



Quaternary geochronology, tectonics and volcanism in South Turkey comprising the collision area of three plates ; Eurasia- Africa- Arabia.

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Research area exhibits complex morpho-tectonic features of continent-continent collision zone (East Anatolian Fault Zone) crossing the northernmost segment of the Dead Sea Rift. Two structural-tectonic knots, cross-section points namely Hatay and Maras knots developed during the Quaternary Period. Marash knot represents the location where EAFZ crossed and end the Dead Sea Rift, to the North. ENE striking EAFZ branches splits into several branches just before crossing the DSR, dissecting the Amanos Ranges and reaches Cyprus Subduction, through Yumurtalik Faults. Maras basin has developed among EAFZ and DSR branches.

Hatay knot situated at the combination point of DSR with Samandag Faults which extends SW , under Eastern Mediterranean. Isotope geochronologic data produced from alkaline basaltic lavas shed light on neotectonic stages of the region. Three main stages of volcanism have proved to be developed , in the area as being; 1.57 Ma, 0.08 Ma ve 0.05 Ma . Amik basin has developed among the splits of DSR zone. Geochronology data provided by K/Ar, Ar/Ar methods on basaltic lava flows and U/Pb method applied on travertine deposits. Palaeoseismic data by radiogenic measurements of fossil soils provided significant values to support tectonic evolution.

Structural and stratigraphical relationship among basin-fill sediments, lava flows and active tectonic surfaces suggest the simultaneous activity , through Quaternary.