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(54) Title: ON-SUPPORT CIRCULARIZATION AND AMPLIFICATION FOR GENERATING IMMOBILIZED NUCLEIC ACID CONCATEMER MOLECULES

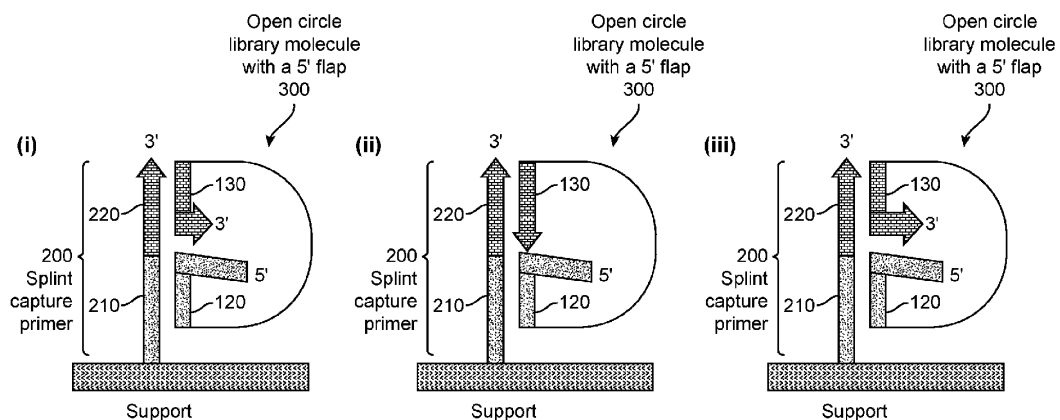


FIG. 28A

(57) Abstract: The present disclosure provides compositions and methods for generating a plurality of nucleic acid concatemers immobilized to a support by conducting on-support circularization and ligation reactions using a plurality of linear library molecules and a plurality of immobilized splint capture primers. The present disclosure provides methods for seeding and optionally re-seeding the support to increase the density of immobilized nucleic acid concatemers that can be sequenced. In some embodiments, the immobilized concatemers can be used for conducting downstream sequencing workflows including batch sequencing and reiterative sequencing workflows. The present disclosure also provides methods for interrupting an ongoing sequencing run to re-seed the support to generate additional concatemers that can be sequenced.

[Continued on next page]

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