UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 7, 2004

ENZON PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	0-12957	22-2372868
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification)

685 Route 202/206, Bridgewater, New Jersey 08807
(Address of principal executive offices) (Zip Code)

(Registrant's telephone number, including area code: (908) 541-8600

(Former name or former address, if changed since last report)

Item 5. Other Events

Press Release by Enzon Pharmaceuticals

On June 7, 2004, Enzon Pharmaceuticals, Inc. (NASDAQ:ENZN) provided a summary of clinical advancements at the 40th Annual Meeting of the American Society of Clinical Oncology (ASCO) in New Orleans, Louisiana. Poster presentations included follow-up results from a Phase 2 study that demonstrated the promise of Onco TCS (vincristine sulfate liposomes injection) in combination therapy for the first-line treatment of aggressive non-Hodgkin's lymphoma (NHL). Also presented were results from a Phase 2 study for Pegamotecan, a novel pegylated camptothecin conjugate, for the treatment of gastric and gastroesophageal cancers and results from a National Cancer Institute (NCI) Phase 1 study for SS1P, a recombinant immunotoxin under investigation as a potential therapy for mesothelin-expressing cancers, (e.g. mesothelioma, ovarian cancer, and pancreatic cancer). Investigators from each of the studies presented the data from their respective trials during the ASCO meeting, June 5 through June 7, 2004. Key highlights from the presentations have been included below.

Onco TCS

Investigators presented follow-up results of a Phase 2 clinical trial, which demonstrated the potential of Onco TCS as part of a combination regimen in the first-line treatment of aggressive NHL. The study is being sponsored by Enzon and its partner Inex Pharmaceuticals Corporation (TSX: IEX). Results were released from 68 evaluable patients in a Phase 2 open-label study conducted at the University of Texas M.D. Anderson Cancer Center in Houston, Texas in which Onco TCS was used in combination with cyclophosphamide, doxorubicin hydrochloride, and prednisone. Rituxan(R) was also administered to those patients with B-cell lymphoma.

Key findings from the study were as follows:

- Sixty-three patients, (93%) of patients, responded to the therapy. Sixty-two patients had their tumors completely eliminated for a complete response rate of 91% and one patient's tumor volume decreased by more than 50% for a partial response rate of 1% and an overall response rate of 93%.

- Of the 68 patients, 37 patients were over the age of 60 years and 91% of these patients were complete responders. In the 31 patients under the age of 60 years, 90% were complete responders and 3% were partial responders. Treatment was well tolerated by both groups with only 6% of patients withdrawing during the trial from adverse

events.

- 88% of courses were delivered at full dose with no dose capping. Adverse events observed were consistent with those seen with the standard first-line chemotherapy combination (neurotoxicity, anemia, neutropenia and thrombocytopenia).

- Investigators also presented positive patient survival data. At a median follow-up of 22 months, median progression-free survival and median overall survival were not yet reached. Overall survival was 99% (1 death) and progression-free survival was 87% (9 relapses). Progression-free survival for the elderly patient group was 86% (5 relapses) and 87% for the younger patient group (4 relapses).

- Based on these data the investigators concluded that Onco TCS may represent an important new drug when used in combination for aggressive NHL.

One-year interim results of this study were released in December 2002 at the American Society of Hematology (ASH) meeting and provided the initial analysis of the data. The ASCO results provide data analysis after a longer period of follow-up.

The current standard first-line treatment for the aggressive form of NHL is the CHOP chemotherapy combination, comprising the drugs cyclophosphamide, doxorubicin hydrochloride, Oncovin(R) (vincristine) and prednisone. In this open-label Phase 2 clinical trial the Oncovin(R) (vincristine) component is substituted with Onco TCS, which is vincristine encapsulated in Inex's proprietary sphingosomal drug delivery technology. Patients diagnosed with B-cell lymphoma also received Rituxan(R) (rituximab), a monoclonal antibody.

In addition to the Phase 2, first-line study, investigators also presented a pharmacokinetics study of Onco TCS in Patients with Metastatic Melanoma. The data presented supported the extended release formulation and longer circulation half-life of Onco TCS compared to vincristine.

