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## ENVIRONMENTAL MICROBIOLOGY AND MICROBIAL ECOLOGY

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**Development of a core collection for Argan tree in Morocco by heuristic search based on SSR markers****Chaimaa Yatrib<sup>1</sup>, Ouafae Pakhrou<sup>1</sup>, Leila Medraoui<sup>1</sup>, Mohammed Alami<sup>1</sup>, Abdelkarim Filali-maltouf<sup>1</sup>, Bouchra Belkadi<sup>1</sup>, Fouad Manda<sup>2</sup>, Abdelhamid El mousadik<sup>2</sup>, Saad Ibn Souda-kourachi<sup>3</sup>, Cherkaoui El modafar<sup>4</sup> and Abderrahim Ferradous<sup>5</sup>**<sup>1</sup>Mohammed V University, Morocco<sup>2</sup>Zohr University, Morocco<sup>3</sup>LBM, Morocco<sup>4</sup>Cadi Ayyad University, Morocco<sup>5</sup>Forestry Research Center, Morocco

The argan tree (*Argania spinosa* L.) is an oil-agro-forestry-pastoral tree that is endemic to Morocco and with a very important socio-economical role. However and due to drought in the early century the argan ecosystem has become overgrazed. This phenomenon combined with overexploitation of argan for fuel, together with land clearance for agriculture, resulted in an alarming reduction of the argan forest. In order to facilitate extensive examination at genetic, phenotypic, and physiological levels and to provide a subset of representative accessions, it is necessary to construct a core collection based on molecular data. In the present study, and for the first time, a core collection of argan tree was constructed from accessions covering all the argan forest's distribution area in Morocco by heuristic search and based on 13 Simple Sequence Repeats (SSR) marker combinations. Our study showed that the relationship between the core collection and the geographic distribution of the entire collection is very weak. Also, the number of amplification bands in the core collection was the same as in the entire collection (245 alleles). Shannon's index for only one of the SSR primers (7.69%) and Nei's index for three of the SSR primers (23.07%) were lower in the core collection than in the entire collection. The comparison of the random core collection and the true core collection showed that the latter retained larger genetic diversity. Altogether, the core collection constructed in our study is representative of the genetic diversity of and could help perform effective conservation strategy to preserve the Argan forest in Morocco.

**Biography**

Chaimaa Yatrib is Ph.D at Mohammed V university, Faculty of science in Rabat. She is interested in the study of genetic diversity and application of news molecular tools to the conservation of endangered species. She is currently working on the case of *Argania spinosa*. in the framework of the project ArganBiogen. This latter is supported by Hassan II Academy of Science and Technology (Morocco) and The Ministry of Higher Education, Scientific Research and Professional Training of Morocco.

yatrib.chaimaa@gmail.com

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