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Unravelling the evolutionary dynamics of a cryptic species complex: genetics of the Iberian and North African wall lizards

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Wall lizards (Podarcis spp.) from the Iberian Peninsula and North Africa have long been acknowledged as a case of doubtful taxonomy. The application of genetics to study evolutionary dynamics in this group of organisms showed that it is formed by several divergent lineages, a finding which set the basis for the on-going taxonomic re-evaluation of the group. In this talk I will review over a decade of studies on the evolutionary genetics of these organisms, with particular emphasis on species delimitation and speciation dynamics. I will also address recent findings regarding the nature of gene flow between species of this group and the multilocus phylogeny of the clade. Overall the results show that the taxa that compose this clade are closely-related yet welldefined species and that gene flow has repeatedly played a major role in shaping the evolutionary patterns of this clade, although with different impacts of different species pairs. I will finish by describing current and future research avenues, which will hopefully set Podarcis as one of the most important reptilian models for the study of speciation.

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