## Panbela Announces Publication of Abstract Titled: Evaluation of Myeloma Cell Lines Viability Following Administration of SBP-101 and DFMO Polyamine Inhibitors

**MINNEAPOLIS, December 4, 2023 (GLOBE NEWSWIRE) Panbela Therapeutics, Inc**. (Nasdaq: PBLA), a clinical stage company developing disruptive therapeutics for the treatment of patients with urgent unmet medical needs, today announces the publication of preclinical data from studies of ivospemin (also known as SBP-101) and eflornithine (also known as CPP-1X or DFMO) research in multiple myeloma (cell lines). Data published in the November supplemental issue of the Journal Blood investigated the effects of polyamine inhibition by ivospemin and CPP-1X on myeloma cell lines growth and viability in vitro. Results showed that ivospemin and CPP-1X treatment significantly decreased cell proliferation and induced apoptosis in a panel of multiple myeloma cell lines. When ivospemin and CPP-1X were combined an almost complete abolition of cell growth occurred. These results demonstrate the anti-neoplastic potential of ivospemin and CPP-1X and offer a compelling rationale for its clinical development as a potentially promising treatment option for multiple myeloma.

The work reflects the company's on-going collaboration with researchers from The University of Texas MD Anderson Cancer Center for the evaluation of polyamine metabolic inhibitor therapies in combination with CAR-T cell therapies in preclinical models. The abstract can be found in the Journal Blood Volume 142. Supplement 1, 28 November 2023, page 6589.

An earlier publication identified a metabolite panel primarily consisting of polyamines as predictive of poor response to anti-CD19 CAR T-cell therapy in relapsed refractory large β cell lymphoma (LBCL) and it is known that the polyamine (PA) uptake transport system is upregulated in LBCL and multiple myeloma (MM). The results from the in vitro studies published in this abstract are the first step in assessing if ivospemin and/or CPP-1X treatment will augment CAR-T mediated cytotoxicity against multiple myeloma cell lines. Together, this suggests the potential for a polyamine targeted therapy in combination with CAR-T therapies.

"We are excited to have initiated the studies evaluating our polyamine inhibitors ivospemin and CPP-1X in models of multiple myeloma. This work demonstrates that each agent alone and in combination with each other can decrease tumor cell growth and induce tumor cell death. Since the literature has demonstrated the relationship between polyamines and the immune system, this suggests that by adding our polyamine metabolic inhibitors, such as ivospemin and eflornithine, they may augment CAR-T cell therapy with the potential to overcome this resistance mechanism to potentially improve initial response rates and durability of response," said Jennifer K. Simpson, PhD, MSN, CRNP, President & Chief Executive Officer of Panbela.

"Polyamine modulation of the immune system is an important focus for Panbela. With our first clinical proof of concept of polyamine targeted therapy in combination with a checkpoint inhibitor for patients with STK11 non-small cell lung cancer, we are excited for this research collaboration to now evaluate the potential benefit of polyamines in immune modulation for hematologic malignancies."

**About Panbela's Pipeline**

The pipeline consists of assets currently in clinical trials with an initial focus on familial adenomatous polyposis (FAP), first-line metastatic pancreatic cancer, neoadjuvant pancreatic cancer, colorectal cancer prevention and ovarian cancer. The combined development programs have a steady cadence of anticipated catalysts with programs ranging from pre-clinical to registration studies.

***Ivospemin (SBP-101)***

Ivospemin is a proprietary polyamine analogue designed to induce polyamine metabolic inhibition (PMI) by exploiting an observed high affinity of the compound for pancreatic ductal adenocarcinoma and other tumors. It has shown signals of tumor growth inhibition in clinical studies of metastatic pancreatic cancer patients, demonstrating a median overall survival (OS) of 14.6 months and an objective response rate (ORR) of 48%, both exceeding what is typical for the standard of care of gemcitabine + nab-paclitaxel suggesting potential complementary activity with the existing FDA-approved standard chemotherapy regimen. In data evaluated from clinical studies to date, ivospemin has not shown exacerbation of bone marrow suppression and peripheral neuropathy, which can be chemotherapy-related adverse events. Serious visual adverse events have been evaluated and patients with a history of retinopathy or at risk of retinal detachment will be excluded from future SBP-101 studies. The safety data and PMI profile observed in the previous Panbela-sponsored clinical trials provide support for continued evaluation of ivospemin in the ASPIRE trial.

***Flynpovi ™***

Flynpovi is a combination of CPP-1X (eflornithine) and sulindac with a dual mechanism inhibiting polyamine synthesis and increasing polyamine export and catabolism. In a Phase 3 clinical trial in patients with sporadic large bowel polyps, the combination prevented > 90% subsequent pre-cancerous sporadic adenomas versus placebo. Focusing on FAP patients with lower gastrointestinal tract anatomy in the recent Phase 3 trial comparing Flynpovi to single agent eflornithine and single agent sulindac, FAP patients with lower GI anatomy (patients with an intact colon, retained rectum or surgical pouch), showed statistically significant benefit compared to both single agents ($p \leq 0.02$) in delaying surgical events in the lower GI for up to four years. The safety profile for Flynpovi did not significantly differ from the single agents and supports the continued evaluation of Flynpovi for FAP.

***Eflornithine (CPP-1X)***

CPP-1X (eflornithine) is being developed as a single agent tablet or high dose powder sachet for several indications including prevention of gastric cancer, treatment of neuroblastoma and

recent onset Type 1 diabetes. Preclinical studies as well as Phase 1 or Phase 2 investigator-initiated trials suggest that CPP-1X treatment may be well-tolerated and has potential activity.

**About Panbela**

Panbela Therapeutics, Inc. is a clinical-stage biopharmaceutical company developing disruptive therapeutics for patients with urgent unmet medical needs. Panbela's lead assets are Ivospemin (SBP-101) and Flynpovi. Further information can be found at **www.panbela.com .** Panbela's common stock is listed on The Nasdaq Stock Market LLC under the symbol "PBLA".

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