Pegamotecan

Results were presented from a Phase 2 study in which Pegamotecan was evaluated as a single-agent treatment for gastric and gastroesophageal junction cancers. Thirty-five patients with gastric and gastroesophageal junction cancers were treated: 28 patients were treatment naive and seven patients had received one prior chemotherapy regimen. The primary endpoint for the study was response rate with the criteria for moving forward being at least 5 responses.

Key findings from the study were as follows:

- Nineteen (19) of the 35 patients (54%) experienced a response or stabilization of disease. Five patients (14%) achieved a partial response and 14 patients (40%) experienced stable disease.

- Pegamotecan showed promising activity based on time to response and duration of response. For those patients that achieved a partial response, the median time to response was 46 days, with a range of 40 days to 124 days, and the median duration of response was 127 days, with a range of 108 days to 208 days.

- Pegamotecan appeared to be well tolerated for a cytotoxic agent. Grade 4 toxicities occurred in 23% of patients, the most common being granulocytopenia, neutropenia and anorexia. The most common adverse events were nausea and vomiting. Patients were not pre-treated in the study and future studies will attempt to control nausea and vomiting with prophylactic use of anti-emetics.

- Based on these data, the investigators concluded that Pegamotecan may be a promising treatment for patients with gastric and gastroesophageal cancers.

SS1P

The National Cancer Institute (NCI) presented results of a multi-center Phase 1 study of SS1P as a targeted therapy of mesothelin-expressing cancers. The primary objective of the study was to determine the toxicities and maximum

tolerated dose of SS1P. Secondary objectives were to determine the pharmacokinetics and immunogenicity and observe any anti-tumor activity. Twenty-three patients with mesothelin-expressing mesotheliomas, ovarian cancer, or pancreatic cancer were treated. All of the patients had failed a first-line therapy.

SS1P was administered intraveneously over 30 minutes every other day for 6 or 3 doses. The maximum tolerated dose for the 6 dose schedule was determined. All dose-limiting toxicities were observed during the second week of treatment. Therefore, the study protocol was amended so that SS1P was administered every other day for a total of 3 doses in one week. Dose escalation is ongoing to determine the maximum tolerated dose for the 3 dose schedule.

Key findings from the study were as follows:

- Of 22 evaluable patients, a response or stabilization of the disease was achieved in 14 patients or 64%.
- Clinical benefit was observed in several patients including complete resolution of abdominal and pelvic ascites.
- Based upon these data, investigators concluded that SS1P shows evidence of anti-tumor activity. Enzon and the NCI are planning additional studies in patients with mesothelin-expressing cancers.

About Onco TCS

Onco TCS is a proprietary drug comprised of the widely used off-patent anticancer drug vincristine encapsulated in INEX's sphingosomal drug delivery technology. INEX's technology is designed to provide prolonged blood circulation, tumor accumulation and extended drug release at the cancer site. These characteristics are intended to increase the effectiveness and reduce the adverse effects of the encapsulated drug.

In May 2004, Enzon and Inex announced that the U.S. Food and Drug Administration (FDA) had accepted the New Drug Application (NDA) for Onco TCS (vincristine sulfate liposomes injection). The FDA has established a target date of January 15, 2005 for completion of review of the Onco TCS NDA. The NDA is seeking marketing approval for Onco TCS as a single-agent treatment for patients with relapsed aggressive non-Hodgkin's lymphoma (NHL) previously treated with at least two combination chemotherapy regimens.

In addition to the lead indication, relapsed aggressive NHL, Enzon and INEX intend to develop Onco TCS for use as a single-agent therapy or in combination therapy for several cancers in which vincristine is now used.

In January 2004, Enzon and INEX announced a strategic partnership to develop and commercialize Onco TCS. Under the terms of the agreement, Enzon has the exclusive North American commercialization rights for Onco TCS for all indications, subject to certain co-promotion rights of INEX. INEX retains commercialization rights outside North America.

