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Spectrum Pharmaceuticals Highlights Survival Advantage in a Case Match Control Analysis of the PROPEL Study with FOLOTYN® (pralatrexate injection) at the 58th Annual Meeting of the American Society of Hematology (ASH)

HENDERSON, Nev.--(BUSINESS WIRE)-- Spectrum Pharmaceuticals (NasdaqGS: SPPI), a biotechnology company with fully integrated commercial and drug development operations with a primary focus in Hematology and Oncology announced the presentation of data from a case match control analysis of the PROPEL Study in a poster presentation session at the 58th American Society of Hematology (ASH).

Abstract #4149: Case Match Control Analysis of Propel Reveals Survival Advantage for Patients with Relapsed/Refractory (R/R) Peripheral T-Cell Lymphoma (PTCL) Treated with Pralatrexate

In this retrospective, observational study, 80 patients out of 109 treated on the PROPEL study were successfully matched 1:1 with the control population. A highly significant difference in the Overall Survival between the control population and the pralatrexate group was observed. The overall survival observed in the control population was 4.04 months (95% CI 2.60, 6.01) which was consistent with historical controls, while the median OS in for pralatrexate treated cohort was 14.78 months (95% CI 10.61-22.31). The most common adverse reactions from the PROPEL study were mucositis (70%), thrombocytopenia (41%), nausea (40%), and fatigue (36%). The most common serious adverse events were pyrexia, mucositis, sepsis, febrile neutropenia, dehydration, dyspnea, and thrombocytopenia. See below for Important Safety Information.

"In this case match controlled study, the overall survival observed in the pralatrexate group was over three-fold higher than a case matched control group," said Owen A. O'Connor, MD, PhD, Director of the Center for Lymphoid Malignancies, Professor of Medicine and Experimental Therapeutics at Columbia Medical Center, New York Presbyterian Medical Center. "The PROPEL study, which was a Phase 2, open-label, single-arm, multi-center, international trial, included patients that were heavily pretreated, with a median of three prior systemic therapies (ranging between 1 and 12). This is one of the first times a case match control analysis has been used to understand the impact of a drug on the outcome of a rare disease, like PTCL. Importantly, we believe this may be a valuable paradigm that can be used in other orphan diseases in cancer medicine."

"We are honored to present this important data at the 58th ASH Meeting," said Rajesh C. Shrotriya, MD, Chairman and Chief Executive Officer of Spectrum Pharmaceuticals. "We are encouraged to see positive data continuing to emerge from the PROPEL study that was the basis for FOLOTYN's approval. FOLOTYN was the first drug approved for the treatment of relapsed or refractory PTCL and continues to have the leading market share in 2nd line therapy. PTCL is an aggressive disease with a poor prognosis and we are excited that FOLOTYN has the potential to improve outcome for PTCL patients. We are also looking forward to emerging new data in combination treatments that might prove to benefit PTCL patients in earlier lines of treatment and with the possibility to include FOLOTYN in future PTCL first line regimens."

About Spectrum Pharmaceuticals, Inc.

Spectrum Pharmaceuticals is a leading biotechnology company focused on acquiring, developing, and commercializing drug products, with a primary focus in Hematology and Oncology. Spectrum currently markets six hematology/oncology drugs, and has an advanced stage pipeline that has the potential to transform the Company. Spectrum's strong track record for in-licensing and acquiring differentiated drugs, and expertise in clinical development have generated a robust, diversified, and growing pipeline of product candidates in advanced-stage Phase 2 and Phase 3 studies. More information on Spectrum is available at www.sppirx.com.

About FOLOTYN®

FOLOTYN, (pralatrexate injection), a folate analogue metabolic inhibitor, was discovered by Memorial Sloan-Kettering Cancer Center, SRI International and Southern Research Institute and developed by Allos Therapeutics. In September 2009, the U.S. Food and Drug Administration (FDA) granted accelerated approval for FOLOTYN for use as a single agent for the treatment of patients with relapsed or refractory PTCL. This indication is based on overall response rate. Clinical

benefit such as improvement in progression-free survival or overall survival has not been demonstrated. FOLOTYN has been available to patients in the U.S. since October 2009. An updated analysis of data from PROPEL, the pivotal study of FOLOTYN in patients with relapsed or refractory PTCL, was published in the March 20, 2011 issue of the Journal of Clinical Oncology. FOLOTYN has patent protection through July 2022, based on a five-year patent term extension through the Hatch-Waxman Act.

Important FOLOTYN® Safety Information

Warnings and Precautions

FOLOTYN may suppress bone marrow function, manifested by thrombocytopenia, neutropenia, and anemia. Monitor blood counts and omit or modify dose for hematologic toxicities.

Mucositis may occur. If greater-than or equal to Grade 2 mucositis is observed, omit or modify dose. Patients should be instructed to take folic acid and receive vitamin B12 to potentially reduce treatment-related hematological toxicity and mucositis.

Fatal dermatologic reactions may occur. Dermatologic reactions may be progressive and increase in severity with further treatment. Patients with dermatologic reactions should be monitored closely, and if severe, FOLOTYN should be withheld or discontinued. Tumor lysis syndrome may occur. Monitor patients and treat if needed.

FOLOTYN can cause fetal harm. Women should avoid becoming pregnant while being treated with FOLOTYN and pregnant women should be informed of the potential harm to the fetus.

Use caution and monitor patients when administering FOLOTYN to patients with moderate to severe renal function impairment.

Elevated liver function test abnormalities may occur and require monitoring. If liver function test abnormalities are greater-than or equal to Grade 3, omit or modify dose.

Adverse Reactions

The most common adverse reactions were mucositis (70%), thrombocytopenia (41%), nausea (40%), and fatigue (36%). The most common serious adverse events are pyrexia, mucositis, sepsis, febrile neutropenia, dehydration, dyspnea, and thrombocytopenia.

Use in Specific Patient Population

Nursing mothers should be advised to discontinue nursing or the drug, taking into consideration the importance of the drug to the mother.

Drug Interactions

Co-administration of drugs subject to renal clearance (e.g., probenecid, NSAIDs, and trimethoprim/sulfamethoxazole) may result in delayed renal clearance.

Please see FOLOTYN Full Prescribing Information at www.FOLOTYN.com.

Forward-looking statement — This press release may contain forward-looking statements regarding future events and the future performance of Spectrum Pharmaceuticals that involve risks and uncertainties that could cause actual results to differ materially. These statements are based on management's current beliefs and expectations. These statements include, but are not limited to, statements that relate to Spectrum's business and its future, including certain company milestones, Spectrum's ability to identify, acquire, develop and commercialize a broad and diverse pipeline of late-stage clinical and commercial products, the timing and results of FDA decisions, and any statements that relate to the intent, belief, plans or expectations of Spectrum or its management, or that are not a statement of historical fact. Risks that could cause actual results to differ include the possibility that Spectrum's existing and new drug candidates may not prove safe or effective, the possibility that our existing and new applications to the FDA and other regulatory agencies may not receive approval in a timely manner or at all, the possibility that our existing and new drug candidates, if approved, may not be more effective, safer or more cost efficient than competing drugs, the possibility that our efforts to acquire or in-license and develop additional drug candidates may fail, our dependence on third parties for clinical trials, manufacturing, distribution and quality control and other risks that are described in further detail in the Company's reports filed with the Securities and Exchange Commission. The Company does not plan to update any such forward-looking statements and expressly disclaims any duty

to update the information contained in this press release except as required by law.

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