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**P18 RED MARK SYNDROME IN RAINBOW TROUT FARMED IN THE REPUBLIC OF MACEDONIA: FIRST OBSERVATION**

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**Introduction:** Red mark syndrome (RMS) is a chronic, nonlethal dermatitis with an unknown etiology that affects farmed rainbow trout (*Oncorhynchus mykiss*). It was firstly described in Scotland in 2003, and since then has been reported in several European countries, USA and South America. The syndrome is characterized by red inflammatory lesions on the skin mainly in marked-sized fish, occurring at temperatures below 15°C. The affected fish show no behavioral changes, but the lesions lead to downgrading of the product or rejection for human consumption, thus lowering its market value.

**Material and Methods:** Rainbow trout (n=22, weight 220-350 g) were sampled during a RMS outbreak (June 2015) in one farm. The water temperature was 13.5°C, there were no changes in behavior and no mortality among the affected fish, but the morbidity reached 75%. The sampled fish were brought to the Faculty of veterinary medicine in Skopje for a pathological, bacteriological and parasitological testing. All sampled rainbow trout were individually tested by performing recognized and previously described diagnostic methods.

**Results:** The examined rainbow trout showed gross skin lesions mainly on the lateral and latero-ventral surface. The lesions were presented as single (n=20) to multiple (n=2) well-defined, slightly swollen, circular to oval red spots up to 5 cm in diameter. All of the lesions had white areas of scale loss in the center. None of the examined fish had any visible lesions on the gills and the internal organs. The microscopic examination found no bacteria and parasites, and the bacteriological examination gave negative results. Based on the results, the condition was diagnosed as RMS and the responsible person on the farm was advised to wait for the fish to spontaneously recuperate and to minimize any

mechanical handling. All of the affected fish fully recovered after approximately 7 weeks from the initial report.

**Conclusion:** This report presents the first observation of RMS in rainbow trout farmed in the Republic of Macedonia. The manifestation of the lesions was typical without behavioral changes or mortality among the affected fish. Although we diagnosed the syndrome and proposed no intervention, still, the etiological agent has to be identified in order to evaluate its epidemiology and the risk for other trout farms.

**Key words:** Red mark syndrome, Cold water strawberry disease, Macedonia