

ABSTRACT

Efendi, Farrah Syahadatina Okta Putri. Dinda Khatijah Islami. Nuri Thobibatus Shofia Alfuruqi. 2021. Effect of Ajwa Date Fruit Ethanol Extract (*Phoenix dactylifera*) On Population Doubling Time (PDT) Value of Goat Endometrial Cell Culture.

Keywords: Ajwa Date Fruit Extract (*Phoenix dactylifera*), Endometrial Cell Proliferation, In Vitro.

Decreased concentration of the hormone estrogen in the blood causes the failure of thickening of the endometrium so that it will minimize the occurrence of gardening. The endometrium is a layer of tissue in the uterus that is very responsive to hormonal changes. Successful implantation depends on the strength of epithelial cells and endometrial stromal cells. The ability of endometrial cell proliferation due to the influence of hormones is studied in vitro by knowing the PDT (Population doubling time) value of cultured endometrial cells. The purpose of the study was to find out the effect of giving ethanol extract of Ajwa date fruit (*Phoenix dactylifera*) to the PDT value of goat endometrial cell culture. This study was an experimental study using 5 concentrations of treatment, namely the administration of ethanol extract of Ajwa date fruit (*Phoenix dactylifera*) on a 10% DMEM medium with a concentration of 0 μM , 10 μM , 20 μM , 30 μM , and 40 μM and 1 10 μM control treatment of genistein in in vitro goat endometrium cells incubated for 6 days. The research design used is a Complete Randomized Design (RAL). The data obtained is analyzed One way ANOVA in Microsoft Excel. Based on the data obtained shows, ethanol extract of Ajwa date fruit (*Phoenix dactylifera*) has an effect on the PDT value of goat endometrial cell culture. The concentration of ethanol extract of Ajwa date fruit (*Phoenix dactylifera*) which most affects the PDT value of 1.05 (hour) of goat endometrial cell culture is 10 μM .

ABSTRAK

Efendi, Farrah Syahadatina Okta Putri. Dinda Khatijah Islami. Nuri Thobibatus Shofia Alfuruqi. 2021. Efek Pemberian Ekstrak Etanol Buah Kurma Ajwa (*Phoenix dactylifera*) Terhadap Nilai Population Doubling Time (PDT) Kultur Sel Endometrium Kambing.

Kata kunci: Ekstrak Buah Kurma Ajwa (*Phoenix dactylifera*), Proliferasi Sel Endometrium, In Vitro.

Turunnya konsentrasi hormone estrogen dalam darah menyebabkan gagalnya penebalan endometrium sehingga akan memperkecil terjadinya kebuntingan. Endometrium merupakan lapisan jaringan pada uterus yang sangat responsif terhadap perubahan hormon. Suksesnya implantasi bergantung pada kuatnya sel epitel dan sel stroma endometrium. Kemampuan proliferasi sel endometrium akibat pengaruh hormon dipelajari secara *in vitro* dengan mengetahui nilai PDT (*Population doubling time*) sel endometrium yang dikultur. Tujuan dari penelitian untuk mengetahui efek pemberian ekstrak etanol buah kurma Ajwa (*phoenix dactylifera*) terhadap nilai PDT kultur sel endometrium kambing. Penelitian ini merupakan penelitian eksperimental menggunakan 5 konsentrasi perlakuan yaitu pemberian ekstrak etanol buah kurma Ajwa (*Phoenix dactylifera*) pada medium DMEM 10% dengan konsentrasi 0 μM , 10 μM , 20 μM , 30 μM , dan 40 μM dan 1 perlakuan kontrol 10 μM genistein pada sel endometrium kambing secara *in vitro* yang diinkubasi selama 6 hari. Rancangan penelitian yang digunakan merupakan Rancangan Acak Lengkap (RAL). data yang diperoleh dianalisis *One way ANOVA* dalam *Microsoft Excel*. Berdasarkan data hasil yang diperoleh menunjukkan, ekstrak etanol buah kurma Ajwa (*Phoenix dactylifera*) memberi efek terhadap nilai PDT kultur sel endometrium kambing. Konsentrasi ekstrak etanol buah kurma Ajwa (*Phoenix dactylifera*) yang paling berpengaruh terhadap nilai PDT 1.05 (jam) kultur sel endometrium kambing adalah 10 μM .