GENETIC CHARACTERIZATION OF *Penicillium* OBTAINED WITH UTILIZATION OF ISSR MARKER

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The fungi participate actively in biodeterioration and biodegradation processes, contributing for nutrient recycling and, consequently, for maintenance of the ecosystems. Fungi isolated from soils were used with different finalities as antibiotic or enzyme production and fermentation or degradation of specific substances, among others. Diverse molecular techniques appear as alternatives to traditional methods, because they analyse the genome independently of the physiological conditions of the organism and they are sufficiently sensibles to differentiate strictly related species. The aim of this work was to characterize genetically 19 species of filamentous soil fungi belonging to *Penicillium* genus isolated from Cabo, Goiana and Timbaúba cities (Pernambuco, Brazil) by the technique of inter simple sequence repeats (ISSR) amplification. By the grouping analysis, the $(GTG)_5$ and $(GACA)_4$ primers of ISSR marker formed two distinct groups delineated with approximately 3 and 4% of common fragments among them, respectively. Both primers used by ISSR marker produced a good number of fragments and were efficient to demonstrate the high genetic variabilty of the isolated. These primers constitute appropiate instruments to discriminate species at inter and intraspecific levels.

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