Title (en)

END SELECTION IN DIRECTED EVOLUTION

Title (de)

SELEKTION AM ENDE IN GEZIELTER EVOLUTION

Title (fr)

SELECTION FINALE D'UNE EVOLUTION DIRIGEE

Publication

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Application

EP 00917887 A 20000309

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- US 33283599 A 19990614

Abstract (en)

[origin: WO0053744A2] This invention provides methods of obtaining novel polynucleotides and encoded polypeptides by the use of non-stochastic methods of directed evolution (DirectEvolution™). A particular advantage of end-selection-based methods is the ability to recover full-length polynucleotides from a library of progeny molecules generated by mutagenesis methods. These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis™) and non-stochastic polynucleotide reassembly (GeneReassembly™). This invention provides methods of obtaining novel enzymes that have optmized physical and/or biological properties. Through use of the claimed methods, genetic vaccines, enzymes, small molecules, and other desirable molecules can be evolved towards desirable properties. For example, vaccine vectors can be obtained that exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like. Furthermore, this invention provides methods of obtaining a variety of novel biologically active molecules, in the fields of antibiotics, pharmacotherapeutics, and transgenic traits.

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