*proceedings*

MDPI

*Abstract*

# The Effects of α-Chaconine on ER-α Positive Endometrium Cancer Cells †

**Ayşe Kübra Karaboğa Arslan * and Mükerrem Betül Yerer**

Department of Pharmacology, Faculty of Pharmacy, Erciyes University, Kayseri 38039, Turkey

* Correspondence: aysekubrakaraboga@gmail.com Tel.: +90-352-207-6666

† Presented at the 2nd International Conference on Natural Products for Cancer Prevention and Therapy, Kayseri, Turkey, 8–11 November, 2017.

Published: 15 November 2017

**Abstract:** Endometrial cancer is one of the most common cancer types among women in the world. In our study, it was aimed to investigate the potential anticancer effect of α-chaconine, which is one of the major glycoalkaloids found in *Solanum tuberosum* (potato), on estrogen receptor (ER) positive endometrial cancer cell line RL95-2. The effect of α-chaconine on RL95-2 cell viability was determined by the method of sulforhodamine B. Effect of α-chaconine on cell growth curve was assessed with the real-time cell analyzer system (xcelligence). The ERα inhibitor methyl-piperidino-pyrazole (MPP) dihydrochloride was used as a positive control to evaluate the association of α-chaconine with ERα. Expressions of ERα and p-ERα protein level were investigated by western blot. ERα mRNA expressions were performed by the real-time PCR method. The $IC_{50}$ values of MPP dihydrochloride and α-chaconine were calculated as 20.01 μM and 4.72 μM, respectively. At MPP dihydrochloride 20 μM ($p < 0.001$), α-chaconine; 2.5 ($p < 0.001$); 5 ($p < 0.001$) and 10 μM ($p < 0.001$) concentrations, p-ERα/ERα ratio was decreased in the same significance compared to control. α-Chaconine decreased the level of ERα mRNA expression, after 24 h, but this decrease was not significant. This study showed for the first time the effect of α-chaconine on cell proliferation, ERα activity and expression in RL95-2 cells.

**Keywords:** α-chaconine; endometrium cancer; ERα; MPP; RL95-2; xcelligence

**Acknowledgment:** This study was supported by Erciyes University Scientific Investigations Department (TDK-2014-5446).

**Conflicts of Interest:** The authors declare no conflict of interest.