PP59. EVALUATION OF BIOAUTOGRAPHIC ANTIOXIDANT AND ANTILIPASE ACTIVITIES OF SOME *BOSWELLIA* L. OLEOGUM RESINS BY HPTLC-EFFECT DIRECTED ANALYSIS

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The *Boswellia* genus grows naturally in India, Africa, and the Middle East. Gum resins of these species, characterized by boswellic acid derivatives such as boswellic acid (BA), acetyl boswellic acid (ABA), acetyl-11-keto-beta boswellic acid (AKBA), have long been used in the treatment of topical and systemic inflammation, arthritis, and asthma. Within the scope of the study, the chemical profiles of 12 different *Boswellia* oleo-gum resins were analyzed using the HPTLC, and the DPPH radical scavenging effects and pancreatic lipase inhibition were evaluated with HPTLC-effect directed analysis (HPTLC-EDA). HPTLC analysis was carried out on HPTLC Silicagel 60F_{254} glass plates by using the mobile phase consisting of cyclohexane: diethyl ether: chloroform: formic acid (55:30:10:5, *v:v:v:v*). Plates were derivatized with the dipping solution of anisaldehyde. Antioxidant activity was evaluated with the dipping solution of DPPH•. Lipase inhibition was carried out with the immersion of plates into the β- naphthyl myristate, enzyme, and Fast Blue B, respectively. Images were taken under 254 nm, 366 nm, and white light (**Figure 1**). Fingerprint analysis revealed the non-consisting of AKBA on *B. frereana*, *B. neglecta*, and *B. rivae* samples. BA and ABA were determined by anisaldehyde under white light illumination, especially on *B. serrata* oleogum resin samples. In DPPH•- EDA, *B. rivae* and *B. dalzielii* samples showed the scavenged-free radical zones on the lower *hRf* values as white zones. In lipase activity, common compounds among the samples, including AKBA and BA or distinct bands with inhibitory activity, were observed as white zones on a purple background.

Keywords: Boswellia, HPTLC, antioxidant, antilipase.

Acknowledgements: This study was financially supported by Anadolu University Scientific Research Commision as a scientific research Project with undergrant number 2207S076.

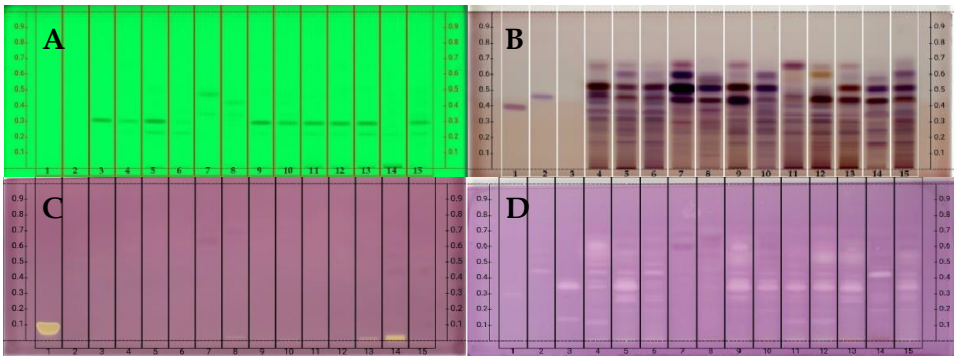

Figure 1. A, 254 nm; B, White light with anisaldehyde; C, DPPH with white light; D, Pancreatic lipase with white light. Track number 1, BA; 2, ABA; 3, AKBA; 4, *B. serrata* AHP5827; 5, *B. serrata* RMB02; 6, *B. serrata* AHP 2455; 7, *B. frereana;* 8; *B. neglecta*; 9, *B. carteri* Somalia; 10, *B. carteri* Oman; 11, *B. papyrifera* Sudan 1; 12, *B. papyrifera* Sudan 2; 13 *B. occulta*; 14, *B. rivae*; 15, *B. dalzielii*. In DPPH track number 1, gallic acid; 2, BA and ABA; 3, AKBA. In pancreatic lipase track number 1, orlistat; 2, BA and ABA; 3, AKBA.