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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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(88) Date of publication of the international search report:

27 June 2013

(54) Title: DISPERSION AND DETACHMENT OF CELL AGGREGATES

(57) Abstract: Compositions comprising a protein or isolated peptide, and methods using the same for preventing, dispersing or detaching a biofilm, are disclosed.



INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2012/001061

A. CLASSIFICATION OF SUBJECT MATTER

INV. CO7K7/08 A61K38/10 A61L27/22 A61L31/10 A61L31/16
CO2F1/50 C07K14/435 C09D5/16

ADD.

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)

C07K A61K A61L C02F C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal , WPI Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	wo 2010/035107 A2 (TEL HASHOMER MEDICAL RES INFRA [I L] ; ZLOTKIN AMIR [I L] ; KESTENBOIM HEN) 1 April 2010 (2010-04-01) p. 5, line 12 - p. 32, line 4, claims 1-76 -----	2-4,7 , 9 , 10 , 12-45 , 48-57
X	wo 2007/089272 A2 (UNIV COLORADO REGENTS [US] ; UNIV ALBERTA [CA] ; HODGES ROBERT S [US] ; I) 9 August 2007 (2007-08-09) p. 9, line 17 - p. 25, Table 4, cl. 1-33, SEQ ID NO:3 ----- - / - -	9 , 15, 18-26, 31 , 34-45 , 48,49



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"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

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2012/001061

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DEVEMY E ET AL: "Identi f icati on of a novel dual E- and N-cadherin antagoni st" , PEPTIDES, , vol . 30, no. 8, 1 August 2009 (2009-08-01) , pages 1539-1547 , XP026337520, ISSN: 0196-9781, DOI : 10. 1016/J . PEPTIDES. 2009. 05. 010 [retri eved on 2009-05-22] the whole document -----	9 , 10, 15, 16, 18-26, 31,32 , 34-42 ,49
X	CARLO AMORIN DAEP ET AL: "Structural characteri sati on of pepti de-mediated inhibi tion of Porphyromonas gingi val is biofi lm formation" , INFECTION AND IMMUNITY, AMERICAN SOCI ETY FOR MACROBIOLOGY, USA, vol . 74, no. 10, 1 October 2006 (2006-10-01) , pages 5756-5762 , XP008131753, ISSN: 0019-9567, DOI : 10. 1128/IAI .00813-06 the whole document -----	9 , 15, 16, 18-25 , 31,32 , 34-42 ,49
X	J. OVERHAGE ET AL: "Human Host Defense Pepti de LL-37 Prevents Bacteri al Biofi lm Formation" , INFECTION AND IMMUNITY, vol . 76, no. 9, 1 September 2008 (2008-09-01) , pages 4176-4182 , XP055046917, ISSN: 0019-9567, DOI : 10. 1128/IAI .00318-08 the whole document -----	9 , 15, 16, 18-25 , 31,32 , 34-42 ,49
X	KAPLAN, J. B. : "Biof ilm Di spersal : Mechani sms, Cl ini cal Impl icati ons , and Potential Therapeuti c Uses" , CRITICAL REVI EWS I N ORAL BIOLOGY & MEDICINE, vol . 89, no. 3, 2010, pages 205-218, XP009165525, the whole document -----	9 , 10, 15, 16, 18-26, 31,32 , 34-45 , 48,49
X	wo 2006/079076 A2 (EPIT0PIX LLC [US] ; EMERY DARYLL A [US] ; STRAUB DARREN E [US] ; WONDERLI) 27 July 2006 (2006-07-27) SEQ ID NO: 66, p. 13, line 1 - p. 17, line 7 ----- -/--	1,5,6, 8-11, 15, 16, 18-24,42

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2012/001061

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HALL-STOODLEY L ET AL: "Bacterial biofilms: From the natural environment to infectious diseases" , NATURE REVIEWS. MICROBIOLOGY, NATURE PUBLISHING GROUP, GB, vol . 2, no. 2, 1 February 2004 (2004-02-01) , pages 95-108, XP002438975, ISSN : 1740-1526 the whole document -----	1-45, 48-57

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2012/001061

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
wo	2010035107	A2	01-04-2010	AU	2009295575	AI	01-04 -2010
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				CN	102171239	A	31-08 -2011
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				CN	101142230	A	12-03 -2008
				EP	1848732	A2	31- 10-2007
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				JP	2008528512	A	31-07 -2008
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				US	2011206674	AI	25-08 -2011
				WO	2006079076	A2	27-07 -2006

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2012/001061

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-45, 48-57(al l partial ly)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-45, 48-57 (all partially)

The peptide SVPFDYNLYSNW and its use in detaching a single cell organism from a surface or from other single cell organisms

2-41. claims: 1-45, 48-57 (all partially)

The peptides as disclosed in claim 3 and their use in detaching a single cell organism from a surface or from other single cell organisms

42. claims: 46, 47

A method of identifying an anti-biofilm composition
