Clinical Staff¹

	<u>Locteron</u>			<u>PEG-Intron</u>
	<u>640 µg</u>	<u>480 µg</u>	<u>320 µg</u>	
% of Patients with Adverse Events Identified as Depression by Clinical Sites	28%	10%	0%	23%

¹ Includes all patients who were dosed at least once in the trial.



Although the 640 µg dose falls outside of the expected commercial dose range of Locteron, it should be noted that the above results may have been adversely influenced by the fact that the mean baseline BDI scores for this cohort were approximately double that of the PEG-Intron control group, and patients within the 640 µg cohort had a more frequent history of depression and higher rate of antidepressant use at baseline.

“The reduction in symptoms of depression that were seen in patients receiving Locteron is quite promising and should be followed up in additional clinical evaluation in combination with direct-acting anti-viral drugs,” said Nezam Afdhal, M.D., Chief of Hepatology at Beth Israel Deaconess Medical Center, Harvard Medical School. “The Locteron safety and tolerability results, particularly those related to depression, are clearly important as the incorporation of new direct-acting anti-virals into future triple- and quad-drug combinations for the treatment of hepatitis C will markedly increase the side effect burden on patients. As such, there is an obvious need for a more tolerable interferon to reduce the side-effect burden on patients from these multi-drug combinations and maximize their adherence to treatment.”

Locteron’s controlled-release mechanism results in the gradual release of interferon alpha 2b to patients over the duration of two weeks and avoids the early peak plasma levels of the active interferon that characterize the currently marketed pegylated interferons. This controlled-release mechanism is designed to reduce the frequency and severity of flu-like symptoms experienced by patients treated with pegylated interferons, and may also be responsible for the favorable depression results seen in SELECT-2.

“Studies suggest that hepatitis C patients react differently to a first injection of interferon alpha. This may be associated with the fact that rapidly rising interferon alpha serum levels trigger exaggerated inflammatory and adrenocorticotrophic hormone (ACTH)/cortisol increases, and patients in whom these response are higher are more likely to show depressive symptoms,” said Charles Raison, M.D., Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, internationally recognized for his expertise in the diagnosis and treatment of interferon-alpha-induced depression and anxiety. “With this in mind, it is quite plausible that Locteron’s slower rate of rise in serum concentration may avoid this effect in some patients, leading to fewer early cortisol and inflammatory spikes, and therefore the potential for fewer depressive symptoms.”

The SELECT-2 depression results were presented by the lead author, Walker Long, MD, Chief Medical Officer of Biolex, in a poster titled “Timing and Frequency of Depression During HCV-Treatment with Controlled-Release INFa2b (CR2b) vs. Pegylated IFNa2b (PEG2b): Results from SELECT-2, a Randomized Open-Label 72-week Comparison in 116 Treatment-Naïve Patients with Genotype-1 HCV.”

About the SELECT-2 Study

Biolex’s SELECT-2 Phase 2b trial was designed to identify one or more doses of Locteron that demonstrated viral kinetics and response rates comparable to the PEG-Intron control while also achieving at least a 50% reduction in flu-like adverse events. SELECT-2 was



conducted in the United States and Europe in 116 treatment-naïve, genotype-1, chronic hepatitis C patients. Patients were randomized into one of four dosing cohorts, the 320, 480 or 640 µg dose of Locteron (administered once every two weeks) or a control arm consisting of PEG-Intron (1.5 µg/kg, administered every week), with all patients receiving weight-based ribavirin. Patients were treated for 48 weeks and were followed for an additional 24 weeks to determine the SVR rate. All results reported include all patients who were dosed at least once in the trial.

The full SELECT-2 results will be presented at the EASL conference today in a separate presentation titled “SVR for Controlled-Release Interferon Alpha-2b (CR2b) + Ribavirin Compared to Pegylated Interferon Alpha-2b (Peg2b) + Ribavirin in Treatment-Naïve Genotype-1 (G1) Hepatitis C: Final Results from SELECT-2.”

Locteron Overview

Locteron, controlled-release interferon alpha 2b, is designed to offer key advantages compared to currently approved products, including reduced flu-like symptoms and rates of depression, and cutting in half the number of injections required. In contrast to Locteron, the currently approved products, Pegasys[®] and PEG-Intron, are immediate-release products that lack a controlled-release mechanism. The two-drug combination of interferon alpha and ribavirin serves as the current standard of care for the treatment of hepatitis C. However, the launch of the first direct-acting anti-viral (DAA) product, projected to occur this year, will transform treatment of genotype-1 patients to a triple-drug therapy (interferon plus ribavirin plus DAA) and substantially raise cure rates. Other recent triple or quad drug combinations with interferon (including interferon plus ribavirin plus two DAA agents) have shown promise in early clinical testing, further solidifying the continued role of interferon in the treatment of hepatitis C. It is estimated that worldwide sales of interferon products for the treatment of hepatitis C will approach \$6 billion by 2016.

Locteron incorporates an advanced controlled-release drug delivery technology that allows dosing once every two weeks. This is considerably more convenient than Pegasys and PEG-Intron, each of which requires dosing every week. More importantly, Locteron’s controlled-release mechanism results in the gradual release of interferon alpha 2b to patients over the duration of two weeks and avoids the early peak plasma levels of the active interferon that characterize the pegylated interferons. This controlled-release mechanism is designed to reduce the frequency and severity of flu-like symptoms and depression commonly experienced by patients treated with pegylated interferons.

Locteron is an investigational therapeutic candidate and has not been approved for sale by the United States Food and Drug Administration or by any international regulatory agency.

About Biolex Therapeutics

Biolex is a biopharmaceutical company that uses its patented LEX SystemSM to develop follow-on biologics, hard-to-make therapeutic proteins and to optimize monoclonal antibodies. The LEX System is a novel technology that genetically transforms the aquatic





plant *Lemna* to enable the production of biologic product candidates. The company's product candidates are designed to provide best-in-class efficacy/tolerability profiles while incorporating proven mechanisms of action. Biolex's lead product candidate, Locteron[®], has completed two Phase 2b clinical trials for the treatment of chronic hepatitis C. Biolex has also developed two other product candidates that capitalize on the benefits of the LEX System. BLX-155 is a direct-acting thrombolytic designed to dissolve blood clots in patients. BLX-301 is a humanized anti-CD20 antibody glyco-optimized for the treatment of non- Hodgkin's B-cell lymphoma and other diseases.

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Contacts:

Media: Tim Brons, Vida Communication, 415-675-7402, tbrons@vidacommunication.com

Investors: Dale Sander, Chief Financial Officer, 858-663-6993, dsander@biolex.com



158 Credle Street
Pittsboro, NC 27312
www.biolex.com

tel 919.542.9901
fax 919.542.9910