

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549 FORM 6-K Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934 For the month of February 2025 Commission File Number: 001-37643 PURPLE BIOTECH LTD. (Translation of registrant's name into English) 4 Oppenheimer Street, Science Park, Rehovot 7670104, Israel (Address of principal executive offices) Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F. Form 20-F Form 40-F On February 3, 2025, Purple Biotech Ltd. (the "Company" or the "Registrant") issued a press release, "Purple Biotech Announces Research Collaboration with the Icahn School of Medicine at Mount Sinai for CAPTN-3 Tri-Specific Antibody Platform", which is attached hereto as Exhibit 99.1. Exhibit 99.1 Press Release issued by Purple Biotech Ltd. on February 3, 2025 Incorporation by Reference This Report on Form 6-K, including all exhibits attached hereto, is hereby incorporated by reference into each of the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on May 20, 2016 (Registration file number 333-211478), the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on June 6, 2017 (Registration file number 333-218538), the Registrant's Registration Statement on Form F-3, as amended, originally filed with the Securities and Exchange Commission on July 16, 2018 (Registration file number 333-226195), the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on March 28, 2019 (Registration file number 333-230584), the Registrant's Registration Statement on Form F-3A filed with the Securities and Exchange Commission on September 16, 2019 (Registration file number 333-233795), the Registrant's Registration Statement on Form F-1A filed with the Securities and Exchange Commission on December 27, 2019 (Registration file number 333-235729), the Registrant's Registration Statement on Form F-3A filed with the Securities and Exchange Commission on May 13, 2020 (Registration file number 333-238229), the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on May 18, 2020 (Registration file number 333-238481), each of the Registrant's Registration Statements on Form F-3A filed with the Securities and Exchange Commission on July 10, 2020 (Registration file numbers 333-239807 and 333-233793), the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on April 4, 2022 (Registration file number 333-264107) and the Registrant's Registration Statement on Form F-3A filed with the Securities and Exchange Commission on March 23, 2023 (Registration file number 333-270769), the Registrant's Registration Statement on Form F-3, as amended, originally filed with the Securities and Exchange Commission on December 8, 2022 (Registration file number 333-268710), the Registrant's Registration Statement on Form F-1A, as amended, originally filed with the Securities and Exchange Commission on October 30, 2023 (Registration file number 333-275216) and the Registrant's Registration Statement on Form F-1A filed with the Securities and Exchange Commission on July 22, 2024 (Registration file number 333-280947), to be apart thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished. 1 SIGNATURES Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized. February 3, 2025 PURPLE BIOTECH LTD. By: /s/ Gil Efron Gil Efron Chief Executive Officer Exhibit 99.1 Purple Biotech Announces Research Collaboration with the Icahn School of Medicine at Mount Sinai for CAPTN-3 Tri-Specific Antibody Platform—Collaboration to explore the immunoregulation of NK and T cells within the tumor microenvironment (TME) by CAPTN-3, with the goal of enhancing tumor-specific immunity against multiple cancer types.—CAPTN-3 antibodies are designed to promote innate-like antitumor functions by NK and CD8 T cells, through conditional activation of the anti-CD3 arm at the TME, blockade of NKG2A, and targeting tumor-specific antigens, potentially leading to improved responses in resistant cancer patients and overcoming the limitations of current therapies. REHOVOT, Israel, Feb. 03, 2025 (GLOBENEWSWIRE) -- Purple Biotech Ltd. ("Purple Biotech" or "the Company") (NASDAQ/TASE: PPBT), a clinical-stage company developing first-in-class therapies that overcome tumor immune evasion and drug resistance, announced today that it has entered into a Research Collaboration Agreement with the Icahn School of Medicine at Mount Sinai ("Icahn School of Medicine") in New York, NY, to explore the immunoregulation of NK and T cells within the TME by Purple's CAPTN-3 multi-specific engagers with the purpose of enhancing tumor-specific immunity against various cancer types. Partnering on this important preclinical work with the Marc and Jennifer Lipschultz Precision Immunology Institute and The Tisch Cancer Institute at the Icahn School