

BeyondSpring's Lead Asset, Plinabulin for the Prevention of Chemotherapy-Induced Neutropenia, Has the Potential to Positively Impact Tumor Microenvironment

Data Demonstrating Plinabulin's Immune-Enhancing Potential Presented at European Society for Medical Oncology (ESMO) Congress

NEW YORK - October 23, 2018 - BeyondSpring Inc. (NASDAQ: BYSI), a global, clinical-stage biopharmaceutical company focused on the development of innovative cancer therapies, presented clinical trial data on its lead asset, Plinabulin, during a poster and oral presentation at the 2018 European Society for Medical Oncology (ESMO) Congress. The data showed that, in contrast to Neulasta (pegfilgrastim), a long-acting G-CSF and the current standard of care for chemotherapy-induced neutropenia (CIN), Plinabulin did not increase the Neutrophil-to-Lymphocyte Ratio (NLR), which is a novel marker for immune suppression in the tumor microenvironment. NLR values of greater than five are a potential immunotherapy biomarker, predicting negative outcomes such as overall survival (OS) and progression-free survival (PFS) in cancer patients.

The data was derived from the Phase 2 portion of BeyondSpring's Study 105 for intermediate-risk CIN, which evaluated Plinabulin's potential to prevent CIN in patients with non-small cell lung cancer (NSCLC) following docetaxel chemotherapy. Plinabulin was administered to patients in doses up to 20 mg/m². BeyondSpring evaluated the NLR in Cycle 1 for patients receiving standard dose of docetaxel at 75 mg/m² with either Plinabulin at 20 mg/m² (n=14) or Neulasta at 6 mg (n=14). The absolute neutrophil count (ANC) was also measured.

The data presented demonstrated the following:

- **Plinabulin did not increase the NLR to immune-suppressive levels.** While treatment with Neulasta resulted in significantly increased NLR values to >5, all patients treated with Plinabulin maintained mean post-dose NLR at <5 in Cycle 1. Baseline mean NLR values were <5 in both the Plinabulin and Neulasta arms. However, the mean NLR with Neulasta increased gradually and significantly from day 7 onwards, and to a peak of 12.2 (p<0.001) on day 10. At the last timepoint measured (on day 15), the NLR with Neulasta was still significantly elevated (mean NLR of 8.11; p<0.001) versus Plinabulin.
- **With Plinabulin, ANC remained within normal range (between 2.0 and 8.0 x 10E9 cells/L) throughout the cycle.** In contrast, with Neulasta, ANC showed an overshoot to levels up to threefold (to >18 x10E9 cells/L) of the upper limit of the normal range. Lymphocyte counts were comparable for both the Plinabulin and Neulasta treatment arms.

"Along with Plinabulin's ease of use through first-day dosing, its prevention of docetaxel chemotherapy-induced-thrombocytopenia and lack of bone pain, these NLR findings further highlight what we believe to be advantages of Plinabulin compared to Neulasta," said Douglas Blayney, global Principal Investigator for BeyondSpring's CIN development program and Professor of Medicine at Stanford University Medical Center. "The data presented at ESMO showed that Plinabulin, unlike Neulasta, did not increase NLR to potentially immune-suppressive levels. As a result, in immunotherapy settings, we believe Plinabulin could become a preferred option to prevent CIN. This data suggests that Plinabulin is an anticancer agent that offers oncologists the potential to improve treatment efficacy and reduce expensive and burdensome unplanned care - such as ER visits and hospitalizations - which are a win for both patients and physicians."

"Immunotherapy has now established its value in the treatment of cancer, and a new trend is combining immunotherapy with chemotherapy, which typically causes CIN. Based on clinical data to date, both Neulasta and Plinabulin show equal efficacy for CIN. However, in contrast to Neulasta, this data suggests that Plinabulin does not increase NLR to immune-suppressive levels, and has immune-enhancing activity," added Ramon Mohanlal, EVP and Chief Medical Officer of BeyondSpring.

