Área: Biotecnologia

MOLECULAR IDENTIFICATION OF TRICHOGRAMMA (HYMENOPTERA: TRICHOGRAMMATIDAE) SPECIES, USING THE ITS2 REGION SEQUENCING OF THE RIBOSOMAL DNA.

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From the use of female individuals in the specific identification of Trichogramma via molecular techniques, taxonomy had a large advance making it possible to solve some cases for instance, in thelytokous populations (exclusive female production) or from unknown genetics factors (*T. cacocieae*). This fact greatly helped the traditional systematic, where identification is based exclusively on morphological characters of the male insects. This work discusses these procedures and proposes the identification of Trichogramma (Hymenoptera) species using PCR and sequencing of the ITS2 region of ribosomal DNA. After DNA extraction, PCR reactions were carried out using the forward primer ITS-2- 5' TGTGAACTGCAGGACACATG-IT2-5' and the reverse IT2-5 GTCTTGCCTGCTCTGCTCTGAG.-3'. The amplifications of the PCR products obtained were submitted to sequencing to confirm the species in the GenBank database (NCBI National Center for Biotechnology Information). It was possible to extract DNA from all species of Trichogramma, with quantities and qualities sufficient for obtaining electrophoretic profiles, with concentrations of genomic DNA varying between 15.3 and 50 ng / µl. By means of the PCR technique, the fragments from the ITS2 region of the ribosomal DNA were amplified. *T. exiguum*, T*. pretiosum* and *T. galloi* sequences were obtained and from theses sequences the search for similarity was done using the BLAST program in the GenBank database. A dendrogram analysis was performed according to the genetic distance matrix, resulting in three different groups formed by each of the sequenced species. This allowed the conclusion that the use of sequencing of the ITS2 region of ribosomal DNA was efficient in the differentiation of the sibling Trichogramma species studied, suggesting a strong inter-specific variation among the species. (Fonte Financiadora: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES).