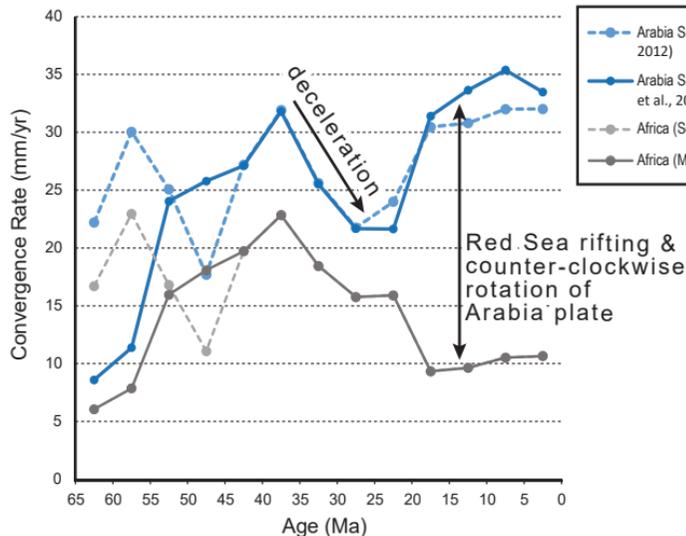
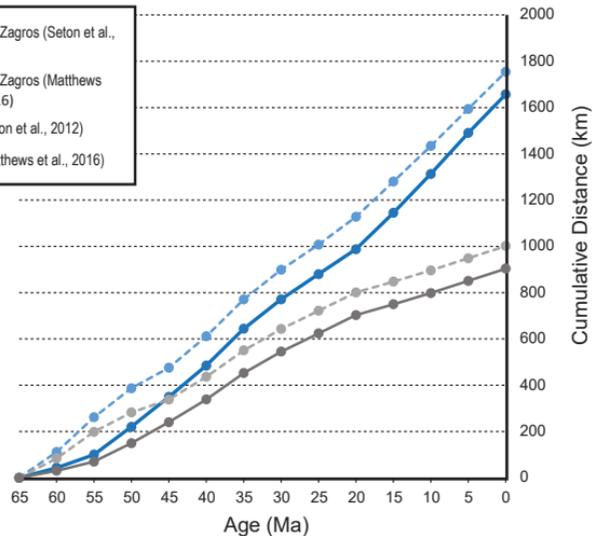


### Plate Convergence Rates Relative to Stable Eurasia



### Plate Motion Relative to Stable Eurasia



**Figure S1.** Cenozoic changes in Arabia and Africa plate convergence rates (left) and cumulative plate motion (right) relative to a fixed Eurasia plate. Values are based on the global plate models of Seton et al. (2012) and Matthews et al. (2016) and were extracted using GPlates software ([www.gplates.org](http://www.gplates.org)) for fixed points on the southeastern part of the Arabia plate (27.59341°N, 55.569763°E) and Africa plate (30.06907°N, 29.60100°E); see Table S1. Note that significant deceleration of the SE Arabia plate from ca. 38–28 Ma, slightly later than along the Arabian promontory (cf. Fig. 3). The deviation between Arabia and Africa convergence rates is due to opening of the Red Sea and counter-clockwise rotation of the Arabia plate since the early Miocene (ca. 23 Ma).