About Study 105

The study evaluated patients with advanced or metastatic NSCLC after failing platinum-based therapy and was designed as a multicenter, open label, randomized study. In a head-to-head comparison of Plinabulin with Neulasta, a long-acting G-CSF, in a total of 55 patients, Plinabulin was shown to be comparable to Neulasta for the prevention of CIN, as assessed by the occurrence of severe (Grade 4) neutropenia and duration of severe neutropenia (DSN) in the first cycle.

Plinabulin was given as a single dose per cycle 30 minutes after docetaxel chemotherapy, while Neulasta was given 24 hours after docetaxel chemotherapy, consistent with its approved product label. The Phase 2 portion met its primary endpoint, which was to determine the recommended Phase 3 Plinabulin dose, and the Phase 3 trial is ongoing.

About Plinabulin

Plinabulin, a marine-derived small-molecule, is BeyondSpring's lead asset and is currently in late-stage clinical development for the prevention of chemo-induced neutropenia and as an anticancer therapy in non-small cell lung cancer. Studies of Plinabulin's mechanism of action indicate that Plinabulin activates GEF-H1, a guanine nucleotide exchange factor. GEF-H1 activates downstream transduction pathways leading to the maturation of dendritic cells, which in turn leads to T-cell activation and the up-regulate of IL6 in the tissue micro environment, contributing to the prevention of neutropenia.

About Chemotherapy-Induced Neutropenia

Chemotherapy-induced neutropenia is a common side effect in cancer patients undergoing treatment that involves the destruction of a type of white blood cell, the neutrophil, which is a patient's first line of defense against infections. Patients with grade 4 (severe) neutropenia have an abnormally low concentration of neutrophils, making these patients more susceptible to bacterial and fungal infections and sepsis, which can require hospitalization.

The current standard of care for chemotherapy-induced neutropenia prevention is G-CSF monotherapy. However, G-CSF monotherapy has limitations as described in its product information summary. As many as 90 percent of patients on chemotherapy and G-CSF monotherapy may still experience grade 3/4 neutropenia. NCCN guidelines require that patients with grade 3/4 neutropenia decrease chemotherapy dose intensity, delay chemotherapy cycle timing or discontinue chemotherapy, each of which can have a negative effect on the long-term outcomes of cancer care.

About BeyondSpring

BeyondSpring is a global, clinical-stage biopharmaceutical company developing innovative immuno-oncology cancer therapies with a robust pipeline from internal development and from collaboration with the University of Washington in de novo drug discovery using a ubiquitination platform. BeyondSpring's lead asset, Plinabulin, is in a Phase 3 global clinical trial as a direct anticancer agent in the treatment of non-small cell lung cancer and two Phase 2/3 clinical programs in the prevention of chemotherapy-induced neutropenia. BeyondSpring has a seasoned management team with many years of experience bringing drugs to the global market.

Cautionary Note Regarding Forward-Looking Statements

This press release includes forward-looking statements that are not historical facts. Words such as "will," "expect," "anticipate," "plan," "believe," "design," "may," "future," "estimate," "predict," "objective," "goal," or variations thereof and variations of such words and similar expressions are intended to identify such forward-looking statements. Forward-looking statements are based on BeyondSpring's current knowledge and its present beliefs and expectations regarding possible future events and are subject to risks, uncertainties and assumptions. Actual results and the timing of events could differ materially from those anticipated in these forward-looking statements as a result of several factors including, but not limited to, difficulties raising the anticipated amount needed to finance the Company's future operations on terms acceptable to the Company, if at all, unexpected results of clinical trials, delays or denial in regulatory approval process, results that do not meet our expectations regarding the potential safety, the ultimate efficacy or clinical utility of our product candidates, increased competition in the market, and other risks described in BeyondSpring's most recent Form 20-F on file with the U.S. Securities and Exchange Commission. All forward-looking statements made

herein speak only as of the date of this release and BeyondSpring undertakes no obligation to update publicly such forward-looking statements to reflect subsequent events or circumstances, except as otherwise required by law.

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