About Pegamotecan

Pegamotecan is a polyethylene glycol (PEG)-enhanced version of camptothecin, a small molecule that is a potent anti-cancer compound in the class of topoisomerase I inhibitors. Using its proprietary PEG technology, Enzon designed Pegamotecan to improve solubility, extend the circulating half-life, and enable preferential accumulation at tumor sites. Due to the increased molecular size of Pegamotecan compared to native camptothecin, it appears that Pegamotecan passively targets certain tumors due to their enhanced vascular permeability, thereby attaining enhanced permeation and retention within these tumors (EPR effect).

In January 2004, patient dosing was initiated in a pivotal clinical trial designed to evaluate Pegamotecan as single-agent therapy for the treatment of gastric and gastroesophageal junction cancers in patients who had received prior chemotherapy. Enzon is focusing its development program for Pegamotecan on second-line therapy for gastric and gastroesophageal junction cancers, as there are no single-agent drug approvals for this indication. The Company believes

that Pegamotecan may be eligible for accelerated approval under Subpart H of the Food and Drug Act for the treatment of these cancers.

About SS1P

SS1P is a fusion protein consisting of a disulfide linked antibody fragment linked to domains II and III of Pseudomonas exotoxin A. The antibody fragment targets mesothelin, a cell surface antigen overexpressed in mesothelioma, ovarian and pancreatic cancers. Importantly, mesothelin is not expressed in normal pancreas, pancreatitis (inflammation of the pancreas), or benign pancreatic adenoma.

In November 2003, Enzon announced a Collaborative Research and Development Agreement (CRADA) with the National Institutes of Health (NIH). The development program will center on the recombinant immunotoxin SS1P. Enzon and the NCI plan to begin a Phase 2 clinical trial around the end of 2004.

About Enzon

Enzon Pharmaceuticals is a biopharmaceutical company dedicated to the discovery, development and commercialization of therapeutics to treat life-threatening diseases. The Company has developed or acquired a number of marketed products, including PEG-INTRON(R), marketed by Schering-Plough, and ABELCET(R), ONCASPAR(R), ADAGEN(R), and DEPOCYT(R), marketed in North America by Enzon's specialized sales force. Enzon's science-focused strategy includes an extensive drug development program that leverages the Company's macromolecular engineering technology platforms, including PEG modification and single-chain antibody (SCA(R)) technologies. Internal research and development efforts are complemented by strategic transactions that provide access to additional products and technologies. Enzon has several drug candidates in various stages of development, independently and with partners, including Onco TCS, for which a U.S. marketing application is currently being reviewed by the FDA for the treatment of relapsed aggressive non-Hodgkin's lymphoma. Further information about Enzon and this press release can be found on the Company's web site at www.enzon.com.

There are forward-looking statements contained herein that are not based on historical fact, including without limitation statements containing the words "believes," "may," "plans," "will," "estimates," "continue," "anticipates," "intends," "expects," 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 discussed above. Such factors include the risk that Onco TCS may not receive regulatory approval from the FDA under Subpart H of the Food and Drug Act and the fact that any such approval, if granted, will include post approval commitments, the risks that Pegamotecan and SS1P will not successfully progress through their clinical studies,

as well as those described in Enzon's Form 10-K and Forms 10-Q on file with the SEC, such as Enzon's ability to successfully launch and market Onco TCS, Enzon's ability to sustain profitability, and positive cash flow; risks in obtaining and maintaining regulatory approval for indications and expanded indications for Enzon's products; market acceptance of and continuing demand for Enzon's products; timing and results of clinical trials, including, without limitation, the ongoing clinical trials of Pegamotecan for the treatment of gastric and gastroesophageal cancers and SS1P for the treatment of mesotheliomas, ovarian cancer, or pancreatic cancer; the risk that the FDA may not deem Pegamotecan eligible for accelerated approval under Subpart H of the Food and Drug Act; and the impact of competitive products and pricing. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. All information in this press release is as of June 7, 2004 and the Company undertakes no duty to update this information.