of Medicine is expected to deepen our understanding of the mechanisms of action for our innovative tri-specific platform in preparation for human clinical studies," said Gil Efron, Purple Biotech CEO. "We have recently observed a growing interest in multi-specific engagers, and we look forward to advancing CAPTN-3 development as we prepare for first-in-human clinical studies." The Principal Investigator of the study is Amir Horowitz, PhD, Associate Professor of Immunology & Immunotherapy and Oncological Sciences and a member of the Lipschultz Precision Immunology Institute and The Tisch Cancer Institute. Dr. Horowitz, an expert in the immunoregulation of the TME in cancer patients, has demonstrated a novel immunotherapeutic target axis involving the interaction between HLA-E expressing tumor cells and NKG2A-positive NK and CD8 T cells, which suppresses immune responses in treatment-resistant patients. He and others have shown the HLA-E/NKG2A axis to be a dominant inhibitory checkpoint pathway in solid tumors. Dr. Horowitz commented, "CAPTN-3's dual potential mechanisms of action appear to be a promising indicator of the platform's potential safety and efficacy to treat cancer through its synergistic regulation of both T cells and NK cells at the tumor microenvironment. In this collaboration, we plan to map how CAPTN-3 antibodies alter T and NK cell activation within the TME, specifically focusing on the modulation of HLA-E/NKG2A interactions and enhancing features of innate immunity." "The opportunity to deepen our understanding of the tumor immune evasion mechanisms that CAPTN-3 uniquely addresses is exciting, and we hope it will pave the way for effective treatments for many challenging tumor indications. We are looking forward to working with Dr. Horowitz and his team at Mount Sinai to validate the unique aspects of CAPTN-3 design in a wide screen of patient-derived tumors, potentially bringing new insights for overcoming resistance to standard frontline immunotherapies," stated Purple Biotech's VP Research and Development, Dr. Hadas Reuveni. In the past, Dr. Horowitz had been a paid consultant for Purple Biotech. About Purple Biotech Purple Biotech Ltd. (NASDAQ/TASE: PPBT) is a clinical-stage company developing first-in-class therapies that seek to overcome tumor immune evasion and drug resistance. The Company's oncology pipeline includes CM24, NT219, and CAPTN-3. CM24 is a humanized monoclonal antibody that blocks CEACAM1, which supports tumor immune evasion and survival through multiple pathways. CEACAM1 on tumor cells, immune cells and neutrophils extracellular traps is a novel target for the treatment of multiple cancer indications. As a proof of concept of these novel pathways, the Company completed a Phase 2 study for the treatment of pancreatic ductal adenocarcinoma (PDAC) with CM24 as a combination therapy with

the anti-PD-1 checkpoint inhibitor nivolumab and chemotherapy, demonstrating clear and consistent improvement across all efficacy endpoints and the identification of two potential serum biomarkers. NT219 is a dual inhibitor, novel small molecule that simultaneously targets IRS1/2 and STAT3. A Phase 1 dose escalation study was concluded as a monotherapy and in combination with cetuximab, in which NT219 demonstrated anti-tumor activity in combination with cetuximab in second-line patients with recurrent and/or metastatic SCCHN (R/N SCCHN). The Company is advancing CAPTN-3, a preclinical platform of conditionally-activated tri-specific antibody that engages both T cells and NK cells to induce a strong, localized immuneresponse within the tumor microenvironment. The cleavable capping technology confines the compound's therapeutic activity to the local tumor microenvironment, thereby potentially increasing the anticipated therapeutic window in patients. The third arm specifically targets the Tumor Associated Antigen (TAA). The technology presents a novel mechanism of action by unleashing both innate and adaptive immune systems to mount an optimal anti-tumoral immune response. IM1240 is the first tri-specific antibody in development that targets 5T4 expressed in a variety of solid tumors and is correlated with advanced disease, increased invasiveness, and poor clinical outcomes. The Company's corporate headquarters are located in Rehovot, Israel. For more information, please visit <https://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, CM24 and IM1240; the process by which such early-stage therapeutic candidates 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, 2023, 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 on 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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