Enzon Presents Data at 2011 AACR Meeting

Third-Generation mRNA Antagonists Continue Showing Promise in Expanding Range of Oncology Indications

Locked Nucleic Acid Technology to be Featured in RNA-Targeting Therapeutics Symposium

PISCATAWAY, N.J.--(BUSINESS WIRE)-- Enzon Pharmaceuticals, Inc. (Nasdaq: ENZN) today presented updated data from clinical and preclinical studies of four investigational messenger RNA (mRNA) antagonists based on the company's locked nucleic acid (LNA) technology platform, licensed from Santaris A/S. The data were presented in poster sessions at the American Association for Cancer Research 102nd Annual Meeting, which is being held April 2-6, 2011 in Orlando, Florida.

"Enzon's third-generation mRNA antagonists continue to demonstrate potential to inhibit key tumor targets, which antibodies and small molecules have limited ability to control and access," said Ralph del Campo, Enzon's Chief Operating Officer. "The specificity and versatility of these compounds give them the potential to improve patient outcomes in an expanding range of oncology indications, both alone and in combination with other approved and experimental therapeutic agents. We look forward to further advancing all of our clinical programs, including our recently initiated androgen receptor (AR) antagonist study, as we continue to research our deep pipeline of early-stage product candidates."

Enzon has coauthored a general discussion on the therapeutic uses of LNA-based oligonucleotides, which will be held April 6 at 11:35 a.m. EDT in room W414 A/B at the Orange County Convention Center. The discussion will be part of the symposium, "RNA Targeting Therapeutics," which is being held 11:00 a.m. to 1:00 p.m. EDT.

LNA-Based mRNA Compound Poster Presentations

Clinical updates

"Down-modulation of messenger ribonucleic acid (mRNA) by EZN-2968, an hypoxia-inducible factor-1α (HIF-1α) mRNA antagonist administered in adult patients with advanced solid tumors," Roger B. Cohen et al. Poster No. LB-407

- Study designed to determine the maximum tolerated dose (MTD) and recommended Phase II dose, evaluate safety and tolerability, determine pharmacokinetic and pharmacodynamic profile, and detect preliminary evidence of antitumor activity.
- The MTD of EZN-2968 was determined to be 18 mg/kg given weekly for 4 of 6 weeks.
- EZN-2968 was well tolerated in previously treated patients with advanced tumors.
- The best response was durable stable disease, and multiple patients had tumor shrinkage.
- Evidence for down-modulation of the HIF-1α mRNA target is supported by observations in tumor and skin.
- Additional evaluation of EZN-2968 in clinical trials is warranted.

"Results of a Phase 1, open-label, dose-escalation study evaluating the safety and tolerability of EZN-3042, a survivin messenger ribonucleic acid (mRNA) antagonist, administered with or without docetaxel in adult patients with advanced solid tumors or lymphoma," Anthony W. Tolcher et al. Poster No. LB-409

- Study was designed to determine the MTD and recommended Phase II dose, both as a single agent and in combination with docetaxel; evaluate safety and tolerability; determine pharmacokinetic and pharmacodynamic profile; and detect preliminary evidence of antitumor activity.
- EZN-3042 was generally well tolerated in previously treated patients with advanced malignancies.
- The MTD for single-agent EZN-3042 is 6.5 mg/kg administered weekly. Enrollment in the combination arm is ongoing.

Preclinical updates

"Dual inhibition of the androgen receptor by ligand blockade and antisense-mediated down regulation is associated with synergistic antitumor activity in models of prostate cancer," Yixian Zhang et al. Poster No. 5394

- Mechanistic studies show strong evidence that the inhibition of AR by two fundamentally different modalities — LNAs and small-molecule AR inhibitors —may provide increased therapeutic benefit.
- Multiple clinically meaningful parameters indicate that EZN-4176, a novel AR mRNA antagonist, potentiates the therapeutic benefit of MDV3100, an oral AR antagonist currently in Phase III testing in patients with advanced prostate cancer.
- These indicators of enhanced therapeutic benefit were demonstrated in both castration-resistant and androgen-sensitive tumor models.
- Furthermore, preliminary data also indicate the potential of EZN-4176 in a bone tumor model.

"Targeting HER3 mRNA by a locked nucleic antisense molecule enhances the antitumor activity of gefitinib *in vivo*," Yaming Wu et al. Poster No. 232

- EZN-3920 down-regulates HER3 mRNA, HER3 protein, and downstream signal transduction controlled by HER3 in human tumors model systems.
- Target inhibition is correlated with potent antitumor activity.
- In addition, the antitumor effect of EZN-3920 is additive with gefitinib, a small-molecule tyrosine kinase inhibitor of EGFR.
- These data suggest that inhibition of HER3 with EZN-3920 will yield therapeutic effects when given alone or in combination with other HER-family inhibitors currently used in patients with cancer.
- Furthermore, EZN-3920 enhances the effect of gefitinib in a non-small-cell lung cancer (NSLC) tumor model. While EZN-3920 or gefitinib alone significantly delays the growth of NSCLC tumor, the combination results in tumor regression.

The abstracts and posters are available on the Company's website at www.enzon.com.

About Enzon

Enzon Pharmaceuticals, Inc. is a biotechnology company dedicated to the research and development of innovative therapeutics for cancer patients with high unmet medical needs. Enzon's drug-development programs utilize two platforms — Customized PEGylation Linker Technology (Customized Linker Technology®) and third-generation mRNA-targeting agents utilizing the Locked Nucleic Acid (LNA) technology. Enzon currently has four compounds in clinical development and multiple novel LNA targets in preclinical research. Enzon receives royalty revenues from licensing arrangements with other companies related to sales of products developed using its Customized Linker Technology. Further information about Enzon and this press release can be found on the Company's website at www.enzon.com.

Forward Looking Statements

There are forward-looking statements contained herein, which can be identified by the use of forward-looking terminology such as the words "believes," "expects," "may," "will," "should," "potential," "anticipates," "plans," or "intends" and similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be materially different from the future results, events or developments indicated in such forward-looking statements. Such factors include but are not limited to the timing, success and cost of clinical studies for Enzon's product candidates, the ability to obtain regulatory approval of Enzon's product candidates, Enzon's ability to obtain the funding necessary to develop its product candidates, market acceptance of and demand for Enzon's product candidates, and the impact of competitive products, pricing and technology. A more detailed discussion of these and other factors that could affect results is contained in Enzon's filings with the U.S. Securities and Exchange Commission, including Enzon's most recent Annual Report on Form 10-K for the year ended December 31, 2010 . These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. No assurance can be given that the future results covered by the forward-looking statements will be achieved. All information in this press release is as of the date of this press release and Enzon does not intend to update this information.

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