DEVELOPMENT OF NOVEL SSR MARKERS FROM A GENOMIC MICROSATellite LIBRARY IN JATROPHA CURCAS L.

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*Jatropha curcas* is a drought-resistant shrub belonging to the family Euphorbiaceae. It is native of Central America and traditionally cultivated as living fence and for traditional use in many tropical and sub-tropical countries.

This specie is easy to establish, it can be grown in degraded land and in low rainfall adapted to high level of aridity and to soils with low nutrient content.

*Jatropha* is a genus with a multipurpose uses, like medicinal, fertilizers, soap, biomass production and currently, there is a great interest through a high potential as a energy crop. A plantation of *J. curcas* can produce high yields for many years and the seeds contain an average of 35-40% of not-edible oil that can be employed as pure oil or for bio-diesel production. This plant does not compete with land resources for food and feed.

At the moment limited is the genetic information of this species and few studies have focussed on the germplasm characterisation using molecular markers.

The objective of this research was to develop a genomic library enriched for microsatellites in order to generate a large number of SSR markers suitable for evaluating genetic polymorphisms in *Jatropha curcas* accessions.

A genomic library, enriched for di- (GA, GT), tri- (CAA, ATT) e tetranucleotides (GATA, CATA) using the method of Edwards et al. (1996), has been constructed.

From the library, 226 sequences were obtained, of which 70 (30%) displayed microsatellite sequences. Using the program entitled PRIMER 3 (Rozen & Skaletsky 2000), 20 pairs primers were designed and have been tested.

The development of a genomic library enriched in microsatellites, could be useful to generate an adequate number of SSR markers sufficiently polymorphic to implement population studies and useful for the set up of future programs of genetic improvement.

**References**


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