SUMMARY

Facial Disharmony cause of mandibular undergrowth has not been done. Some methods use to solve these problems as functional orthopedic appliances to correct this disharmony but the results in still in questions. Freshly isolated cartilage tissue is to future proposed, as new treatment innovation in orthodontics. These new treatment innovations will be stimulating the secondary cartilage growth with exogenous IGF-1 in human mandibular condyle to treat the face disharmony. The research hypothesis is the cartilage tissue of mandibular condyle can be use as primary condrocyte tissue culture. The propose of this study is to make a condrocyte as tissue culture from secondary mandibular condyle rat (Rattus norvegicus).

The benefit of this study are: to make the condrocyte primary tissue culture from rat mandibular condyle (Rattus norvegicus); to understanding in mechanism of the proliferation the mandibular condyle condrocyte; as the research tissue culture model for the finding the new innovation treatment in dysharmony face because of underdeveloped mandibular growth.

This is the research exploration that has been done to prove the hypothesis by some following research step: the tissue collection of the mandibular condyle from rat; to make the secondary condrocyte as primary tissue culture; and finally is to investigation the confluence of the culture.

The results of this study can be revealed that cartilage of mandibular condyle can be cultured in monolayer culture. At first the condrocyte has round cell morphology, then after in the day 14th the condrocyte morphology is fibroblast like-cell. It's suggested that at the beginning condrocyte will synthesize type II collagen, following that type I collagen will synthesized, that give fibroblastlike-cells morphology.

We suggested that the further research to detect a collagen expression in every morphological change in monolayer culture. Further Analysis, whether the condrocyte can stabilize its morphology and phenotype every subculture in monolayer culture.

Kata Kunci: Facial Disharmony; IGF-1; condrocyte; fibroblastlike cells.