Finnish team of researchers finds a mutation in a tumor of the jaw

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A Finnish team of researchers was the first in the world to discover a gene mutation in ameloblastoma, which is a tumour of the jaw.

Ameloblastoma is an odontogenic tumour with a high tendency to recur after treatment. Ameloblastoma is most often found in the posterior of the lower jaw. Ameoloblastomas are treated by surgery, often resulting in tissue deficiencies in the jaws as well as loss of several teeth. A suitable drug therapy could reduce the need for surgery and the recurrence of ameloblastoma, but finding such a treatment requires a better understanding of the pathogenesis of the tumour.

Researchers have been searching for the mutation that causes ameloblastoma for decades, and this mutation has now been found in a patient living in the eastern part of Finland. The core of the team making the discovery comprises researchers of the University of Turku and the University of Eastern Finland. According to the leaders of the team, Professor of Medical Biochemistry Klaus Elenius of the University of Turku, and Professor of Oral Diagnostic Sciences Kristiina Heikinheimo of the University of Eastern Finland, the finding is a scientific breakthrough. The significance of the finding is further emphasised by the fact that it has direct implications for treatment, because a targeted drug for the mutation in question already exists.

The findings were published in *Journal of Pathology* in March.

More information: Kari J Kurppa, Javier Catón, Peter R Morgan, Ari

Ristimäki, Blandine Ruhin, Jari Kellokoski Klaus Elenius and Kristiina Heikinheimo. High frequency of BRAF V600E mutations in ameloblastoma. *J Pathol* 2014; 232: 492–498.