Enzon Presents Data at 2009 EORTC Meeting

Novel pipeline continues to advance and show promise

BRIDGEWATER, N.J., Nov 19, 2009 (BUSINESS WIRE) -- Enzon Pharmaceuticals, Inc. (Nasdaq: ENZN) presented data from its pipeline programs at the 2009 EORTC-NCI-AACR (European Organization for Research and Treatment of Cancer-National Cancer Institute-American Association for Cancer Research) annual meeting in Boston, Massachusetts.

"We are pleased to present new data from our novel pipeline programs. Our PEG-SN38 continues to be well tolerated and demonstrates antitumor activity in previously treated patients with solid tumors," said Jeffrey H. Buchalter, president and chief executive officer of Enzon. "Additionally, our novel locked nucleic acid (LNA)-based antagonists including Survivin, continue to show promise for inhibition of tumor growth in a variety of cancers."

The Posters and Abstracts that were presented included:

PEG-SN38 (EZN-2208)

Phase 1, first-in-human, dose-escalation study of EZN-2208, a novel anticancer agent, in patients with advanced malignancies (Poster C216)

EZN-2208, a novel agent, was well tolerated in previously treated patients with advanced malignancies. No cumulative toxicities were reported. The dose-limiting toxicity (DLT) for EZN-2208 administered as a 1-hour i.v. infusion every 3 weeks, with or without granulocyte colony-stimulating factor (G-CSF), was febrile neutropenia, contrasted with the DLT of irinotecan. The maximum-tolerated dose (MTD) and recommended Phase 2 dose of EZN-2208 administered once every 3 weeks is10 mg/m2 for EZN-2208 administered without G-CSF and 16.5 mg/m2 for EZN-2208 administered with G-CSF. Stable disease, sometimes prolonged and associated with tumor shrinkage, was observed as the best response. For some patients, the duration of EZN-2208 was longer than the duration of their prior therapy.

EZN-2208, a novel anticancer agent, in patients with advanced malignancies: a Phase 1 dose-escalation study (Poster C221)

EZN-2208, a novel agent, was well tolerated in previously treated patients with advanced malignancies. The DLT was neutropenia with or without fever, in distinction to the DLT of irinotecan. The MTD and recommended Phase 2 dose for EZN-2208 administered every 3 weeks is 9 mg/m2. Prolonged periods of stable disease, sometimes associated with tumor shrinkage, were observed. For some patients, the duration of EZN-2208 was longer than the duration of their prior therapy. EZN-2208 is being evaluated in a Phase 2 study in patients with metastatic colorectal cancer who failed prior oxaliplatin and irinotecan containing regimens (CRC).

Survivin Antagonist (EZN-3042)

EZN-3042, a novel survivin messenger ribonucleic acid (mRNA) antagonist, administered as a single agent or with docetaxel: results of a Phase 1, first-in-human, pharmacokinetic (PK), combination after single agent (CASA) dose-escalation study (Poster A99)

EZN-3042 was generally well tolerated in previously treated patients with advanced malignancies. The DLT for single-agent EZN-3042 was increased aspartate aminotransferase (AST) and alanine aminotransferase (ALT). For the EZN-3042 and docetaxel combination, one patient had a DLT of febrile neutropenia. Enrollment is ongoing. A qualitative assessment of the single-agent EZN-3042 pharmacokinetics (PK) data indicated that the concentration-time curve (AUC) and maximum plasma concentration (Cmax) appear to increase in a dose-proportional manner. The combination after single agent dose-escalation design is an innovative approach that allows one to follow the safety and efficacy of single-agent and combination therapy in the same patient.

LNA Antagonists (Androgen Receptor (AR), Beta-Catenin, GIL2)

A locked nucleic acid antisense oligonucleotide against androgen receptor, down-modulates target mRNA and causes antitumor effects in xenograft models of prostate cancer (Abstract C144)

EZN-4176 is a novel locked nucleic acid (LNA)-based antisense oligonucleotide that targets AR. In vivo studies demonstrated significant that down regulation of AR is associated with tumor growth inhibition as well as significant decrease of PSA. This is a novel therapeutic strategy for advanced prostate cancer, where existing therapies are focused on androgen-deprivation.

In vitro and in vivo characterization of two novel beta-catenin RNA antagonists, EZN-3889 and EZN-3892 (Abstract C141)

The beta-catenin antagonists (EZN-3889 and EZN-3892) potently and specifically inhibit the target mRNA expression both in vitro and in vivo. Targeted down-modulation of beta-catenin mRNA effectively leads to downregulation of beta-catenin protein expression and could lead to growth inhibition in beta-catenin-driven tumor cell lines. These novel agents specifically inhibit a transcription factor that has been difficult to target with conventional agents.

LNA (Locked nucleic acid) oligonucleotide based Gli2 RNA antagonist, EZN-4482, effectively inhibited tumor growth and increased survivin of animals with liver metastasis (Abstract C146)

Emerging evidence suggests that Gli1 and Gli2 represent the main activators of the Hedgehog (Hh) pathway due to amplification, overexpression of the Hh ligand, and mutations of components along the Hh pathway. Therefore, specific down-regulation of Gli1 and Gli2 may offer an effective therapeutic approach for cancer treatment. The LNA-based Gli2 antagonists (EZN 4482) potently and specifically inhibit Gli2 mRNA expression and tumor growth in two tumor models. The antagonist may be an effective therapy to treat a broad spectrum of cancers including ones that fail treatment with Smoothened inhibitor therapy.

LNA (locked nucleic acid)-based RNA antagonists mediate target mRNA silencing without transfection by simple addition to cell culture media (Abstract C148)

LNA based RNA antagonist, when used in the high nanomolar, low micromolar range readily down modulate mRNA and protein of interests in multiple cell lines without any assistance. LNA oligonucleotide represents a promising option for rapid, simple, and specific determination of gene function, target validation, and identification of drug-sensitive tumors for further in vivo evaluation and furthermore is an attractive therapeutic strategy.

The abstracts and posters can be found on the Company's website at www.enzon.com.

About Enzon

Enzon Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to developing, manufacturing and commercializing important medicines for patients with cancer and other life-threatening conditions. The Company has a portfolio of four marketed products, Oncaspar(R), DepoCyt(R), Abelcet(R) and Adagen(R). Enzon's drug development programs utilize several cutting-edge approaches, including its industry-leading PEGylation technology platform and the Locked Nucleic Acid (LNA) technology. Enzon's PEGylation technology was used to develop two of its products, Oncaspar and Adagen, and has created a royalty revenue stream from licensing partnerships for other products developed using the technology. Enzon also engages in contract manufacturing for several pharmaceutical companies to broaden its revenue base. Further information about Enzon and this press release can be found on the Company's web site 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; the ability to obtain regulatory approval of products; market acceptance of, and continuing demand for, Enzon's products and the impact of competitive products and pricing.A more detailed discussion of these and other factors that could affect results is contained in our filings with the U.S. Securities and Exchange Commission, including our annual report on Form 10-K for the year ended December 31, 2008. 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.

SOURCE: Enzon Pharmaceuticals, Inc.

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