



Spectrum Provides Pozotinib Update after Successful Pre-NDA Meeting with the FDA

December 22, 2020

FDA agrees to the submission of an NDA for pozotinib for non-small cell lung cancer (NSCLC) in previously treated patients with HER2 exon 20 insertion mutations, NDA submission planned for 2021

Cohort 3 of the ZENITH20 clinical trial, which enrolled first-line NSCLC patients with EGFR exon 20 insertion mutations at 16mg once daily, did not meet its primary endpoint

Preliminary data from 8 mg twice daily dosing demonstrates meaningful improvement in tolerability

Management to host webcast and conference call today at 4:30 p.m. ET / 1:30 p.m. PT

HENDERSON, Nev.--(BUSINESS WIRE)--Dec. 22, 2020-- Spectrum Pharmaceuticals, Inc. (NasdaqGS: SPPI), a biopharmaceutical company focused on novel and targeted oncology therapies, today announced that the U.S. Food and Drug Administration (FDA) has agreed to the submission of an NDA based on data from Cohort 2 of its Phase 2 clinical trial, ZENITH20, which evaluated previously treated patients with non-small cell lung cancer (NSCLC) with HER2 exon 20 insertion mutations. The company also reported that its pre-specified primary endpoint in its Phase 2 clinical trial evaluating pozotinib in first-line NSCLC patients with EGFR exon 20 insertion mutations was not met in Cohort 3. Spectrum additionally reported that preliminary data from patients receiving 8 mg of pozotinib twice daily demonstrated meaningful improvement in tolerability as measured by adverse events and dosing interruptions.

"The agreement with the FDA to proceed with the submission of a new drug application is a significant milestone for the pozotinib program," said Joe Turgeon, President and CEO of Spectrum Pharmaceuticals. "The improved tolerability from the BID dosing could have a meaningful impact on the overall safety and efficacy profile of pozotinib in an area of high unmet medical need."

The company had a successful pre-NDA meeting with the FDA which resulted in an agreement to submit an NDA for pozotinib. During the meeting, Spectrum confirmed with the FDA that Cohort 2 data could serve as the basis of an NDA submission. The company will continue to work with the FDA as it prepares the application for submission in 2021. Cohort 2 enrolled 90 patients who received an oral once daily dose of 16 mg of pozotinib. The intent-to-treat analysis demonstrated a confirmed objective response rate (ORR) of 27.8% (95% Confidence Interval (CI), 18.9%-38.2%). The observed lower bound of 18.9% exceeded the pre-specified lower bound of 17%. The median duration of response was 5.1 months and the median progression free survival was 5.5 months. In this cohort, 87% of patients had drug interruptions with 11 patients (12%) permanently discontinuing due to adverse events. 13 patients (14%) had treatment-related serious adverse events.

"We are pleased that the FDA meeting confirmed that Cohort 2 data can serve as the basis of a NDA submission and our team is diligently working on preparing our file for submission in 2021," said Francois Lebel, M.D., Chief Medical Officer of Spectrum Pharmaceuticals. "While Cohort 3 did not meet its pre-specified ORR endpoint, we are seeing evidence of clinical activity with a disease control rate (DCR) of 86% and progression free survival data of 7.2 months." Dr. Lebel added, "The preliminary data from Cohort 5 with 8 mg twice daily dosing is supporting our hypothesis that this new dosing paradigm improves tolerability substantially, with Grade 3 adverse events reduced by about a third. We believe that improved tolerability and reduced drug dosing interruptions are key to patients staying on the drug longer and could potentially enhance anti-tumor effectiveness across the various EGFR and HER2 cohorts. These early findings, if confirmed, could benefit the entire pozotinib program."

Cohort 3 of the ZENITH20 clinical trial enrolled a total of 79 patients who received an oral once daily dose of 16 mg of pozotinib. The median time of follow up of all patients was 9.2 months with 12 ongoing patients still on treatment. The intent-to-treat analysis showed that 22 patients had a partial response (by RECIST) and 68 patients had stable disease for an 86.1% DCR. 91% of patients experienced tumor reduction with a median reduction of 25.5%. The confirmed ORR was 27.8% (95% CI 18.4-39.1%). Based on the pre-specified statistical hypothesis for the primary endpoint, the observed lower bound of 18.4% did not meet the pre-specified lower bound of >20%. The median duration of response was 6.5 months and the median progression free survival was 7.2 months. The safety profile was similar with the type of adverse events observed with other second-generation EGFR tyrosine kinase inhibitors. Grade 3 treatment related rash was 33% and diarrhea was 23%. 94% of patients had drug interruptions with 6 patients (8%) permanently discontinuing due to adverse events.

Preliminary data from Cohort 5 for patients with exon 20 insertion mutations receiving 8 mg twice daily dosing shows improved tolerability versus patients who received the 16 mg once daily dose. The data from this cohort includes patients with both EGFR and HER2 mutations. In Cycle 1, the incidence of Grade 3 or higher treatment related adverse events (rash, diarrhea and stomatitis) decreased by 32% for patients receiving the 8 mg twice daily dose. In addition, dose interruptions were reduced by 38% for the 8 mg twice daily dose versus the 16 mg once daily dose. No new types of adverse events were observed with the twice daily dosing regimen.

