
Conservation of the 5' end of the medRNA in New World species of *Leishmania*

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The effectiveness of antisense oligonucleotides targeted against the spliced leader (SL)(1) in trypanosomes has been documented by Verspieren et al (2). To evaluate a similar approach for leishmaniasis antisense therapy, we used a 12 base primer (Primer A) complementary to a conserved region of the SL to sequence the 5' portion of the SL from the medRNA and the mature mRNAs of several leishmanial species. The first 15 nucleotides of the spliced leader was identical in the New World species of *L. braziliensis guyanensis* (Lbg), *L. mexicana amazonensis* (Lma), *L. donovani chagasi* (Ldc) and *L. enriettii* (Le). In addition, sequencing with Primer B, a highly conserved 18 base sequence in the medRNA of Le, revealed that the first 44 nucleotides of the medRNA, which includes all of the SL nucleotides, were identical in Lma, Le and Lbg.

This sequencing data suggests that a single sequence can be targeted for antisense therapy against New World *Leishmania*. The data also indicates that the SL is not useful as a taxonomic indicator of leishmanial species, even though they are varied in their host range and pathology.

Published *Leishmania enriettii* medRNA sequence³:

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      10      20      30      40      50      60      70
5'  |   |   |   |   |   |   |   |   |   |
AACGCTATATAAGTATCAGTTTCTGTACTTTATTTGGTATGCGAAACCTTCCGGAACCTGTCTTCCGGCAAGA...
      GTCAAAGACATG 5'                GAAGGCCTTGGACAGAAG 5'
      Primer A                        Primer B

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Primer Extension Sequence:

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NTGCGATATATTCATAGTCAAAGACATGAAATAACCCATACGCTTT L. enriettii
NTGCGATATATTCATAGTCAAAGACATGAAATAACCCATACGCTTT L. mexicana amazonensis
NTGCGATATATTCATAGTCAAAGACATGAAATAACCCATACGCTTT L. braziliensis guyanensis
NTGCGATATATTCATA                                  L. donovani chagasi

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Species Name:**ACKNOWLEDGEMENTS**

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