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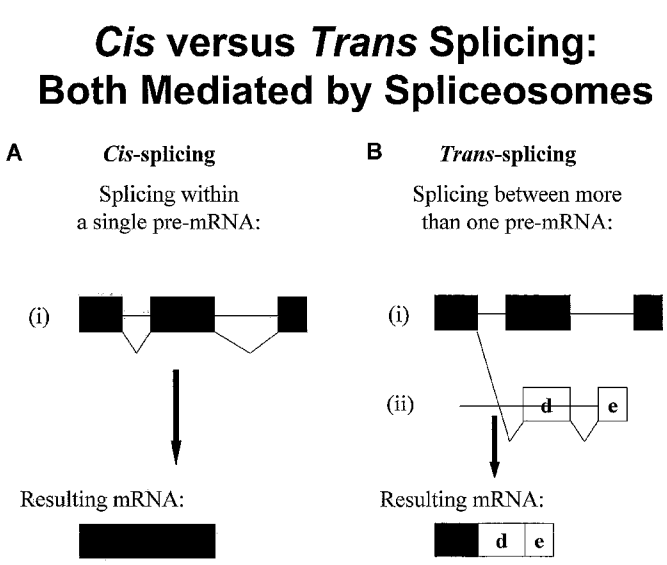
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(54) **Title:** USE OF RNA TRANS-SPLICING FOR ANTIBODY GENE TRANSFER AND ANTIBODY POLYPEPTIDE PRODUCTION



(57) **Abstract:** The present invention provides methods and compositions for generating novel nucleic acid molecules through RNA trans-splicing that target a highly expressed pre-mRNA and contain the coding sequence for antibody polypeptide(s). The compositions of the invention include pre-trans-splicing molecules (PTMs) designed to interact with the target precursor messenger RNA molecule (target pre-mRNA) that is abundantly expressed or tumor specific and mediate a trans-splicing reaction resulting in the generation of novel chimeric RNA molecule (chimeric RNA) capable of encoding an antibody polypeptide. The invention provides for the *in vivo* production of chimeric RNA molecules that encode and result in the production of an antibody polypeptide that is therapeutically effective against, for example, infectious agents, cancer cells, transplantation antigens, rheumatoid arthritis, etc.

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