





PL4. CHEMICAL COMPOSITION AND BIOLOGICAL ACTIVITIES OF *LYCIUM FEROCISSIMUM* MIERS.

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Lycium genus belongs to Solanaceae uses as food and medicinal purposes. Named almost 80 *Lycium* species widely grow in subtropical region of the world. *Lycium* species are generally known and use in Traditional Chinese Medicine. Especially, *Lycium barbarum* and *Lycium chinense* widely use in Traditional Chinese Medicine for a long time and *Lycium barbarum* also cultivated in China. This genus represented in 8 species in Türkiye, but *Lycium ferocissimum* species growing in Cyprus in limited area. *Lycium* species generally traditionally use in eye diseases, cough, gastrointestinal system problems, headache, rheumatoid problems, and kidney diseases, etc. in Türkiye.

In this study, extracts of ripe and unripe fruits, and leaves of *Lycium ferocissimum* Miers. were used in antioxidant and antiinflammatory activity assays. Chemical compositions of the extracts were identified by High Performans Liquid Chromatography (HPLC). Methanol extract of unripe fruit was found as most active extract and its IC₅₀ value was recorded 0.57 mg/mL in DPPH• assay. It's inihition in ABTS+• assay also found as 88.73% in 3 mg/mL concentration. In addition, ethanol extract of unripe fruit was found as active in LPS induced (31.25 mg/mL) inflammation after measured TNF- α , IFN- γ , PGE 2 ve NO levels. In HPLC analyses, p-OH-benzoic acid, caffeic acid and rutin were identified in the extracts. Antioxidant and antiinflammatory activities of *L. ferocissimum* were studied at the first time in this study.

Keywords: *Lycium ferocissimum*, antioxidant, antiinflammatory, HPLC.

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