Session 2: Germplasm

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Title
Clone identification of four grapevine varieties

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Abstract

The identification and comparison of plant material by ampelographic methods is afflicted by misinterpretations; DNA-based markers provide a more reliable alternative for cultivar identification. Due to their codominance, high information content and easy scoring, microsatellites, or simple -sequence repeats (SSRs), are ideal molecular markers. A number of SSR primers have been developed for Vitis by different groups, and the usefulness of SSR markers for grapevine genotyping, cultivar identification, parentage studies, and detection of synonyms has been shown. In our work twenty grapevine accessions believed to belong to "Merlot", "Cabernet Sauvignon", "Riesling" and "Pinot" varieties were the objects for study. For nalyze we collected unexpanded young leaves from this genotypes. Three different approaches were taken or DNA extraction in grapevine species: 1) CTAB-based extraction procedure (Doyle & Doyle, 1987) – we haven't obtained DNA; 2) CTAB-based extraction procedure modified by the use of NaCl to remove polysaccharides and PVP to eliminate polyphenols during DNA purification. (Doyle & Doyle, 1990) - we haven't obtained clean DNA; 3) siliki–method - this procedure purifies greater amounts of clean DNA. Microsatellite polymorphism analysis was carried out at sixth microsatellite loci: VRTAG79, VVMD5, VVMD7, VRZAG62, VVS2, VVMD27. The analyze shown the all genotype in our groups (Merlot-control, ? -2, ? -35, ? -181, ? -343, ? -347, ? -348; Cabernet Sauvignon-control, CS-5? , CS-15, CS-104, CS-217; Riesling–control, Riesling-991; Pinot–control, Pinot white 32) were difficult at all microsatellite loci from control varieties.

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