



Development of primary cell cultures from *Rutilus kutum*

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Abstract

Preparing a new cell culture from fish species is a valuable tool for biological researches. Caspian Kutum (*Rutilus kutum*) is one of the most important indigenous species of the Caspian Sea. So In this study, the preparation of primary cell culture from the mentioned fish was investigated using explant methods. Fin and kidney specimens were collected from healthy fish after the disinfection of the fish surface. Then they were sliced and planted in a cell culture medium containing Bovine fetal serum and penicillin-streptomycin in 24 cm² cell culture flasks. Primary cultures were incubated under standard conditions at a range of temperatures between 20 to 28 ° C. The first cells were successfully derived from fin and kidney tissues during 24 hours. After two weeks Subculture was performed using trypsin enzyme when the cell coverage reached to 100 percent. About the fin tissue subculture, a single cell layer consists of cells with homogeneous epithelial morphology was formed. So far, these cells have been passaged for 28 times. Results indicated the possibility of producing a permanent cell line from the fin tissue of *Rutilus kutum*. But the subculture of kidney cells only continued five times.

Keywords: Bafa Lake, Helminth, Monogenea, Nematoda, Trematoda