January 19, 2017

Stemline Therapeutics Announces Proposed Public Offering of Common Stock

NEW YORK, Jan. 19, 2017 (GLOBE NEWSWIRE) -- **Stemline Therapeutics, Inc.** (Nasdaq:STML), a clinical-stage biopharmaceutical company developing novel oncology therapeutics, today announced that it intends to offer and sell, subject to market conditions, shares of its common stock in an underwritten public offering. All of the shares to be sold in the offering will be offered by Stemline. In addition, Stemline intends to grant the underwriters a 30-day option to purchase up to an additional 15% of the shares of its common stock offered in the public offering.

Jefferies LLC is acting as book-running manager for the offering.

Stemline intends to use the net proceeds from the public offering for (i) clinical, regulatory, manufacturing and, if and when approved, potential commercial activities of SL-401; (ii) clinical development of SL-801 and SL-701; (iii) research and development activities; and (iv) other general corporate purposes.

Stemline has filed a preliminary prospectus supplement to its shelf registration statement on Form S-3 (File No. 333-193726) with the U.S. Securities and Exchange Commission for the proposed public offering of its common stock. The offering will be made only by means of a prospectus supplement and the accompanying prospectus, which will be available on the SEC's web site at www.sec.gov. Copies of the preliminary prospectus supplement relating to these securities may also be obtained, when available, by contacting Jefferies LLC, Attention: Equity Syndicate Prospectus Department, 520 Madison Avenue, 2nd Floor, New York, NY, 10022, or by telephone at 877-547-6340, or by email at prospectus_department@jefferies.com.

The offering of these securities is being made under an effective shelf registration statement on file with the U.S. Securities and Exchange Commission. This press release shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

About Stemline Therapeutics

Stemline Therapeutics, Inc. is a clinical stage biopharmaceutical company developing novel oncology therapeutics. Stemline is developing three clinical stage product candidates, SL-401, SL-801, and SL-701. SL-401 is a targeted therapy directed to the interleukin-3 receptor (CD123) present on a wide range of malignancies. SL-401 is being advanced through a pivotal Phase 2 program in patients with blastic plasmacytoid dendritic cell neoplasm (BPDCN), an indication for which SL-401 has been granted Breakthrough Therapy Designation (BTD) by the FDA. SL-401 has demonstrated high overall response rates (ORR), with multiple complete responses (CRs), in both first-line and relapsed/refractory patients, and treatment duration and frequency of bridge to transplant have been trending favorably. SL-401 is also being advanced through Phase 1/2 trials of patients with additional malignancies including acute myeloid leukemia (AML) in remission with minimal residual disease (MRD), high-risk myeloproliferative neoplasms (MPN), and relapsed/refractory multiple myeloma (in combination with pomalidomide). SL-801 is a novel oral small molecule reversible inhibitor of XPO1 that has demonstrated broad *in vivo* and *in vitro* preclinical activity in a wide array of solid and hematologic malignancies. A Phase 1 trial with SL-801 is open and enrolling patients with advanced solid tumors, and a Phase 1 trial in hematologic malignancies is planned. SL-701 is an immunotherapy designed to activate the immune system to attack tumors. A Phase 2 trial with SL-701 in adult patients with second-line glioblastoma multiforme (GBM) is ongoing.

Forward-Looking Statements

Some of the statements included in this press release may be forward-looking statements that involve a number of risks and uncertainties. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. The factors that could cause our actual results to differ materially include: statements regarding the proposed public offering and the intended use of proceeds from the proposed offering; the success and timing of our clinical trials and preclinical studies for our product candidates, including site initiation, internal review board approval, scientific review committee approval, patient accrual, safety, tolerability and efficacy data observed, and input from regulatory authorities; our plans to develop and commercialize our product candidates; market acceptance of our products; reimbursement available for our products; our available cash and investments; our ability to obtain and maintain intellectual property protection for our product candidates; our ability to manufacture; the performance of third-party manufacturers, clinical research organizations, clinical trial sponsors and clinical trial investigators; and other

risk factors identified from time to time in our reports filed with the Securities and Exchange Commission. Any forward-looking statements set forth in this press release speak only as of the date of this press release. We do not intend to update any of these forward-looking statements to reflect events or circumstances that occur after the date hereof.

Contact
Investor Relations
Stemline Therapeutics, Inc.
750 Lexington Avenue
Eleventh Floor
New York, NY 10022
Tel: 646-502-2307
Email: investorrelations@stemline.com