

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number  
**WO 2004/035170 A3**

- (51) International Patent Classification<sup>7</sup>: **B01J 20/22**, C12N 9/00
- (21) International Application Number: PCT/US2003/033220
- (22) International Filing Date: 20 October 2003 (20.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/419,614 18 October 2002 (18.10.2002) US
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- (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, NI, 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 (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).
- Declaration under Rule 4.17:**  
— *of inventorship (Rule 4.17(iv)) for US only*
- 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:  
4 August 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.*



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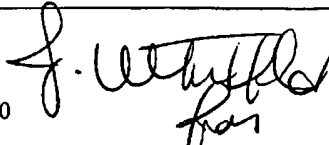
(54) Title: COMPOSITION FOR SEPARATING MOLECULES

(57) Abstract: The present invention provides compositions for the separation of metals or biomolecules such as polypeptides, nucleic acids, or endotoxins using modified solid supports.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/33220

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : B01J 020/22; C12N 009/00 US CL : 502/401,402,404,405,406,407,408,415 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 502/401,402,404,405,406,407,408,415,62,63,85,87; 435/174,176,177,178,180,182,183,188 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) USPT, USOC, and PGPB West text searches # 1 and #2		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- A	US 5,250,188 A (BRUENING et al.) 05 October 1993 (05.10.1993), abstract, column 3, line 15 to column 4, line 25, column 6, line 10 to column 7, line 42, examples and claims.	1-20, 32-33 ----- 21-31 and 34
Y --- A	US 6,106,724 A (MCCULLOCH et al.) 22 August 2000 (22.08.2000), abstract, column 4, line 26 to column 5, line 67, column 7, line 48 to column 8 line 19, and claims.	1-20, 32-33 ----- 21-31, 34
Y --- A	US 2002/0037532 A (REGNIER et al.) 28 March 2002 (28.03.2002), abstract, section [0149], and claims.	1-20, 32-33 ----- 21-31, 34
X --- A	US 5,217,866 A (SUMMERTON et al.) 08 June 1993 (08.06.1993), abstract, column 17, line 65 to column 18, line 56, Example 21.2 in column 45, and claims.	21-31, 34 ----- 1-20, 32-33
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Date of the actual completion of the international search 22 June 2005 (22.06.2005)	Date of mailing of the international search report 29 JUN 2005	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner of Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Joseph D. Anthony Telephone No. (571) 272-1700 	

## 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 --- A	US 2002/0058269 A (NOCK et al.) 16 May 2002 (16.05.2002), abstract, sections [0044] through [0047], and claims.	21-31, 34 ----- 1-20, 32-33
X --- A	ANDREAS THESS et al, SPECIFIC ORIENTATION AND TWO-DIMENTIONAL CRYSTALLIZATION OF THE PROTEASOME AT METAL-CHELATING LIPID INTERFACES, (The Journal of Biological Chemistry, Vol. 227, No. 39, September 27, 2002, pages 36321-36328).	21-31, 34 ----- 1-20, 32-33
X --- A	E. HOCHULI et al., NEW METAL CHELATE ADSORBENT SELECTIVE FOR PROTEINS AND PEPTIDES CONTACTING NEIGHBOURING HISTIDINE RESIDUES, (Journal of Chromatography, Vol. 411, 1987, pages 177-184.), see especially Fig. 2 and pages 180-181.	21-31, 34 ----- 1-20, 32-33
X --- A	JOSEPH G. ALTIN et al., SYNTHESIS OF THE CHELATOR LIPID NITRILOTRIACETIC ACID DITETRADECYLAMINE (NTA-DTDA) AND ITS USE WITH THE IAsys BIOSENSOR TO STUDY RECEPTOR-LIGAND INTERACTIONS ON MODEL MEMBRANES, (Biochemica et Biophysica Acta, Vol. 1513, 2001, pages 131-148), see especially abstract and pages 134-135	21-31, 34 ----- 1-20, 32-33
X --- A	US 2002/0040275 A (CRAVATT et al.) 04 April 2002 (04.04.2002), abstract and section [0094].	21-31, 34 ----- 1-20, 32-33
X,P --- A,P	US 6479,300 A (JIANG et al.) 12 November 2002 (12.11.2002), abstract, columns 3-4, and claims.	21-31, 34 ----- 1-20, 32-33
X,P --- A,P	US 2002/0182651 A (PATRICELLI) 05 December 2002 (05.12.2002), abstract, section [0056], and clams.	21-31, 34 ----- 1-20, 32-33