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*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.*



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(54) Title: RECONSTITUTED POLYPEPTIDES

(57) Abstract: The present invention provides modified fibronectin type III (Fn3) molecules, and nucleic acid molecules encoding the modified Fn3 molecules. Also provided are methods of preparing these molecules, and kits to perform the methods.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/18030

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(7) : C07K 14/78, 16/00, 5/00, 14/00; C12N 15/11; A61K 48/00.  
 US CL : 530/387.1, 381, 350, 300; 424/130.1; 435/69.1, 320.1; 514/2, 44; 536;23.1.  
 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. : 530/387.1, 381, 350, 300; 424/130.1; 435/69.1, 320.1; 514/2, 44; 536;23.1.

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.
E, Y	U.S. Patent 6,673,901 B2 (KOIDE, S.) 06 January 2004 (06.01.2004), columns 4-7 and Figure 1.	1-68, 70-78.
Y	WO 98/56915 A2 (RESEARCH CORPORATION TECHNOLOGIES, INC.) 17 December 1998 (17.12.1998), pages 6-10 and Figure 1.	1-68, 70-78.
Y	SKERRA A. Engineered protein scaffolds for molecular recognition. Journal of Molecular Recognition. 2000, Vol. 13, pages 167-187. See pages 168 (right column), pages 171-174 and pages 176-177.	9-17, 37-46, 64-66.
Y	HELMS, L. R. et al. Proteolytic excision and in situ cyclization of a bioactive loop from an REI-VL presentation scaffold. Protein Science. 1994, Vol. 3, pages 1108-1113. See pages 1108, 1111 (right column) and 1112.	19-31.
Y	CONRATH, K. E. et al. Camel single-domain antibodies as modular building units in bispecific and bivalent antibody constructs. The Journal of Biological Chemistry. 09 March 2001, Vol. 276, No. 10, pages 7346-7350. See pages 7346 and 7349-7350.	1-68, 70-78.

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
"B" 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	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 11 March 2004 (11.03.2004)	Date of mailing of the international search report <b>24 JUN 2004</b>
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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	Authorized officer David J Blanchard <i>Janice Ford</i> Telephone No. 571-272-1600 <i>for</i>
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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/18030

**Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)**

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

1.  Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claim 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.  Claim Nos.: 69  
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:

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 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.

**INTERNATIONAL SEARCH REPORT**

PCT/US03/18030

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

Medline, Biosis, EMBASE, Swiss-Prot, WEST.

Search terms: FN3, fibronectin , monobody, protein scaffold, molecular scaffold, single-Ig domains, unpaired Ig, camelids VH, inventor search.