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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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(54) **Title:** ORAL BACTERIA AND USES THEREOF

(57) **Abstract:** The present invention relates to compositions and methods for preventing and treating periodontitis and other conditions. In particular, the present invention relates to oral bacteria for use in treating and preventing diseases and conditions.

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(8) - A61K 8/66 (2012.01)  
 USPC - 424/50  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 USPC - 424/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 USPC - 424/50, 435/252.9

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 PubWest (DB=PGPB,USPT,EPAB,JPAB,DWPI); Free Patents Online (USPT, PGPB, WIPO/PCT, EP,JP, German, NPL, keyword);  
 DialogWeb (65,2, 35,315,155, 440); Google (Google Scholar)  
 Search terms: ACTINOMYCES NAESLUNDII, PORPHYROMONAS GINGIVALIS, PERIODONTITIS, bacteria, STREPTOCOCCUS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009/0311199 A1 (Hillman et al.) 17 December 2009 (17.12.2009) entire document, especially, para [0006]-[0007], [0012], [0014]-[0015], [0026]-[0029]	1-19
X	US 2006/0246015 A1 (Hillman et al.) 02 November 2006 (02.11.2006) entire document	1-19

Further documents are listed in the continuation of Box C.

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| <p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p> | <p>“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>“&amp;” document member of the same patent family</p> |
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Date of the actual completion of the international search 21 May 2012 (21.05.2012)	Date of mailing of the international search report <b>06 JUN 2012</b>
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