

Deep phylogeography of *Pistacia lentiscus* in the Mediterranean basin

Joan Pedrola¹, Isabel Martínez Nieto¹, Fernando Boisset², Miguel Guara², Felisa Puche², Rafael Currás², Antoni Aguilera¹, Emilio Laguna¹, Antoni Marzo¹, Pablo Ferrer¹, Isabel Mateu-Andrés¹

Instituto Cavanilles de Biodiversidad y Biología Evolutiva, Universidad de Valencia¹,
Departamento de Botánica-Facultad de Biología, Universidad de Valencia²

The vast majority of phylogeographical surveys have focused on population dynamics that took place during the Quaternary climatic oscillations, causing repeated retreats and re-advances of plant populations into and from refuge areas. However, recent examples in southern European areas showed that some species have retained genetic imprints of much more ancient dynamics. It is known that around Mediterranean Basin the impact of the Quaternary climatic oscillations on some evergreen trees and shrubs was reduced. Thus, it seems reasonable to predict that ancient Mediterranean species could have favoured long-term population persistent allowing that ancestral molecular variants to be preserved. Consequently, the present distribution of its molecular variants should reflect the paleogeographical history of the area prior to glaciations. To test this hypothesis we analysed six cpDNA microsatellites and sequencing all different alleles found in eight individuals/populations of 65 populations of *Pistacia lentiscus* one of the few species shrubs widely distributed from East to West Mediterranean Basin. In this study we tried to combine molecular analyses with geological data in order to reveal timing and modes of divergence of *Pistacia lentiscus* populations. Preliminary results about the distribution of haplotypes suggest a western Mediterranean centre of genetic diversity of this species and a West-East migration pattern. Anatolian and Balkan populations show low haplotype diversity levels and the most ancestral haplotype is found in Spain and northern Maghreb. This scenario provides a striking insight into the pace of evolution of a typical Mediterranean maquia-shrub, which retain cohesive species identity over timescales long enough to allow the diversification of entire plant and animal genera.