

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number
WO 2003/086278 A3

- (51) International Patent Classification⁷: **A61K 38/48**, 38/49, C12N 9/72
- (21) International Application Number:
PCT/US2003/010323
- (22) International Filing Date: 4 April 2003 (04.04.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/370.466 5 April 2002 (05.04.2002) US
60/414.202 27 September 2002 (27.09.2002) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:
US 60/370.466 (CON) Filed on 5 April 2002 (05.04.2002)
US 60/414.202 (CON) Filed on 27 September 2002 (27.09.2002)
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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, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, 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).
- 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:
22 September 2005
- (15) Information about Correction:
Previous Correction:
see PCT Gazette No. 22/2004 of 27 May 2004, Section II
- 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: INTRAPLEURAL SINGLE-CHAIN UROKINASE ALONE OR COMPLEXED TO ITS SOLUBLE RECEPTOR PROTECTS AGAINST PLEURAL ADHESIONS

(57) Abstract: The present invention relates to methods of preventing or decreasing the severity of scarring in a subject comprising: obtaining a pharmaceutical composition comprising a single chain urokinase plasminogen activator molecule (scuPA) or a scuPA mimetic; and administering the pharmaceutical composition to a subject; wherein scarring in the subject is either prevented or decreased relative to an amount of scarring that would be expected if the pharmaceutical composition were not administered to the subject. The invention also relates to methods of screening for compounds that prevent or decrease the severity of scarring in a subject.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/10323

A. CLASSIFICATION OF SUBJECT MATTER
 IPC(7) : A61K 38/48, 38/49; C12N 9/72
 US CL : 514/2; 435/183, 215
 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. : 514/2; 435/183, 215

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 --- Y	MUNSTER et al. Jet and Ultrasonic Nebulization of Single Chain Urokinase Plasminogen Activator (scu-PA). J. Aerosol. Med. (2000) Vol. 13, No. 4, pp. 325-333, especially abstract, p. 326, Col. 1; p.330, Col. 1, lines 9-13.	20, 23, 25, 26, 27, 28, 29 ----- 1-5, 7, 8, 10, 11, 14, 15, 21, 24
Y, P	ANTONY, VEENA B. Fibrinolysis in the Pleural Space. Am. J. Respir. Crit. Care Med. (Oct. 2002) Vol. 166, No. 7, pp. 909-910, especially p. 909, Col. 1, paragraph 3.	1-31
X, P	IDELL et al. Single-Chain Urokinase Alone or Complexed to its Receptor in Tetracycline-induced Pleuritis in Rabbits. Am. J. Respir. Care Med. October 2002, Vol. 166, pp. 920-926, especially p. 924-925.	1-31
X, P --- Y, P	MUNSTER et al. Effects of inhaled plasminogen activator on the balance between coagulation and fibrinolysis in traumatized pigs. Blood Coagul. Fibrinol. (October 2002) Vol. 13, pp. 591-601, especially p. 592, Col. 1, 1st paragraph; p. 592, Col. 2; p. 596, Col. 2; p. 599.	4, 15, 16, 27 ----- 1-3, 5, 7, 8, 10, 11, 14, 17, 20-21, 23-26, 28, 29

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

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Date of the actual completion of the international search: 18 June 2005 (18.06.2005)
 Date of mailing of the international search report: 28 JUL 2005

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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.
Y	HIGAZI et al. Enhancement of the Enzymatic Activity of Single-Chain Urokinase Plasminogen Activator by Soluble Urokinase Receptor. J. Biol. Chem. July 1995, Vol. 270, No. 29, pp. 17375-17380, especially abstract.	9, 28
X	BOUROS et al. Intrapleural Urokinase versus Normal Saline in the Treatment of Complicated Parapneumonic Effusions and Empyema. Am. J. Respir. Crit. Care Med. 1999, Vol. 159, pp. 37-42, especially abstract and p. 38, paragraph bridging Columns.	1-9, 12, 14, 20, 2122, 24, 25, 26, 27, 30, 31
X	STRANGE et al. Effects of Intrapleural Heparin or Urokinase on the Extent of Tetracycline-Induced Pleural Disease. 1995, Am. J. Respir. Crit. Care Med. Vol. 151, pp. 508-515, especially abstract, lines 5-6 and 15-18; and p. 309.	1-6, 8, 12, 13, 14-22, 24-27, 30, 31
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Y		10, 11, 29