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(54) Title: A METHOD TO GENERATE SUPERCOILED CIRCULAR DNA IN VITRO

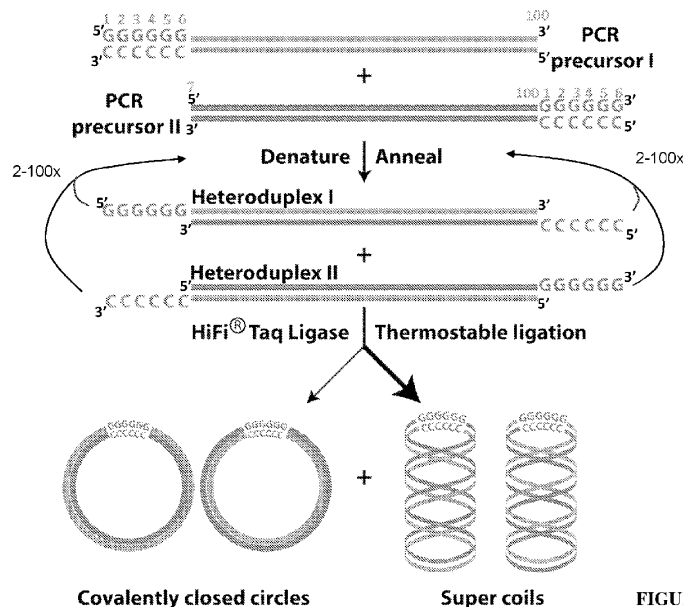


FIGURE 1

(57) Abstract: Current minicircle production methods are slow, expensive, and difficult to perform under GMP conditions because, in most cases, the product is derived from bacteria. In contrast, HTLA- and CHTLA-based synthetic circular supercoiled DNA production can be done completely in a test tube, using chemically or enzymatically synthesized oligonucleotides, long single stranded DNA, and/or double stranded DNA.

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