ESSA Pharma Presents Therapeutic Potential of EPI-7386 at 32nd EORTC-NCI-AACR Symposium

Houston, Texas and Vancouver, Canada, October 24, 2020 – ESSA Pharma Inc. (Nasdaq: EPIX; TSX-V: EPI), a clinical-stage pharmaceutical company focused on developing novel therapies for the treatment of prostate cancer, today presented new preclinical data on ESSA's clinical candidate, EPI-7386, at the 32nd EORTC-NCI-AACR Annual Symposium on Molecular Targets and Cancer Therapeutics ("ENA").

In an oral poster presentation titled, "The pre-clinical characterization of the N-terminal domain androgen receptor inhibitor, EPI-7386, for the treatment of prostate cancer", was published on Saturday, October 24th.

The studies highlight new information about EPI-7386 including:

- In an *in vitro* cellular thermal shift assay (CETSA), EPI-7386 was shown to physically interact with the both the full-length and the splice variant (AR-V7) form of the androgen receptor ("AR").
- In an *in vitro* full-length AR-driven cellular model (LNCaP), RNAseq data was analyzed by pathway enrichment analysis. EPI-7386 demonstrates largely similar modulation of AR-regulated genes compared to enzalutamide, but with additional unique elements.
- EPI-7386 exhibits superior activity to enzalutamide in the AR-V7-driven cellular models LNCaP95 and 22Rv1 by modulating AR-driven gene expression with or without the addition of an external androgen.

"Previously, we presented *in vitro* data demonstrating that EPI-7386 binds to the full-length androgen receptor and can inhibit the transcription of AR-regulated genes. These new data demonstrate that EPI-7386 can also physically interact with the splice variant form, AR-V7, of the androgen receptor and inhibit its activity. The importance of this interaction with AR-V7 is seen through the superior transcriptional inhibition of AR-regulated genes by EPI-7386 compared to enzalutamide in the AR-V7-driven cell models LNCaP95 and 22Rv1. Together, these data provide important new insights into mechanistic aspects related to the binding and utility of EPI-7386 against AR-V7 splice-variant driven prostate cancer models. The data further strengthen the rationale for studying EPI-7386 in men with prostate cancer resistant to current anti-androgens." said Dr. David R. Parkinson, President and Chief Executive Officer.

About ESSA Pharma Inc.

ESSA is a clinical-stage pharmaceutical company focused on developing novel and proprietary therapies for the treatment of castration-resistant prostate cancer in patients whose disease is progressing despite treatment with current therapies. ESSA's proprietary "aniten" compounds bind to the N-terminal domain of the androgen receptor ("AR"), inhibiting AR driven transcription and the AR signaling pathway in a unique manner which bypasses the drug resistance mechanisms associated with current anti-androgens. The Company is currently conducting a phase 1 study of EPI-7386 in patients with metastatic castration-resistant prostate cancer

("mCRPC") who are failing current standard-of-care therapies. For more information, please visit www.essapharma.com and follow us on Twitter under @ESSAPharma.

About Prostate Cancer

Prostate cancer is the second-most commonly diagnosed cancer among men and the fifth most common cause of male cancer death worldwide (Globocan, 2018). Adenocarcinoma of the prostate is dependent on androgen for tumor progression and depleting or blocking androgen action has been a mainstay of hormonal treatment for over six decades. Although tumors are often initially sensitive to medical or surgical therapies that decrease levels of testosterone, disease progression despite castrate levels of testosterone generally represents a transition to the lethal variant of the disease, mCRPC, and most patients ultimately succumb to the illness. The treatment of mCRPC patients has evolved rapidly over the past five years. Despite these advances, additional treatment options are needed to improve clinical outcomes in patients, particularly those who fail existing treatments including abiraterone or enzalutamide, or those who have contraindications to receive those drugs. Over time, patients with mCRPC generally experience continued disease progression, worsening pain, leading to substantial morbidity and limited survival rates. In both in vitro and in vivo animal studies, ESSA's novel approach to blocking the androgen pathway has been shown to be effective in blocking tumor growth when current therapies are no longer effective.

Forward-Looking Statement Disclaimer

This release contains certain information which, as presented, constitutes "forward-looking information" within the meaning of the Private Securities Litigation Reform Act of 1995 and/or applicable Canadian securities laws. Forward-looking information involves statements that relate to future events and often addresses expected future business and financial performance, containing words such as "anticipate", "believe", "plan", "estimate", "expect", and "intend", statements that an action or event "may", "might", "could", "should", or "will" be taken or occur, or other similar expressions and includes, but is not limited to, the results of preclinical data on EPI-7386 including the potential utility of EPI-7386 against AR-V7 splice-variant driven prostate cancer models.

Forward-looking statements and information are subject to various known and unknown risks and uncertainties, many of which are beyond the ability of ESSA to control or predict, and which may cause ESSA's actual results, performance or achievements to be materially different from those expressed or implied thereby. Such statements reflect ESSA's current views with respect to future events, are subject to risks and uncertainties and are necessarily based upon a number of estimates and assumptions that, while considered reasonable by ESSA as of the date of such statements, are inherently subject to significant medical, scientific, business, economic, competitive, political and social uncertainties and contingencies. In making forward looking statements, ESSA may make various material assumptions, including but not limited to (i) the accuracy of ESSA's financial projections; (ii) obtaining positive results of clinical trials; (iii) obtaining necessary regulatory approvals; and (iv) general business, market and economic conditions.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein and in ESSA's Annual Report on Form 20-F dated December 19, 2019 under the heading "Risk Factors", a copy of which is available on ESSA's profile on the SEDAR website at www.sedar.com, ESSA's profile on EDGAR at www.sec.gov, and as otherwise

disclosed from time to time on ESSA's SEDAR profile. Forward-looking statements are made based on management's beliefs, estimates and opinions on the date that statements are made and ESSA undertakes no obligation to update forward-looking statements if these beliefs, estimates and opinions or other circumstances should change, except as may be required by applicable Canadian and United States securities laws. Readers are cautioned against attributing undue certainty to forward-looking statements.

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