Purple Biotech Expands Research Collaboration in Immuno-Oncology in Combination with NT219

Collaboration to Study NT219 in Combination with anti-CTLA4 and anti-PD1/PDL1 Antibodies

REHOVOT, Israel, Oct. 26, 2021 (GLOBE NEWSWIRE) -- Purple Biotech Ltd. ("Purple Biotech", or the "Company") (NASDAQ/TASE: PPBT), a clinical-stage company developing first-in-class, effective and durable therapies by overcoming tumor immune evasion and drug resistance, announced today the expansion of an existing research agreement, led by Menashe Bar-Eli, Ph.D., Professor, Department of Cancer Biology, at The University of Texas MD Anderson Cancer Center, and will evaluate the potential efficacy of the combination of NT219, a dual inhibitor, novel small molecule that simultaneously targets IRS1/2 and STAT3, and immuno-oncology drugs, such as anti-CTLA4 or anti-PD1/PDL1 antibodies.

"Previously completed preclinical studies have shown that NT219 is able to overcome resistance to certain treatment approaches, with results demonstrating sensitization of various tumor types to the approved therapies," said Hadas Reuveni, Ph.D., VP Research and Development of Purple Biotech. "This new research leverages preclinical data depicting the interface of the lymphoid and myeloid systems within the biology, as well as a target in human cancer. It provides an opportunity to address the alterations of metabolism of both the tumor and the responsive human immune system, altering a "cold" tumor unresponsive to immune oncology approaches into a responsive "hot" one. This collaboration will also provide an opportunity to assess potential synergies mitigating anti-apoptotic mechanisms associated with TGFbeta and the canonical WNT pathway."

"Our prior preclinical studies with NT219 demonstrated its effect on the STAT3 and IRS pathways and the encouraging clinical data presented at ASCO 2021 supports the further evaluation of potentially combining NT219 with immunotherapy agents," said Dr. Reuveni. "We look forward to understanding the potential impact of such combinations through this expanded research collaboration. Based on the profile of NT219 and the data generated to date, we believe there are multiple potential benefits that can be derived by combining NT219 with certain immuno-oncology drugs."

"We are thrilled to expand this collaboration, and we believe that combining NT219 with immune-oncology backbone therapies is an important path forward for our NT219 clinical program," said Isaac Israel, Chief Executive Officer of Purple Biotech. "The collaboration is an important step in the translational work that could support the advancement of this potential treatment into the clinic. We recently presented promising initial clinical data for NT219 as a monotherapy treatment for advanced solid tumors and look forward to the availability of additional top-line data from the first part of this ongoing Phase 1/2 clinical trial."

Previous research conducted by Dr. Bar-Eli demonstrated that treatment of mice-bearing melanoma with early generation compounds of NT219 inhibited tumor growth and metastasis by blocking STAT3 and IGF1R/IRS signaling. The inhibition of downstream pro-angiogenic and pro-invasion factors in-vivo, such as VEGF, MMP-2 and IL-8, was shown, as well as the suppression of macrophage recruitment to the tumor microenvironment.

About Purple Biotech

Purple Biotech Ltd. is a clinical-stage company developing first-in-class therapies by overcoming tumor immune evasion and drug resistance. The Company's oncology pipeline includes NT219 and CM24. NT219 is a dual inhibitor, a novel small molecule that simultaneously targets IRS1/2 and STAT3. The Company is currently advancing NT219 as monotherapy treatment of solid tumors, followed by a dose escalation of NT219 in combination with cetuximab for the treatment of recurrent and/or metastatic squamous cell carcinoma of the head and neck cancer (SCCHN) or colorectal adenocarcinoma in a phase 1/2 study, and an expansion phase of NT219 at its recommended phase 2 level in combination with cetuximab in patients with recurrent and/or metastatic squamous cell carcinoma of the head and neck. CM24 is a humanized monoclonal antibody that blocks CEACAM1, an immune checkpoint protein that supports tumor

immune evasion and survival through multiple pathways. The Company is advancing CM24 as a combination therapy with anti-PD-1 checkpoint inhibitors in selected cancer indications in a phase 1b study followed by a phase 2 for the treatment of non-small cell lung cancer and pancreatic cancer. The Company has entered into a clinical collaboration agreement, as amended, with Bristol Myers Squibb for the planned phase 1/2 clinical trials to evaluate the combination of CM24 with the PD-1 inhibitor nivolumab (Opdivo®) in patients with non-small cell lung cancer and in combination with nivolumab in addition to nab-paclitaxel (Abraxane®) in patients with pancreatic cancer. The Company's corporate headquarters are located in Rehovot, Israel. For more information, please visit https://www.purple-biotech.com.

Forward-Looking Statements and Safe Harbor Statement

Certain statements in this press release that are forward-looking and not statements of historical fact are forward looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, but are not limited to, statements that are not statements of historical fact, and may be identified by words such as "believe", "expect", "intend", "plan", "may", "should", "could", "might", "seek", "target", "will", "project", "forecast", "continue" or "anticipate" or their negatives or variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical matters. You should not place undue reliance on these forward-looking statements, which are not guarantees of future performance. Forward-looking statements reflect our current views, expectations, beliefs or intentions with respect to future events, and are subject to a number of assumptions, involve known and unknown risks, many of which are beyond our control, as well as uncertainties and other factors that may cause our actual results, performance or achievements to be significantly different from any future results, performance or achievements expressed or implied by the forward-looking statements. Important factors that could cause or contribute to such differences include, among others, risks relating to: the plans, strategies and objectives of management for future operations; product development for NT219 and CM24; the process by which early stage therapeutic candidates such as NT219 and CM24 could potentially lead to an approved drug product is long and subject to highly significant risks, particularly with respect to a joint development collaboration; the fact that drug development and commercialization involves a lengthy and expensive process with uncertain outcomes; our ability to successfully develop and commercialize our pharmaceutical products; the expense, length, progress and results of any clinical trials; the impact of any changes in regulation and legislation that could affect the pharmaceutical industry; the difficulty in receiving the regulatory approvals necessary in order to commercialize our products; the difficulty of predicting actions of the U.S. Food and Drug Administration or any other applicable regulator of pharmaceutical products; the regulatory environment and changes in the health policies and regimes in the countries in which we operate; the uncertainty surrounding the actual market reception to our pharmaceutical products once cleared for marketing in a particular market; the introduction of competing products; patents obtained by competitors; dependence on the effectiveness of our patents and other protections for innovative products; our ability to obtain, maintain and defend issued patents; the commencement of any patent interference or infringement action against our patents, and our ability to prevail, obtain a favorable decision or recover damages in any such action; and the exposure to litigation, including patent litigation, and/or regulatory actions, and other factors that are discussed in our Annual Report on Form 20-F for the year ended December 31, 2020 and in our other filings with the U.S. Securities and Exchange Commission ("SEC"), including our cautionary discussion of risks and uncertainties under "Risk Factors" in our Registration Statements and Annual Reports. These are factors that we believe could cause our actual results to differ materially from expected results. Other factors besides those we have listed could also adversely affect us. Any forward-looking statement in this press release speaks only as of the date which it is made. We disclaim any intention or obligation to publicly update or revise any forward-looking statement or other information contained herein, whether as a result of new information, future events or otherwise, except as required by applicable law. You are advised, however, to consult any additional disclosures we make in our reports to the SEC, which are available on the SEC's website, https://www.sec.gov.

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