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(54) **COMPOSITIONS AND METHODS FOR INTRAMOLECULAR NUCLEIC ACID REARRANGEMENT**

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(57) **ABSTRACT**

Aspects of the present invention are drawn to processes for moving a region of interest in a polynucleotide from a first position to a second position with regard to a domain within the polynucleotide, also referred to as a "reflex method". In certain embodiments, the reflex method results in moving a region of interest into functional proximity to specific domain elements present in the polynucleotide (e.g., primer sites and/or multiplex identifier). Compositions, kits and systems that find use in carrying out the reflex processes described herein are also provided.

13 Claims, 13 Drawing Sheets