Does it exists a Greek ampelographical heredity in South Italy? SSR profiles comparison of cultivars growing in both Countries.

Thirtyeight accessions belonging to varieties coming from Greece, growing in the ERSA (Gorizia) and Istituto Sperimentale per la Viticoltura collections, have been analyzed by means of 11 microsatellite loci (SSR): the six core-loci suggested in the frame of Genres 081 Project and five additional loci, namely VVMD28, ISV2, ISV3, ISV4 and VMC ng4b9. Twentyeight different SSR profiles have been obtained, corresponding to as many again cultivars.
These data have been elaborated with the free program “Identity 1.0” for statistical analysis. In total 88 alleles have been found. The most polimorphic loci resulted VVMD28, ISV2 and VMC ng4b9, with 10, 11 and 10 alleles each, respectively. The less informative locus was ISV3, with only 3 alleles. These data confirm previous indication, about the worth of ISV2 and VMC ng4b9 loci for varietal characterization, to enlarge the six-core Genres 081 loci set. The probability of identity, i.e. the probability that two different varieties share the same SSR profile using these 11 microsatellite loci, has been computed on these 28 identified cultivars and is highly small (1.83 x 10-10), confirming the great discrimination power of the 11 selected SSR loci.
These 28 SSR profiles have been compared with those of the most important wine grapevine cultivars cultivated in South Italy, i.e. Campania, Calabria, Sicilia, Basilicata and Puglia regions; the comparison has been enriched with some table seeded and seedless varieties, some Malvasias, Moscato bianco and 7 outgroup varieties, 41 cultivars in all. We did not find, in respect to the analysed materials, any synonymy among Greek and South Italy cultivated varieties. The dendrogram of genetic similarity, produced using the Dice’s coefficient and UPGMA algorithm, shows complicated clusters, making difficult the reading in a “geographical” key of cultivars distribution in the different branches of the tree. Greek and Italian varieties are ubiquitously spread and mixed together in a rather uniform way.