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**Microsatellites assisted selection for yellow rust resistance in Algerian bread wheat *Triticum aestivum* L**

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**Abstract**

Wheat is currently one of the most important cultivated crops, considering its contribution in the global economy and food security; it is also one of the most consumed cereal crops in Algeria. In the year 2004, the eastern region of Algeria had a considerable damage in wheat fields due to yellow rust that is caused by a fungus called *Puccinia striiformis*. Leading to taking serious measures regarding that disease, especially research and wheat development. In this study, we aimed to find the resistance genes in seven Algerian bread wheat varieties, three sensitive and four resistant. The research was conducted using eight microsatellite markers, of which we can mention Wmc44, Barc119, and Wms533...etc. Using a CTAB DNA extraction method then followed by PCR amplifications and an electrophoresis migration. The results we obtained indicated that the markers did show polymorphism in multiple occasions, however after the PIC calculation and establishing a dendrogram, we have to conclude that the markers revealed different random wheat characteristics, although there were not clear links to the yellow rust resistance.

**Keywords:** Microsatellite, Yellow rust, Wheat, Marker assisted selection and resistance.