

The Anticariogenic and Antibiofilm Activities of *Marrubium vulgare* L.Ahmet ALTIN¹, Nurdan SARAC¹¹Department of Biology, Faculty of Science, Mugla Sitki Kocman University, Mugla , Turkey
sarac_63@hotmail.com

Aim of the study: In this study; the anticariogenic and antibiofilm activities of *M. vulgare*, belonging to the *Lamiaceae* family, growing in Mugla, were investigated. *Lamiaceae* species are important for the biological activities among plants, which are used in research of antimicrobial and antibiofilm activities.

Material and Methods: The ethanolic extract of this plant was obtained with Soxhlet apparatus. The anticariogenic activities of the extract on *Streptococcus mutans* ATCC 25175, *Streptococcus sanguis* DSMZ 20567 and *Streptococcus gordonii* ATCC 10558 were determined by disc diffusion and microdilution methods. While the antibiofilm activities of the extracts on same bacteria were studied with microplate biofilm method.

Results: The ethanolic extract of *M. vulgare* did not have any significant inhibition effect on the tested cariogenic bacteria. Although the extract slightly inhibits the growth of *S. mutans* and *S. sanguis*. The antibiofilm activity of the extract was studied on the tested bacteria. The maximum antibiofilm activity was observed on *S. mutans* at 2.5 mg/ml concentration (85.60%). The extract has antibiofilm activity on oral streptococci and for this reason; it can be used for protection of oral and dental health. Moreover, they can be used in the medical materials, such as prosthesis or implants, which have several biofilm problems.

Acknowledgements: This study was supported by the Scientific Research Project Unit of *Mugla Sitki Kocman University*, through the Grant number 14/041.

Keywords: *Lamiaceae*, Oral Streptococci, Antibiofilm Activity