Joint Press Release by Enzon Pharmaceuticals and Inex Pharmaceuticals

On June 7, 2004, Enzon Pharmaceuticals Inc. ("Enzon"; NASDAQ: ENZN) and Inex Pharmaceuticals Corporation ("INEX"; TSX: IEX) released follow-up results from a phase II clinical trial that indicate Onco TCS (vincristine sulfate liposomes injection) has potential to be used in combination with other cancer drugs for the first-line treatment of patients with aggressive non-Hodgkin's lymphoma (NHL).

The follow-up results were reported at the Annual Meeting of the American

Society of Clinical Oncology (ASCO) in New Orleans, Louisiana. One-year interim results were released in December 2002 at the American Society of Hematology meeting and provided the initial data analysis. The ASCO results provide data analysis after a longer period of follow-up.

Follow-up results were released from 68 evaluable patients in a phase II open-label clinical trial conducted at The University of Texas M. D. Anderson Cancer Center in Houston, Texas in which Onco TCS was used as part of a combination regimen in the first-line treatment of aggressive NHL. Sixty-three patients, or 93% of patients, responded to the therapy. Sixty-two patients had their tumors completely eliminated for a complete response rate of 91% and one patient's tumor volume decreased by more than 50% for a partial response rate of 1% and an overall response rate of 93%.

Of the 68 patients, 37 patients were over the age of 60 years and 91% of these patients were complete responders. In the 31 patients under the age of 60 years, 90% were complete responders and 3% were partial responders. Treatment was well tolerated by both groups with only 6% of patients withdrawing from treatment due to adverse events.

Investigators also presented positive patient survival data. At a median follow-up of 22 months, median progression-free survival and median overall survival had not yet been reached. Overall survival was 99% (one death) and progression-free survival was 87% (nine relapses). Progression-free survival for the elderly patient group was 86% (five relapses) and 87% for the younger patient group (four relapses).

In December 2002, INEX reported at the ASH annual meeting that at a median follow-up of 12 months after treatment, progression free survival for the elderly group was 89% (four relapses) and 94% for the younger patient group (two relapses). Therefore, the progression free survival at a median of 22 months presented today at ASCO compares favorably with the previously reported results.

The current standard first-line treatment for the aggressive form of NHL is the CHOP chemotherapy combination, comprising the drugs cyclophosphamide, doxorubicin hydrochloride, Oncovin(R) (vincristine) and prednisone. This phase II trial treated patients with CHOP in which the Oncovin(R) (vincristine) component was substituted with Onco TCS. Patients diagnosed with B-cell lymphoma also received Rituxan(R) (rituximab).

In addition to the first-line lymphoma study, data were also presented at ASCO on an Onco TCS pharmacokinetics trial in patients with metastatic melanoma. The data presented supports the extended release formulation and longer circulation half-life of Onco TCS compared to vincristine.

About Onco TCS

Onco TCS is a proprietary drug comprised of the widely used off-patent anticancer drug vincristine encapsulated in INEX's sphingosomal drug delivery technology. This technology provides prolonged blood circulation, tumor accumulation and extended drug release at the cancer site. These characteristics are designed to increase the effectiveness and reduce the side effects of the encapsulated drug.

About Non-Hodgkin's Lymphoma (NHL)

NHL is the fifth-leading cause of cancer deaths in the United States (19,400 estimated in 2004) and the sixth-leading cause of cancer deaths in Canada (2,900 estimated in 2004), according to estimates of the American Cancer Society and the Canadian Cancer Society. Approximately 53,400 and 6,400 new cases were diagnosed in the U.S. and Canada respectively in 2003.

About INEX

INEX is a Canadian biopharmaceutical company developing and commercializing proprietary drugs and drug delivery systems to improve the treatment of cancer. Further information about INEX and this press release can be found at www.inexpharm.com.

About Enzon

Enzon Pharmaceuticals is a biopharmaceutical company dedicated to the discovery, development and commercialization of therapeutics to treat life-threatening

diseases. Further information about Enzon and this press release can be found at www.enzon.com.

