

PLURISTEM INCREASES PREVIOUSLY ANNOUNCED BOUGHT DEAL OFFERING OF COMMON STOCK AND WARRANTS TO \$15,000,000

Haifa, Israel – January 20, 2017 -- Pluristem Therapeutics Inc. (NASDAQCM: PSTI, TASE: PLTR) announced today that due to increased demand, it has entered into an amended and restated underwriting agreement (as amended and restated, the "Underwriting Agreement") with H.C. Wainwright & Co., LLC, acting as the sole book-running manager, to increase the size of the previously announced bought deal to \$15,000,000. Pursuant to the Underwriting Agreement, the underwriter has agreed to buy, on a firm commitment basis, 12,244,898 shares of common stock of the Company, at a price to the public of US\$1.225 per share (the "Public Price") together with warrants to purchase up to 7,346,939 shares of common stock of the Company with an exercise price of US\$1.40 per share of common stock, for gross proceeds of \$15,000,000.

The Company also has granted to the underwriter a 30-day option (the "Over-Allotment Option") to purchase up to an additional 1,836,735 shares of common stock and/or with warrants to purchase 1,102,041 shares of common stock of the Company, for potentially additional aggregate proceeds to the Company of up to approximately US\$2.25 million (assuming no exercise of the warrants) before deducting underwriting discounts and commissions and estimated offering expenses. In the event the Over-Allotment Option is exercised in full, the aggregate gross proceeds to the Company (assuming no exercise of the warrants) will be approximately US \$17.25 million.

As previously announced, the common stock and warrants will be sold in units, with each unit consisting of a share of common stock and a warrant to purchase 0.6 of a share of common stock. Each unit will be sold at the Public Price. Each warrant will have a term of five and a half years and be exercisable within 6 months from the date of issuance. The closing of the offering is expected to occur on or about January 25, 2017, subject to customary closing conditions. As previously announced, the Company intends to use the net proceeds of the offering for research and product development activities, clinical trial activities, investment in capital equipment and for working capital and other general corporate purposes.

This press release shall not constitute an offer to sell, or a solicitation of an offer to buy, nor shall there be any sale of these securities in any state or jurisdiction in which such an offer, solicitation, or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction. The securities described above are being offered by the Company pursuant to a "shelf" registration statement previously filed with and declared effective by the Securities and Exchange Commission (the "SEC") on October 30, 2014.

The offering may be made only by means of a prospectus supplement and the accompanying prospectus. A preliminary prospectus supplement and the accompanying prospectus was filed

with the SEC on January 19, 2017 and a final prospectus supplement and the accompanying prospectus related to the offering will be filed with the SEC and, once filed, copies can be obtained by contacting H.C. Wainwright & Co., LLC, 430 Park Avenue, New York, NY 10022, by calling 646-975-6996 or by email at placements@hcwco.com or at the SEC's website at http://www.sec.gov.

About Pluristem Therapeutics

Pluristem Therapeutics Inc. is a leading developer of placenta-based cell therapy products. The Company has reported robust clinical trial data in multiple indications for its patented PLX (PLacental eXpanded) cells. The cell products release a range of therapeutic proteins in response to inflammation, ischemia, hematological disorders, and radiation damage. PLX cell products are grown using the Company's proprietary three-dimensional expansion technology. They are off-the-shelf, requiring no tissue matching prior to administration.

Pluristem has a strong intellectual property position; Company-owned and operated, GMP-certified manufacturing and research facilities; strategic relationships with major research institutions; and a seasoned management team.

Safe Harbor Statement

This press release contains express or implied forward-looking statements within the Private Securities Litigation Reform Act of 1995 and other U.S. Federal securities laws. For example, the Company is using forward-looking statements when the Company discusses the expected closing of the offering, the filing of a final prospectus and its intended use of proceeds. These forward-looking statements and their implications are based on the current expectations of the management of the Company only, and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: market risks and uncertainties; the offering is subject to conditions that may not be met; changes in technology and market requirements; the Company may encounter delays or obstacles in launching and/or successfully completing its clinical trials; the Company's products may not be approved by regulatory agencies, the Company's technology may not be validated as it progresses further and its methods may not be accepted by the scientific community; the Company may be unable to retain or attract key employees whose knowledge is essential to the development of its products; unforeseen scientific difficulties may develop with the Company's process; the Company's products may wind up being more expensive than it anticipates; results in the laboratory may not translate to equally good results in real clinical settings; results of preclinical studies may not correlate with the results of human clinical trials; the Company's patents may not be sufficient; the Company's products may harm recipients; changes in legislation; inability to timely develop and introduce new technologies, products and applications; loss of market share and pressure on pricing resulting from competition, which could cause the actual results or performance of the Company to differ materially from those contemplated in such forward-looking statements. Except as otherwise required by law, the Company undertakes no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. For a more detailed description of the risks and uncertainties affecting the Company, reference is made to the Company's reports filed from time to time with the Securities and Exchange Commission.

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