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(54) Title: MULTIPLE PRIMING FOR ON-SUPPORT NUCLEIC ACID AMPLIFICATION

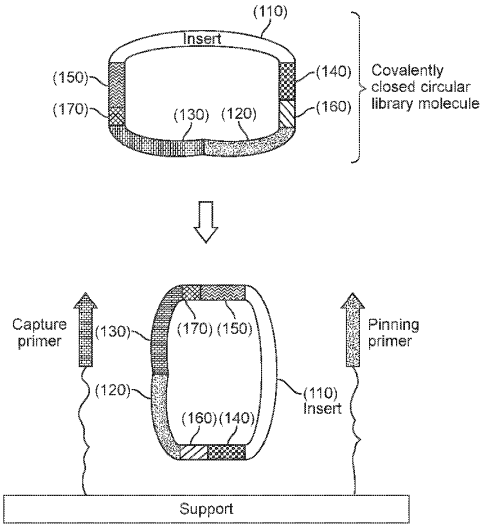


FIG. 15

(57) Abstract: The present disclosure provides compositions, apparatus and methods for generating a plurality of concatemer template molecules immobilized on a support for conducting massively parallel sequencing runs. In some embodiments, the concatemer template molecules can be generated by conducting rolling circle amplification reactions on a support comprising a mixture of immobilized capture and pinning primers. The rolling circle amplification reaction comprises a plurality of circularized polynucleotide molecules and soluble amplification primers which generates concatemer template molecules that collapse to form compact DNA nanoballs that are stably immobilized to a support.

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