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future results, events or developments described in the forward looking statements. Such factors include the risk that Onco TCS may not receive regulatory approval from the FDA under Subpart H of the Food and Drug Act and the fact that any such approval, if granted, will include post approval commitments, as well as those described in Enzon's Form 10-K and Forms 10-Q on file with the SEC and INEX's publicly filed periodic reports and others, such as, (i) as to Enzon, Enzon's ability to successfully launch and market Onco TCS, Enzon's ability to sustain profitability, and positive cash flow; risks in obtaining and maintaining regulatory approval for indications and expanded indications for Enzon's products; market acceptance of and continuing demand for Enzon's products; timing and results of clinical trials and the impact of competitive products and pricing and (ii) as to INEX, INEX's stage of development, lack of product revenues, additional capital requirements, risks associated with the completion of clinical trials and obtaining regulatory approval to market INEX's products, risks associated with the failure to secure all necessary intellectual property from third parties, the ability to protect its intellectual property and dependence on collaborative partners. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. All information in this press release is as of June 7, 2004, and Enzon and INEX undertake no duty to update this information.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: June 8, 2004

By: /s/ Kenneth J. Zuerblis

Kenneth J. Zuerblis
Vice President, Finance and
Chief Financial Officer

Exhibit 99.1

ENZON
PHARMACEUTICALS

For Immediate Release

PRESS RELEASE

Contact: Susan M. Mesco
Director, Investor Relations
(908)541-8777

Euro RSCG Life NRP
Mark R. Vincent, Media Relations
(212)845-4239

ENZON PROVIDES CLINICAL UPDATES ON THREE ONCOLOGY CANDIDATES AT ANNUAL MEETING OF AMERICAN SOCIETY OF CLINICAL ONCOLOGY

-Onco TCS Demonstrates Potential in the First-Line Setting for NHL-

-Pegamotecan Phase 2 Study Meets Primary Endpoint-

-SS1P Phase 1 Study Shows Evidence of Anti-tumor Activity and Clinical Benefit-

Bridgewater, NJ - June 7, 2004 - Enzon Pharmaceuticals, Inc. (NASDAQ:ENZN) today provided a summary of clinical advancements at the 40th Annual Meeting of the American Society of Clinical Oncology (ASCO) in New Orleans, Louisiana. Poster presentations included follow-up results from a Phase 2 study that demonstrated the promise of Onco TCS (vincristine sulfate liposomes injection) in combination therapy for the first-line treatment of aggressive non-Hodgkin's lymphoma (NHL). Also presented were results from a Phase 2 study for Pegamotecan, a novel pegylated camptothecin conjugate, for the treatment of gastric and gastroesophageal cancers and results from a National Cancer Institute (NCI) Phase 1 study for SS1P, a recombinant immunotoxin under investigation as a potential therapy for mesothelin-expressing cancers, (e.g. mesothelioma, ovarian cancer, and pancreatic cancer). Investigators from each of the studies presented the data from their respective trials during the ASCO meeting, June 5 through June 7, 2004. Key highlights from the presentations have been included below.

"Enzon is continuing to make significant progress in advancing its clinical pipeline of oncology drug candidates. The multiple presentations at this year's ASCO meeting exemplifies our team's ability to successfully execute Enzon's strategy and further underscores our commitment to expand and advance our clinical pipeline," stated Uli Grau, Ph.D., Enzon's Chief Scientific Officer.

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Onco TCS

Investigators presented follow-up results of a Phase 2 clinical trial, which demonstrated the potential of Onco TCS as part of a combination regimen in the first-line treatment of aggressive NHL. The study is being sponsored by Enzon and its partner Inex Pharmaceuticals Corporation (TSX: IEX). Results were released from 68 evaluable patients in a Phase 2 open-label study conducted at the University of Texas M.D. Anderson Cancer Center in Houston, Texas in which Onco TCS was used in combination with cyclophosphamide, doxorubicin hydrochloride, and prednisone. Rituxan(R) was also administered to those patients with B-cell lymphoma.

