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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.

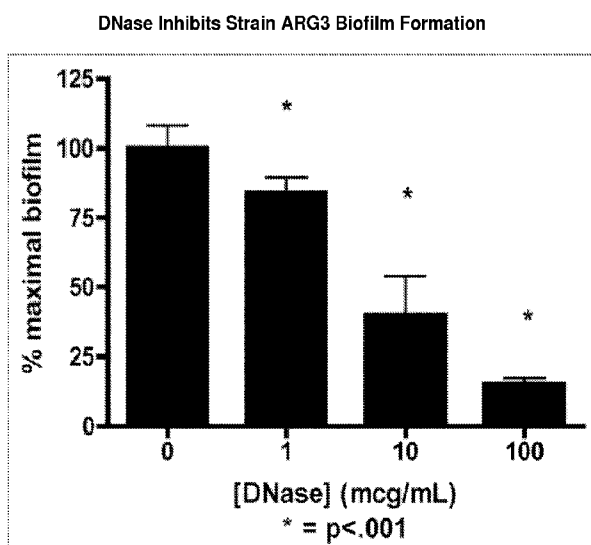
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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) **Title:** TREATMENT AND PREVENTION OF BACTERIAL VAGINOSIS AND GARDNERELLA VAGINALIS INFECTIONS

Figure 2

(57) **Abstract:** *G. vaginalis* infection, a major cause of bacterial vaginosis (BV), is associated with biofilm formation. The present invention relates to treatment of *G. vaginalis* infections and BV with DNase. DNase reduces biofilm formation and increases biofilm breakdown, both in a dose dependent manner. The present invention further relates to treating BV and *G. vaginalis* infections with a combination of DNase and an antibiotic known to treat these diseases.



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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))* (88) **Date of publication of the international search report:**
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INTERNATIONAL SEARCH REPORT

0127023185-14-0
International application No.

PCT/US 12/23185

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61K 38/46; A61P 31/04 (2012.01)

USPC - 424/94.6; 514/2.4

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: 424/94.6; 514/2.4

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 435/333; 424/405, 418, 430; 514/2.3, 2.6, 2.7, 3.8 (see search terms below)Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST (PGPB,USPT,EPAB,JPAB), Google Scholar
Search terms: DNase, antibacterial, antimicrobial, disinfectant, topical\$, bacterial vaginosis, gardnerella vaginitis, antibiotic, metronidazole, clindamycin, tinidazole

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 2004/0023848 A1 (BOEHM) 05 February 2004 (05.02.2004) para [0005]-[0011], [0021]-[0024], [0038], [0045], [0100], [0103], [0162], [0167], [0270], [0278], [0285], [0289]-[0294]	1-15 — 16-17
Y	US 2008/0160065 A1 (HALLIDAY et al.) 03 July 2008 (03.07.2008) para [0038]-[0039]	16-17
A	TETZ et al. Effect of DNase and Antibiotics on Biofilm Characteristics. ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, 2009, pp 1204-1209; entire document.	1-15
A	WO 2009/117373 A2 (RATNER) 24 September 2009 (24.09.2009) para [0021]-[0029]	1-15
A	US 2009/0202516 A1 (OLMSTEAD) 13 August 2009 (13.08.2009) para [0010]-[0062]	1-15
X/P	US 2011/0129454 A1 (OLMSTEAD) 02 June 2011 (02.06.2011) para [0009]-[0087]	1-15

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

02 May 2012 (02.05.2012)

Date of mailing of the international search report

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