MOLECULAR CHARACTERIZATION OF A NON-LTR RETROTRANSPOSON IN THE 28S RDNA GENE OF *RHYNCHOSCIARA AMERICANA*

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Ribosomal RNA genes are encoded by large unit arrays located in the nucleolar organizer region in several organisms. Each tandem repeat is composed of an 18S, 5.8S and 28S gene organized as a single transcription unit. However, in some organisms the repeating unit is not uniform, there is an additional insertion in the coding region for the 28S rDNA. This insertion is a specific non-long terminal repeat retrotransposon that have a very restricted integration targets within the genome. Non-LTR retrotransposon also known as long interspersed nuclear elements (LINEs) are transposable elements that encode a reverse transcriptase and insert into genomic localization via RNA intermediates. The retrotransposon present in the genome of *Rhynchosciara americana*, called as R2Ra, was isolated from screening of a lambda dash genomic library using as probe the recombinant pRa1.4 of rDNA. The analysis of sequence showed the presence of conserved regions, like transcriptase reverse domain and zinc finger motif in the amino terminal region. The insertion site is high conserved in *R.americana* and a phylogenetic analysis showed that this element belongs to the R2 clade. The chromosomal localization is being done to confirm that the R2Ra mobile element insert into the site specific in rDNA gene.