Key findings from the study were as follows:

- Sixty-three patients, (93%) of patients, responded to the therapy. Sixty-two patients had their tumors completely eliminated for a complete response rate of 91% and one patient's tumor volume decreased by more than 50% for a partial response rate of 1% and an overall response rate of 93%.

- Of the 68 patients, 37 patients were over the age of 60 years and

91% of these patients were complete responders. In the 31 patients under the age of 60 years, 90% were complete responders and 3% were partial responders. Treatment was well tolerated by both groups with only 6% of patients withdrawing during the trial from adverse events.

- 88% of courses were delivered at full dose with no dose capping. Adverse events observed were consistent with those seen with the standard first-line chemotherapy combination (neurotoxicity, anemia, neutropenia and thrombocytopenia).

- Investigators also presented positive patient survival data. At a median follow-up of 22 months, median progression-free survival and median overall survival were not yet reached. Overall survival was 99% (1 death) and progression-free survival was 87% (9 relapses). Progression-free survival for the elderly patient group was 86% (5 relapses) and 87% for the younger patient group (4 relapses).

- Based on these data the investigators concluded that Onco TCS may represent an important new drug when used in combination for aggressive NHL.

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The current standard first-line treatment for the aggressive form of NHL is the CHOP chemotherapy combination, comprising the drugs cyclophosphamide, doxorubicin hydrochloride, Oncovin(R) (vincristine) and prednisone. In this open-label Phase 2 clinical trial the Oncovin(R) (vincristine) component is substituted with Onco TCS, which is vincristine encapsulated in Inex's proprietary sphingosomal drug delivery technology. Patients diagnosed with B-cell lymphoma also received Rituxan(R) (rituximab), a monoclonal antibody.

In addition to the Phase 2, first-line study, investigators also presented a pharmacokinetics study of Onco TCS in Patients with Metastatic Melanoma. The data presented supported the extended release formulation and longer circulation half-life of Onco TCS compared to vincristine.

Pegamotecan

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- Nineteen (19) of the 35 patients (54%) experienced a response or stabilization of disease. Five patients (14%) achieved a partial response and 14 patients (40%) experienced stable disease.

- Pegamotecan showed promising activity based on time to response and duration of response. For those patients that achieved a partial response, the median time to response was 46 days, with a range of 40 days to 124 days, and the median duration of response was 127 days, with a range of 108 days to 208 days.

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occurred in 23% of patients, the most common being granulocytopenia, neutropenia and anorexia. The most common adverse events were nausea and vomiting. Patients were not pre-treated in the study and future studies will attempt to control nausea and vomiting with prophylactic use of anti-emetics.

- Based on these data, the investigators concluded that Pegamotecan may be a promising treatment for patients with gastric and gastroesophageal cancers.

SS1P

The National Cancer Institute (NCI) presented results of a multi-center Phase 1 study of SS1P as a targeted therapy of mesothelin-expressing cancers. The primary objective of the study was to determine the toxicities and maximum tolerated dose of SS1P. Secondary objectives were to determine the pharmacokinetics and immunogenicity and observe any anti-tumor activity. Twenty-three patients with mesothelin-expressing mesotheliomas, ovarian cancer, or pancreatic cancer were treated. All of the patients had failed a first-line therapy.

SS1P was administered intraveneously over 30 minutes every other day for 6 or 3 doses. The maximum tolerated dose for the 6 dose schedule was determined. All dose-limiting toxicities were observed during the second week of treatment. Therefore, the study protocol was amended so that SS1P was administered every other day for a total of 3 doses in one week. Dose escalation is ongoing to determine the maximum tolerated dose for the 3 dose schedule. Key findings from the study were as follows:

- Of 22 evaluable patients, a response or stabilization of the disease was achieved in 14 patients or 64%.

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- Based upon these data, investigators concluded that SS1P shows evidence of anti-tumor activity. Enzon and the NCI are planning additional studies in patients with mesothelin-expressing cancers.