Conference Call and Webcast

The company's management will host a webcast and conference call today, December 22, 2020, at 4:30 p.m. ET / 1:30 p.m. PT. The live call may be accessed by dialing (877) 837-3910 for domestic callers and (973) 796-5077 for international callers and entering the conference ID#: 5036836. A live webcast of the call will be available from the Investor Relations section of the company's website at <https://investor.sppix.com/events-and-presentations> and will be archived there shortly after the live event.

About Pozotinib

Pozotinib is a novel, oral epidermal growth factor receptor tyrosine kinase inhibitor (EGFR TKI) that inhibits the tyrosine kinase activity of EGFR as

well as HER2 and HER4. Importantly this, in turn, leads to the inhibition of the proliferation of tumor cells that overexpress these receptors. Mutations or overexpression/amplification of EGFR family receptors have been associated with a number of different cancers, including non-small cell lung cancer (NSCLC), breast cancer, and gastric cancer. The company holds an exclusive license from Hanmi Pharmaceuticals to develop, manufacture, and commercialize poziotinib worldwide, excluding Korea and China. Poziotinib is currently being investigated by the company and Hanmi in several mid-stage trials in multiple solid tumor indications.

About ZENITH20

The ZENITH20 trial is comprised of 7 independent cohorts. Cohorts 1 - 4 are each independently powered for a pre-specified statistical hypothesis with a primary endpoint of ORR. Cohorts 5 - 7 are exploratory. In December 2019, the company reported that the primary endpoint for Cohort 1 (EGFR) was not met but clinical activity was seen. Based on the results of Cohort 1, the company has amended the protocol for ZENITH20 to explore additional twice-daily dosing regimens as well as lower single daily dosage. In September 2020, the company reported that Cohort 2 met its primary endpoint. Cohorts 4 - 7 are still enrolling patients.

About Spectrum Pharmaceuticals, Inc.

Spectrum Pharmaceuticals is a biopharmaceutical company focused on acquiring, developing, and commercializing novel and targeted oncology therapies. Spectrum has a strong track record of successfully executing across the biopharmaceutical business model, from in-licensing and acquiring differentiated drugs, clinically developing novel assets, successfully gaining regulatory approvals and commercializing in a competitive healthcare marketplace. Spectrum has a late-stage pipeline with novel assets that serve areas of unmet need. This pipeline has the potential to transform the company in the near future. For additional information on Spectrum Pharmaceuticals, please visit www.sppirx.com.

Notice Regarding Forward-Looking Statements

Certain statements in this press release may constitute "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995, as amended to date. These forward-looking statements relate to a variety of matters, including, without limitation, statements that relate to the company's business and its future, including the significance of Cohort 3's reported results; the significance of the preliminary data from Cohort 5, including, but not limited to, whether the new dosing paradigm will continue to improve tolerability, lead to patients staying on the drug longer and enhance anti-tumor effectiveness and the impact of such data on the entire poziotinib program; the timing and outcome of filing an NDA with Cohort 2 data with the FDA; the overall determination of a path forward for poziotinib; poziotinib's potential to significantly advance the treatment of NSCLC patients with EGFR or HER2 exon 20 insertion mutations; the timing and result of future FDA approvals; the overall progression of the poziotinib development program; the company's ability to advance development of its late-stage pipeline assets and such assets' ability to serve areas of unmet need; the potential of the company's existing drug pipeline to transform the company in the near future; and other statements that are not purely statements of historical fact. These forward-looking statements are made on the basis of the current beliefs, expectations, and assumptions of the management of the company and are subject to significant risks and uncertainties that could cause actual results to differ materially from what may be expressed or implied in these forward-looking statements. Risks that could cause actual results to differ include the possibility that the different methodologies, assumptions and applications the company utilizes to assess particular safety or efficacy parameters may yield different statistical results, and even if the company believes the data collected from the clinical trials of its product candidates, including poziotinib, are positive, these data may not be sufficient to support approval by the FDA; the possibility that success in early clinical trials, especially if based on a small patient sample, might not result in success in later clinical trials, and other unforeseen events during clinical trials which could cause delays or other adverse consequences; the company's existing and new drug candidates, including poziotinib, may not prove safe or effective; the possibility that the company's existing and new applications to the FDA and other regulatory agencies, including the NDA with Cohort 2 data it plans to submit in 2021, may not receive approval in a timely manner or at all; the possibility that the company's existing and new drug candidates, including poziotinib, if approved, may not be more effective, safer or more cost efficient than competing drugs; the possibility that the company's efforts to acquire or in-license and develop additional drug candidates may fail; the company's 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 (SEC). 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. For a further discussion of risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the company in general, see the risk disclosures in the company's Annual Report on Form 10-K for the year ended December 31, 2019, and in subsequent reports on Forms 10-Q and 8-K and other filings made with the SEC by the company.

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Robert Uhl
Managing Director, Westwicke ICR
858.356.5932
robert.uhl@westwicke.com

Kurt Gustafson
Chief Financial Officer
949.788.6700
InvestorRelations@sppirx.com

Source: Spectrum Pharmaceuticals, Inc.