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(54) Title: METHODS OF ENZYMATICALLY REPAIRING CLEAVED RNAS AND DETECTING THEREOF

(57) Abstract: The present disclosure relates to a method of enzymatically repairing RNAs that are nicked or at least partially cleaved. The method comprises providing a biological sample containing RNAs that are nicked or at least partially cleaved; purifying the nicked or at least partially cleaved RNAs contained in the biological sample, under a non-denaturing condition, to remove non-RNA components; and treating the purified RNAs with at least one of the following: (i) one or more enzymes that exhibit the activity of an RNA 3' phosphatase or cyclic phosphatase and the activity of an RNA 5' kinase, and an RNA ligase, or (ii) a 3'-5' RNA ligase, thereby forming repaired RNAs from the nicked or at least partially cleaved RNA. The present disclosure also relates to a method of detecting RNAs by enzymatically repairing RNAs that are nicked or at least partially cleaved, and detecting the repaired RNAs.