Abstract

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Title of thesis: The impact of M1043 on the expression of inflammatory markers in a mouse model of NASH – immunohistochemical analysis

Introduction and aim of the study: The liver is an organ with many important functions in the body, such as detoxification and regulation of lipid metabolism. Impairment of these processes can lead to NASH, a disease associated with obesity and metabolic syndrome, characterized by inflammation and accumulation of fat droplets in the liver. Studies focused on NASH are important for understanding the pathophysiology and developing new therapeutic strategies. The use of mouse models allows the investigation of pathogenesis and testing of different therapeutic approaches. This study examines the effect of the anti-endoglin antibody M1043 on the expression of inflammatory markers in a mouse model of NASH.

Methodology: Mice were fed a diet inducing NASH and divided into two groups, one receiving rat IgG antibody and the other one, receiving the anti-endoglin antibody M1043. The livers were collected and processed using immunohistochemical analysis.

Results and conclusion: The results of this study are important for understanding the effect of the anti-endoglin antibody on inflammatory processes in NASH-affected livers and may contribute to the identification of new therapeutic targets. Our results show that the high-fat diet caused steatosis in hepatocytes and inflammation in liver tissue. Staining confirmed the presence of the expected markers ICAM-1 and galectin-3, but we did not observe significant changes in the extent and intensity of the staining reaction when comparing the IgG and M1043 groups. These results suggest that M1043 is unlikely to affect inflammation in NASH.

Keywords: liver, NASH, Kupffer cells, hepatic stellate cells, inflammatory markers, immunohistochemistry