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Date: - 03/02/2022

Summary

The paper titled “Differential Matrix Metalloprotease (MMP) Expression Profiles Found in Aged Gingiva” by Suhee Kim et.al, investigates what the age-related genetic change is in gingiva. According to National Cancer Institute, gingiva is also known as gums, this is the tissue of both the upper and lower jaw that surrounds the base of the teeth. Through their studies Suhee Kim et.al, find that there can also be determined the cause of aging of the gingiva. It was found that MMP12 maybe indication of natural aging, and aging caused by an external factor such as an infection can be indicated by the upregulations of MMP3, MMP9, and IL1B. By sequencing the RNA of both young and old gingiva tissue in real time PCR, they have found that these different aged tissues showed different gene expression, and the top pathway that contributes to the aging of the gingival tissues was Matrix metalloprotease (MMP). MMPs such as MMP3, MMP9, MMP12 and MMP13 were found in old gingival tissues and, the MMP3, MMP9, and IL1B were stimulated by infections with oral bacterium and etc.

In conclusion, their study finds the genes involved with the clinical and circular changes of the periodontium and understands why these changes may occur.

References

Kim, S. et al. Differential Matrix Metalloprotease (MMP) Expression Profiles Found in Aged Gingiva. (2022).

NCI Dictionary of Cancer Terms. National Cancer Institute (2022)