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In May 2004, Enzon and Inex announced that the U.S. Food and Drug Administration (FDA) had accepted the New Drug Application (NDA) for Onco TCS (vincristine sulfate liposomes injection). The FDA has established a target date of January 15, 2005 for completion of review of the Onco TCS NDA. The NDA is seeking marketing approval for Onco TCS as a single-agent treatment for patients with relapsed aggressive non-Hodgkin's lymphoma (NHL) previously treated with at least two combination chemotherapy regimens.

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development program for Pegamotecan on second-line therapy for gastric and gastroesophageal junction cancers, as there are no single-agent drug approvals for this indication. The Company believes that Pegamotecan may be eligible for accelerated approval under Subpart H of the Food and Drug Act for the treatment of these cancers.

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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 discussed above. Such factors include the risk that Onco TCS may not receive regulatory approval from the FDA under Subpart H of the Food and Drug Act and the fact that any such approval, if granted, will include post approval commitments, the risks that Pegamotecan and SS1P will not successfully progress through their clinical studies, as well as those described in Enzon's Form 10-K and Forms 10-Q on file with the SEC, such as Enzon's ability to successfully launch and market Onco TCS, Enzon's ability to sustain profitability, and positive cash flow; risks in obtaining and maintaining regulatory approval for indications and expanded indications for Enzon's products; market acceptance of and continuing demand for Enzon's products; timing and results of clinical trials, including, without limitation, the ongoing clinical trials of Pegamotecan for the treatment of gastric and gastroesophageal cancers and SS1P for the treatment of mesotheliomas, ovarian cancer, or pancreatic cancer; the risk that the FDA may not deem Pegamotecan eligible for accelerated approval under Subpart H of the Food and Drug Act; and the impact of competitive products and pricing. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. All information in this press release is as of June 7, 2004 and the Company undertakes no duty to update this information.

Exhibit 99.2

ENZON
PHARMACEUTICALS For Immediate Release

PRESS RELEASE

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ENZON AND INEX PRESENT PROMISING FOLLOW-UP DATA AT AMERICAN SOCIETY OF CLINICAL ONCOLOGY SHOWING ONCO TCS POTENTIAL IN FIRST-LINE LYMPHOMA

BRIDGEWATER, NJ - June 7, 2004 - Enzon Pharmaceuticals Inc. ("Enzon"; NASDAQ: ENZN) and Inex Pharmaceuticals Corporation ("INEX"; TSX: IEX) today released follow-up results from a phase II clinical trial that indicate Onco TCS (vincristine sulfate liposomes injection) has potential to be used in combination with other cancer drugs for the first-line treatment of patients with aggressive non-Hodgkin's lymphoma (NHL).

The follow-up results were reported at the Annual Meeting of the American Society of Clinical Oncology (ASCO) in New Orleans, Louisiana. One-year interim results were released in December 2002 at the American Society of Hematology meeting and provided the initial data analysis. The ASCO results provide data analysis after a longer period of follow-up.

David Main, President and CEO of INEX, said the follow-up results are very encouraging. "These data support the commercial strategy of seeking marketing approval for Onco TCS as a treatment for relapsed aggressive NHL, as well as our goal to continue to expand its potential in additional indications including first-line aggressive NHL. Importantly, after 22 months, patient survival data continues to support our positive expectations for this product in the first line setting."

Follow-up results were released from 68 evaluable patients in a phase II open-label clinical trial conducted at The University of Texas M. D. Anderson Cancer Center in Houston,

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Texas in which Onco TCS was used as part of a combination regimen in the first-line treatment of aggressive NHL. Sixty-three patients, or 93% of patients, responded to the therapy. Sixty-two patients had their tumors completely eliminated for a complete response rate of 91% and one patient's tumor volume decreased by more than 50% for a partial response rate of 1% and an overall response rate of 93%.

Of the 68 patients, 37 patients were over the age of 60 years and 91% of these patients were complete responders. In the 31 patients under the age of 60 years, 90% were complete responders and 3% were partial responders. Treatment was well tolerated by both groups with only 6% of patients withdrawing from treatment due to adverse events.

