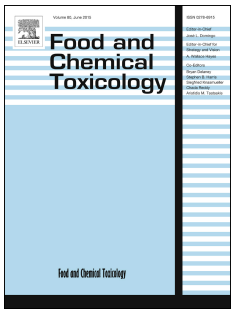
Accepted Manuscript



The frequently occurring components of essential oils beta elemene and R-limonene alter expression of *dprE1* and *clgR* genes of *Mycobacterium tuberculosis* H37Ra

Rafal Sawicki, Elwira Sieniawska, Marta Swatko-Ossor, Joanna Golus, Grazyna Ginalska

PII: S0278-6915(17)30800-1

DOI: 10.1016/j.fct.2017.12.052

Reference: FCT 9497

To appear in: *Food and Chemical Toxicology*

Received Date: 6 November 2017

Revised Date: 21 December 2017

Accepted Date: 22 December 2017

Please cite this article as: Sawicki, R., Sieniawska, E., Swatko-Ossor, M., Golus, J., Ginalska, G., The frequently occurring components of essential oils beta elemene and R-limonene alter expression of *dprE1* and *clgR* genes of *Mycobacterium tuberculosis* H37Ra, *Food and Chemical Toxicology* (2018), doi: 10.1016/j.fct.2017.12.052.

The frequently occurring components of essential oils beta elemene and R-limonene alter expression of *dprE1* and *clgR* genes of *Mycobacterium tuberculosis* H37Ra

Rafal Sawicki[1*], Elwira Sieniawska[2], Marta Swatko-Ossor[1], Joanna Golus[1], Grazyna Ginalska[1]

[1]Medical University of Lublin, Chair and Department of Biochemistry and Biotechnology, Chodzki 1, PL-20093 Lublin, Poland

[2]Medical University of Lublin, Medical Plant Unit, Chair and Department of Pharmacognosy, Chodzki 1, PL-20093 Lublin, Poland

*corresponding author

Rafal Sawicki Ph.D

E-mail: rafal.sawicki@umlub.pl

Cell phone: +48606312059

Address: Medical University of Lublin, Chair and Department of Biochemistry and Biotechnology, Chodzki 1, PL-20093 Lublin, Poland

Abbreviations

ATCC – American Type Culture Collection

CFU – colony-forming units

DEPC – diethyl pyrocarbonate, (IUPAC name diethyl dicarbonate)

DPA – decaprenylphosphoryl-D-arabinofuranose

DPR – decaprenylphosphoryl-D-ribose

MDR – Multi Drug Resistance

MIC – Minimal Inhibitory Concentration

qPCR – quantitative Polymerase Chain Reaction

SDS – Sodium Dodecyl Sulfate

σ^E – sigma factor

TEM – transmission electron microscope

TB – tuberculosis

TDR – Total Drug Resistance

XDR – Extensive Drug Resistance

7H9-S – Middlebrook 7H9 with supplements: 10% ADC and 0.2% glycerol