EFFECT OF CISTUS LAURIFOLIUS EXTRACT ON LACTATE DEHYDROGENASE RELEASE IN VITRO

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Abstract
Cistus laurifolius (C. laurifolius) belongs the genus Cistus L. mainly growing in the Mediterranean region. In folk medicine, C. laurifolius has been used for anti-inflammatory activity, anti-bacterial effect, wound healing capacity and pain relief. In this study, water extract of C. laurifolius leaves was prepared and lyophilized by rotary evaporator. Various concentrations of extract dissolved in DMSO were applied cell lines in vitro for 3 days. Release of Lactate Dehydrogenase (LDH) was measured for presence of damage and toxicity in cell line. As a result of statistical analysis, it was determined that highest concentration of extract significantly increased LDH release at the end of the 2nd and 3rd days ($p<0.05$). We can conclude that C. laurifolius extract may be evaluated to induce necrotic cells when used high concentrations. Although C.laurifolius extract may cause necrotic cell death in cancer cells, new studies are required to evaluate this effect in normal cell lines. Additionally, other cell death pathways need to be studied to evaluate cell death or toxicity. In vivo experiments should not be initiated without collecting sufficient data in in vitro studies.

Keywords: C.laurifolius, LDH release, necrotic cell, in vitro

International Marmara Sciences Congress
(Spring 2021)

21 – 22 May 2021 KOCAELI

ABSTRACT & POSTERS
E-BOOK

This congress proceedings book is published as an electronic format as e-book.

ISBN: 978-625-00-0088-5

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