Acronym: -
Name: MICROSATELLITE MARKERS IN WHEAT BREEDING
Project status: From 01.01.2008 to 31.12.2009
Contract number: KLASA: 910-08/07-01/00133, URBROJ: 533-06-07-0002
Action line: -
Type (Programme): Bilateral project
Funding scheme: MZOS
Project cost: -
Project funding: -

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Short description of project
The improvement of wheat traits is mainly due to efficient use of wheat germplasm genetic diversity. In today wheat breeding important place has the application of molecular markers and marker assisted selection (MAS). Investigation are conducted for wheat germplasm diversity research on molecular level and marker specific for traits linked to yield and quality. These markers were identified and used for shortening the classical wheat selection. One of the molecular marker methods frequently used today is microsatellite markers (Simple Sequence Repeats_SSR). According to Stachel et al. (TAG 100; 242-248, 2000) SSR is a promising method because it enables differentiation of related genotypes, it is codominant, shows high level of polymorphism and it is relatively easily to handle. Research work will be conducted on 40 winter wheat cultivars from Croatia, Austria, France and Hungary. Field trials will be conducted in two years period in Osijek and Tulln in lattice design in two replications. Results will be used for statistical analysis of agronomic performance and diversity between analized cultivars. During the field trials laboratory analysis will be
conducted using microsatellite markers. Analysis will include approx. 100 molecular markers. Emphasis will be on the microsatellite markers which will be chosen from published sequences and they will be evenly distributed on short and long chromosome arms for all three genomes. Microsatellite sequences will be chosen according to Röder et al. 1998, Genetics 149:p 2007-2023; Somers et al. 2004, TAG 109:p 1105-1114; Mahmood et al. 2004, TAG 109:p 1494-1503; Song et al. 2005, TAG 110:p 550-560.

**Short description of the task performed by Croatian partner**

**Project task:** -