

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number  
**WO 2004/044138 A3**

- (51) International Patent Classification<sup>7</sup>: **C07H 21/02**
- (21) International Application Number:  
PCT/US2003/035074
- (22) International Filing Date:  
4 November 2003 (04.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/423,760 5 November 2002 (05.11.2002) US  
60/503,271 15 September 2003 (15.09.2003) US
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, 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, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, 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:  
24 March 2005
- 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.*

(54) Title: CHIMERIC OLIGOMERIC COMPOUNDS AND THEIR USE IN GENE MODULATION

(57) Abstract: Oligomer compositions comprising first and second oligomers are provided wherein at least a portion of the first oligomer is capable of hybridizing with at least a portion of the second oligomer, at least a portion of the first oligomer is complementary to and capable of hybridizing to a selected target nucleic acid, and at least one of the first or second oligomers includes at least one nucleotide comprising a chimeric organic composition. Oligomer/protein compositions are also provided comprising an oligomer complementary to and capable of hybridizing to a selected target nucleic acid and at least one protein comprising at least a portion of an RNA-induced silencing complex (RISC), wherein at least one nucleotide comprising a chimeric organic composition.



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**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US03/35074

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(7) : C07H 21/02  
 US CL : 536/24.5  
 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)  
 U.S. : 536/24.5, 23.1; 514/44

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)  
 Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X --- P,Y	US 2003/0143732 A1 (FOSNAUGH et al.) 31 July 2003 (31.07.2003), see entire document, in particular figures 4, 5, pages 3-9, 14-27, all claims.	1-29, 33-36, 38-80, 84-87, 89-118 ----- 30-32, 37, 81-83, 88
E,X --- E,Y	US 2003/0206887 A1 (MORRISSEY et al.) 6 November 2003 (06.11.2003), see entire document, in particular figures 4 and 5, pages 5-32 and claims 1-25.	1-29, 33-36, 38-80, 84-87, 89-118 ----- 30-32, 37, 81-83, 88
X --- Y	ELBASHIER et al. Functional anatomy of siRNAs for mediating efficient RNAi in <i>Drosophila melanogaster</i> embryo lysate. December 2001, Vol. 20, No. 23, pp. 6877-6877, see entire document, in particular abstract, figure 4 and pg. 6881.	1-11, 19-21, 36, 53-63, 70, 72, 76-79, 87, 96-97, 102-103 ----- 13-18, 25-28, 30-32, 37, 38-40, 41-43, 50-52, 64-69, 81-83, 88, 89-95, 101

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"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	"&" document member of the same patent family

Date of the actual completion of the international search: 29 November 2004 (29.11.2004)  
 Date of mailing of the international search report: 28 JAN 2005

Name and mailing address of the ISA/US: Mail Stop PCT, Attn: ISA/US, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, Facsimile No. (703) 305-3230  
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## INTERNATIONAL SEARCH REPORT

## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	ELABASHIR et al. Duplexes of 21-nucleotide RNAs mediate RNA interference in cultered mammalian cell. Nature. 24 May 2001, Vol. 411, pp. 494-498, please see entire document.	1-12, 19, 25-26, 53-63, 70, 76-77 -----
Y	US 5,623,065 A (COOK et al. ) 22 April 1999 (22.04.1999), see entire document, in particular columns 1-19.	13-18, 20-21, 30-46, 50-52, 64-69, 78-79, 81-97, 101-103
Y	US 5,700,922 A (COOK) 23 December 1997 (23.12.1997), see entire document, in particular abstract and columns 3-16.	11-18, 25-28, 30-43, 50-52, 62-69, 76-94, 101-103 11-18, 25-28, 30-43, 50-52, 62-69, 76-94, 101-103

**INTERNATIONAL SEARCH REPORT**

PCT/US03/35074

**Continuation of B. FIELDS SEARCHED Item 3:**

EAST, STN (medline, biosis, caplus, embase)  
search terms: siRNA, RNAi, RNA interference