**PRECLINICAL DATA HIGHLIGHTING THERAPEUTIC POTENTIAL OF EPI-7386 PRESENTED AT 2019 AMERICAN UROLOGICAL ASSOCIATION ANNUAL MEETING**

**Houston, Texas and Vancouver, Canada, May 4, 2019** – ESSA Pharma Inc. (Nasdaq: EPIX; TSX-V: EPI), a pharmaceutical company focused on developing novel therapies for the treatment of prostate cancer, today presented new preclinical data on ESSA's lead Investigational New Drug ("IND") candidate at the 2019 American Urological Association ("AUA") Annual Meeting.

In an oral poster presentation, "A New Generation of N-terminal Domain Androgen Receptor Inhibitors in Castration-Resistant Prostate Cancer Models", a deeper preclinical characterization of EPI-7386 was presented. The studies demonstrate that, pre-clinically, EPI-7386:

- Displays similar *in vitro* IC50 potency compared to the 'lutamide class of antiandrogens in an *in vitro* androgen receptor (AR) inhibition assay.
- Shows *in vitro* activity in several enzalutamide-resistant prostate cancer cell models in which enzalutamide is resistant.
- Exhibits a favorable metabolic profile across three preclinical animal species, which suggests that EPI-7386 will have high exposure and a long half-life in humans.
- Provides similar antitumor activity to enzalutamide in the enzalutamide-sensitive LNCaP prostate cancer xenograft model.
- Provides superior antitumor activity to enzalutamide, as a single agent or in combination with enzalutamide, in the enzalutamide-resistant VCaP prostate cancer xenograft model.
    - AR inhibition with both an N-terminal domain inhibitor (EPI-7386) and a ligand binding domain inhibitor (enzalutamide), induces deeper and more consistent anti-tumor responses in the enzalutamide-resistant VCaP xenograft model.

"The variety of *in vitro* and *in vivo* studies examining both antiandrogen sensitive models and antiandrogen-resistant xenograft mouse models show a favorable preclinical profile of EPI-7386. From this and an aggregate of other preclinical data, we nominated EPI-7386 as the IND candidate to be used in the clinic in mCRPC patients failing current antiandrogen therapy. EPI-7386 represents a novel approach to targeting the androgen receptor, one of the most validated targets in oncology," said Dr. David R. Parkinson, President & Chief Executive Officer. "We look forward to providing further details of the preclinical profile of EPI-7386 later in the year as we move close to our anticipated IND filing in the first quarter of 2020.".

**About ESSA Pharma Inc.**
ESSA is a pharmaceutical company focused on developing novel and proprietary therapies for the treatment of castration-resistant prostate cancer ("CRPC") in patients whose disease is progressing despite treatment with current therapies. ESSA believes that its proprietary compounds can significantly expand the interval of time in which patients suffering from CRPC can benefit from hormone-based therapies, by disrupting the androgen receptor ("AR") signaling pathway that drives prostate cancer growth and by preventing AR transcriptional activity by binding selectively to the N-terminal domain ("NTD") of the AR. A functional NTD is essential for transactivation of the AR. In preclinical studies, blocking the NTD has demonstrated the capability to overcome the known AR-dependent mechanisms of CRPC. ESSA was founded in 2009.

ESSA proprietary compounds, otherwise known as aniten compounds, bind to the N-terminal domain of the androgen receptor ("AR"). The company is currently conducting studies on a small

number of next generation compounds with higher potency and metabolic stability, longer half-life and superior pharmaceutical properties.

**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, metastatic CPRC (“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 “look forward”, "anticipate" and, "believe", and statements that an action or event “is expected”, “is predicted”, "should", “may” or "will" be taken or occur, or other similar expressions and includes, but is not limited to, statements regarding the anticipated pharmaceutical properties of the EPI-7386 drug candidate and anti-androgens, including potential exposure and half-life in humans, and anticipated IND filing for EPI-7386 in the first quarter of 2020.

*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 13, 2018 under the heading “Risk Factors”, a copy of which is available on ESSA’s profile on the SEDAR website at www.sedar.com or ESSA’s profile on EDGAR at www.sec.gov, and as

otherwise disclosed from time to time on ESSA's SEDAR and EDGAR profiles. 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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