Title (en)
   SHUFFLING OF CODON ALTERED GENES

Title (de)
   SHUFFLING VON GENE MIT VERÄNDERTEN KODONS

Title (fr)
   REARRANGEMENT DE GENES MODIFIES PAR CODON

Publication
   EP 1117777 A2 20010725 (EN)

Application
   EP 99969739 A 19990928

Priority
   • US 9922588 W 19990928
   • US 10236298 P 19980929
   • US 11772999 P 19990129
   • US 11881399 P 19990205
   • US 14104999 P 19990624

Abstract (en)
   [origin: WO0018906A2] Methods of recombining codon-altered libraries of nucleic acids are provided. The nucleic acids can include conservative or
   non-conservative modifications of coding sequences, in addition to codon alterations, as compared with wild-type sequences. In addition to making
   new proteins, methods of generation vectors with reduced rates of reversion to wild-type and attenuated viruses are also provided.

IPC 1-7
   C12N 15/10; C12N 15/11; C12N 5/10; C12N 7/04; A61K 39/21; C07B 61/00; G06F 19/00; B01J 19/00

IPC 8 full level
   C12N 15/09 (2006.01); **C07K 14/16** (2006.01); **C07K 14/505** (2006.01); **C07K 14/535** (2006.01); **C12N 1/21** (2006.01); **C12N 7/00** (2006.01);
   C12N 9/16 (2006.01); **C12N 15/10** (2006.01); **G06F 19/00** (2011.01); A61K 39/00 (2006.01)

CPC (source: EP KR)
   C07K 14/005 (2013.01 - EP); **C07K 14/505** (2013.01 - EP); **C07K 14/535** (2013.01 - EP); **C12N 9/16** (2013.01 - EP); **C12N 15/10** (2013.01 - KR);
   C12N 15/1027 (2013.01 - EP); A61K 39/00 (2013.01 - EP KR); B01J 2219/00689 (2013.01 - EP); C12N 2740/16122 (2013.01 - EP)

Designated contracting state (EPC)
   AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
   WO 0018906 A2 20000406; **WO 0018906 A3 20001026**; **WO 0018906 A9 20000831**; AU 1199000 A 20000417; CA 2331335 A1 20000406;
   EP 1117777 A2 20010725; IL 140441 A0 20020210; JP 2002537758 A 20021112; KR 20010085850 A 20010907

DOCDB simple family (application)
   US 9922588 W 19990928; AU 1199000 A 19990928; CA 2331335 A 19990928; EP 99969739 A 19990928; IL 14044199 A 19990928;
   JP 2000572353 A 19990928; KR 20017003873 A 20010327