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(71) Applicant *(for all designated States except US)*: CALIFORNIA INSTITUTE OF TECHNOLOGY [US/US]; 1200 East California Boulevard, Pasadena, CA 91125 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: ARNOLD, Frances [US/US]; 629 South Grand Avenue, Pasadena, CA 91105 (US). SHAO, Zhixin [CN/DE]; Wohnung 52, Birkenstrasse 23, D–82377 Penzberg (DE). VOLKOV, Alexander [RU/–]; – (**).

(74) Agents: LIEBESCHUETZ, Joe et al.; Townsend and Townsend and Crew LLP, 8th floor, Two Embarcadero Center, San Francisco, CA 94111–3834 (US).

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(54) Title: METHOD FOR CREATING POLYNUCLEOTIDE AND POLYPEPTIDE SEQUENCES

(57) Abstract

The invention provides methods for evolving a polynucleotide toward acquisition of a desired property. Such methods entail incubating a population of parental polynucleotide variants under conditions to generate annealed polynucleotides comprising heteroduplexes. The heteroduplexes are then exposed to a cellular DNA repair system to convert the heteroduplexes to parental polynucleotide variants or recombined polynucleotide variants. The resulting polynucleotides are then screened or selected for the desired property.