Investigators also presented positive patient survival data. At a median follow-up of 22 months, median progression-free survival and median overall survival had not yet been reached. Overall survival was 99% (one death) and progression-free survival was 87% (nine relapses). Progression-free survival for the elderly patient group was 86% (five relapses) and 87% for the younger patient group (four relapses).

In December 2002, INEX reported at the ASH annual meeting that at a median follow-up of 12 months after treatment, progression free survival for the

elderly group was 89% (four relapses) and 94% for the younger patient group (two relapses). Therefore, the progression free survival at a median of 22 months presented today at ASCO compares favorably with the previously reported results.

Arthur Higgins, Enzon's chairman, said, "These results continue to demonstrate the excellent potential for Onco TCS as part of first-line combination therapy for aggressive NHL. The rate and duration of response in the context of the therapy being very well tolerated is especially important for elderly patients. Further, these data are particularly encouraging when reviewed in the context of published studies for CHOP and CHOP plus Rituximab."

The current standard first-line treatment for the aggressive form of NHL is the CHOP chemotherapy combination, comprising the drugs cyclophosphamide, doxorubicin hydrochloride, Oncovin(R) (vincristine) and prednisone. This phase II trial treated patients with CHOP in which the Oncovin(R) (vincristine) component was substituted with Onco TCS. Patients diagnosed with B-cell lymphoma also received Rituxan(R) (rituximab).

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In addition to the first-line lymphoma study, data were also presented at ASCO on an Onco TCS pharmacokinetics trial in patients with metastatic melanoma. The data presented supports the extended release formulation and longer circulation half-life of Onco TCS compared to vincristine.

About Onco TCS

Onco TCS is a proprietary drug comprised of the widely used off-patent anticancer drug vincristine encapsulated in INEX's sphingosomal drug delivery technology. This technology provides prolonged blood circulation, tumor accumulation and extended drug release at the cancer site. These characteristics are designed to increase the effectiveness and reduce the side effects of the encapsulated drug.

About Non-Hodgkin's Lymphoma (NHL)

NHL is the fifth-leading cause of cancer deaths in the United States (19,400 estimated in 2004) and the sixth-leading cause of cancer deaths in Canada (2,900 estimated in 2004), according to estimates of the American Cancer Society and the Canadian Cancer Society. Approximately 53,400 and 6,400 new cases were diagnosed in the U.S. and Canada respectively in 2003.

About INEX

INEX is a Canadian biopharmaceutical company developing and commercializing proprietary drugs and drug delivery systems to improve the treatment of cancer. Further information about INEX and this press release can be found at www.inexpharm.com.

About Enzon

Enzon Pharmaceuticals is a biopharmaceutical company dedicated to the discovery, development and commercialization of therapeutics to treat life-threatening diseases. Further information about Enzon and this press release can be found at www.enzon.com.

There are forward-looking statements contained herein that are not based on historical fact, including without limitation statements containing the words "believes," "may," "plans,"

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"will," "estimate," "continue," "anticipates," "intends," "expects," 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 future results, events or developments described in the forward looking statements. Such factors include

the risk that Onco TCS may not receive regulatory approval from the FDA under Subpart H of the Food and Drug Act and the fact that any such approval, if granted, will include post approval commitments, as well as those described in Enzon's Form 10-K and Forms 10-Q on file with the SEC and INEX's publicly filed periodic reports and others, such as, (i) as to Enzon, Enzon's ability to successfully launch and market Onco TCS, Enzon's ability to sustain profitability, and positive cash flow; risks in obtaining and maintaining regulatory approval for indications and expanded indications for Enzon's products; market acceptance of and continuing demand for Enzon's products; timing and results of clinical trials and the impact of competitive products and pricing and (ii) as to INEX, INEX's stage of development, lack of product revenues, additional capital requirements, risks associated with the completion of clinical trials and obtaining regulatory approval to market INEX's products, risks associated with the failure to secure all necessary intellectual property from third parties, the ability to protect its intellectual property and dependence on collaborative partners. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. All information in this press release is as of June 7, 2004, and Enzon and INEX undertake no duty to update this information.