(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 9 January 2003 (09.01.2003)

PCT

(10) International Publication Number WO 03/002077 A3

- (51) International Patent Classification⁷: **A61K 7/00**, 7/06, 31/19, 31/4745, 31/56, 48/00
- (21) International Application Number: PCT/US02/18702
- **(22) International Filing Date:** 12 June 2002 (12.06.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

09/893,252 27 June 2001 (27.06.2001) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US 09/893,252 (CON) Filed on 27 June 2001 (27.06.2001)

- (71) Applicant (for all designated States except US): THE GILLETTE COMPANY [US/US]; Prudential Tower Building, Boston, MA 02199 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): STYCZYNSKI, Peter [US/US]; 55 Oak Ridge Drive, Wrentham, MA 02093 (US). AHLUWALIA, Gurpreet, S. [US/US]; 10804 Barnwood Lane, Potomac, MD 20854 (US).

- (74) Agents: RICHARDS, John et al.; Ladas & Parry, 26 West 61 Street, New York, NY 10023 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 16 October 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 03/002077 A3

(54) Title: REDUCTION OF HAIR GROWTH

(57) Abstract: Mammalian hair growth is reduced by applying an inhibitor of telomerase to the skin.

Application No PCT/US 02/18702

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K7/00 A61K7/06 A61K48/00

A61K31/19

A61K31/4745 A61K31/56

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)

IPC 7 A61K

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

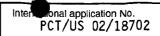
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal, BIOSIS, MEDLINE, EMBASE, PASCAL, SCISEARCH

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT			
Category °	Citation of document, with indication, where appropriate, of	Relevant to claim No		
X	WO 98 23276 A (GABEV EVGENI E ;ANRET LTD (BG); GABEV EVGENI (BG)) 4 June 1998 (1998-06-04 abstract	22,23,27		
X	JP 09 143096 A (POLA CHEM IND 3 June 1997 (1997-06-03) abstract			
X	US 6 017 912 A (BUSSELL LETAN 25 January 2000 (2000-01-25) abstract examples; claims	TIA)	22,23,27	
		-/		
X Furti	her documents are listed in the continuation of box C.	Patent family members are listed	in annex.	
Special ca	ategories of cited documents:			
 "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document 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 		
Date of the	actual completion of the international search	Date of mailing of the international se	arch report	
1	5 July 2003	07/08/2003		
	mailing address of the ISA	Authorized officer		

Internati Application No
PCT/US 02/18702

		PCT/US 02/18702				
C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT						
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.				
A	IZBICKA E ET AL: "Effects of cationic porphyrins as G-quadruplex interactive agents in human tumor cells." CANCER RESEARCH. UNITED STATES 1 FEB 1999, vol. 59, no. 3, 1 February 1999 (1999-02-01), pages 639-644, XP002247791 ISSN: 0008-5472					
A	ISSN: 0008-5472 RAMIREZ RUBEN D ET AL: "Telomerase activity concentrates in the mitotically active segments of human hair follicles." JOURNAL OF INVESTIGATIVE DERMATOLOGY, vol. 108, no. 1, 1997, pages 113-117, XP009013613 ISSN: 0022-202X					



Box I Observations where certain claims were found unsearchable (Continuation of item 1 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. X Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:	
Although claims 1-21, 24 and 28 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.	
2. X Claims Nos.: 4, 5 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:	
see FURTHER INFORMATION sheet PCT/ISA/210	
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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)	
This International Searching Authority found multiple inventions in this international application, as follows:	
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 fee, this Authority did not invite payment of any additional fee.	
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.:	
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.	

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 4, 5

1. The subject-matter of present claims 1, 19-21, 22, 25, 27 and 28 (and the dependent claims 3-18) is defined by means of the functional features 'inhibitor of telomerase', 'a compound that reduces telomerase levels in the hair follicles', 'a compound that reduces telomerase mRNA expression in the hair follicles', 'a compound that promotes the erosion of telomeric DNA in the hair follicles'.

Because of the character of the functional features, it cannot be guaranteed that the performed search is complete.

It cannot be excluded that compounds fulfilling the requirements of the functional feature have not been identified as doing so in the prior art. If such compounds have not been identified in the application either, they have not been covered by the search.

The search has been carried out, based on the functional features per se as well as the examples given in the application and the compounds particularly mentioned in claim 2.

It is further pointed out that the substantive examination can only be carried out to the same extent as the search.

2. Present claims 4 and 5 relate to the use of a composition which is defined by reference to a desirable characteristic or property. An attempt is made to define the composition by reference to a result to be achieved and thus is unclear in the sense of Art. 6 PCT.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

....on on patent family members

PCT/US 02/18702

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9823276	Α	04-06-1998	AU WO BG	4937097 A 9823276 A2 101011 A	22-06-1998 04-06-1998 29-05-1998
JP 09143096	Α	03-06-1997	NONE		
US 6017912	Α	25-01-2000	NONE		