

Abstract

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Title of thesis: Effect of high soluble endoglin levels on the liver morphology in mice

Bachelor thesis

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Endoglin (CD105) is an integral transmembrane protein with total weight of 180 kDa. It is characterised by its participation in the signaling cascade of transforming growth factor β (TGF- β) due to its role as a co-receptor of this factor. In addition, a soluble form of endoglin (*sol-Eng*) which is produced by proteolytical sheeding from the extracellular part of membrane bound endoglin into circulation was demonstrated. Recently, it was shown, that endoglin is crucial factor in the development of both, cardiac fibrosis in the failing myocardium and liver fibrosis. The aim of our work was to detect liver fibrosis in transgenic mice.

Using basic histological techniques and collagen staining we evaluated development of liver fibrosis in transgenic mice overexpressing human soluble endoglin on chow and high fat diet in comparison with control mice with low levels of human soluble endoglin.

Our histological results show that high soluble endoglin levels have no effect on the development of fibrotic changes in the liver. However, it will be very interesting to evaluate markers of the liver fibrosis pathogenesis at the molecular level.

Key words: Endoglin, soluble endoglin, liver fibrosis, histological technique

