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(74) Agents: **ESMOND, Robert, W.** et al.; Sterne, Kessler,
Goldstein & Fox, P.L.L.C., 1100 New York Avenue, Wash-
ington, DC 20005 (US).

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(71) Applicant: **INVITROGEN CORPORATION** [US/US];
1600 Faraday Avenue, Carlsbad, CA 92008 (US).

(72) Inventors: **CHESNUT, Jonathan, D.**; 2858 Andover Av-
enue, Carlsbad, CA 92008 (US). **CARRINO, John**; 13129
Sea Knoll Court, San Diego, CA 92130 (US). **LEONG,**
Louis; 25925 Via Del Sur, Mission Viejo, CA 92691
(US). **MADDEN, Knut**; 2705 Glasgow Drive, Carlsbad,
CA 92008 (US). **GLEESON, Martin**; 4228 Cordobes
Cove, San Diego, CA 92130 (US). **FAN, James**; 3550
Knollwood Drive, Carlsbad, CA 92008 (US). **BRASCH,**
Michael, A.; 20931 Sunnycres Road, Gaithersburg,
MD 20882 (US). **CHEO, David**; 4307 Ambler Drive,
Kensington, MD 20895 (US). **HARTLEY, James, L.**;
7409 Hillside Drive, Frederick, MD 21702 (US). **BYRD,**
Devon, R.N.; 29 Sunset Street, Waynesville, NC 28786
(US). **TEMPLE, Gary, F.**; 114 Ridge Road, Washington
Grove, MD 20880 (US).

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ning of each regular issue of the PCT Gazette.

(54) Title: METHODS AND COMPOSITIONS FOR SYNTHESIS OF NUCLEIC ACID MOLECULES USING MULTIPLE
RECOGNITION SITES

(57) Abstract: The present invention provides compositions and methods for recombinational cloning. The compositions include vectors having multiple recombination sites and/or multiple topoisomerase recognition sites. The methods permit the simultaneous cloning of two or more different nucleic acid molecules. In some embodiments the molecules are fused together while in other embodiments the molecules are inserted into distinct sites in a vector. The invention also generally provides for linking or joining through recombination a number of molecules and/or compounds (e.g., chemical compounds, drugs, proteins or peptides, lipids, nucleic acids, carbohydrates, etc.) which may be the same or different. The invention also provides host cells comprising nucleic acid molecules of the invention or prepared according to the methods of the invention, and also provides kits comprising the compositions, host cells and nucleic acid molecules of the invention, which may be used to synthesize nucleic acid molecules according to the methods of the invention.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18036

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68; C12N 1/21, 15/00, 15/11, 15/63; C12P 19/34

US CL : 435/6, 69.1, 91.1, 91.2, , 252.3, 320.1; 536/23.1

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 69.1, 91.1, 91.2, , 252.3, 320.1; 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.
X	WO 02/16594 A2 (CHESTNUT et al.) 28 February 2002 (28.02.2002), pages 1-7 and 10-12.	1-11, 13, 14, and 16-45
X,T	US 2003/0220249 A1 (HACKETT et al) 27 November 2003 (27.11.2003), section [0195], [0217], and [0238].	12 and 15

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Facsimile No. (703)305-3230

Authorized officer

Young J. Kim

Telephone No. (703) 308-0196

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

Patent Database (USPT, USPGP, EPO, JPO, DERWENT, IBM-TDB)

search terms: recombination, topoisomerase recognition, restriction sites, vector, pcDNAGW-DT(sc), pENTR-DT(sc), pcDNA-DEST41, pENTR/D-TOPO, pENTR/SD/D-TOPO, pcDNA3.2/V5/GWD-TOPO, pcDNA6.2/V5/GWD-TOPO, and cloning.