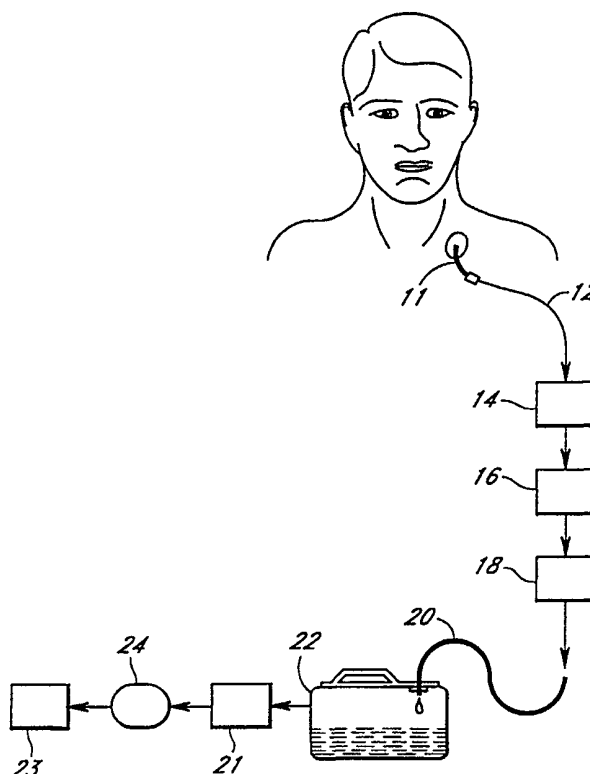




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(21) International Application Number: PCT/US98/21371 (22) International Filing Date: 9 October 1998 (09.10.98) (30) Priority Data: 08/949,055 10 October 1997 (10.10.97) US (71) Applicant: TRANSVIVO, INC. [US/US]; Suite 206, 1100 Lincoln Avenue, Napa, CA 94558 (US). (72) Inventors: GORSUCH, Reynolds, G.; 1119 State Lane, Yountville, CA 94599 (US). VENKAT, K.; 62 Kingsberry Drive, Somerset, NJ 08873 (US). (74) Agent: SIMPSON, Andrew, H.; Knobbe, Martens, Olson and Bear, LLP, 16th floor, 620 Newport Center Drive, Newport Beach, CA 92660 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 8 July 1999 (08.07.99)
(54) Title: APPARATUS AND METHOD FOR THE TREATMENT OF ACUTE AND CHRONIC RENAL DISEASE BY CONTINUOUS PASSIVE PLASMA ULTRAFILTRATION (57) Abstract An apparatus for treatment of acute, and chronic renal disease by continuous passive plasma ultrafiltration includes a plasmapheresis element comprising a catheter (11), a plasmapheresis filter element secured to the end of the catheter for being implanted in a patient's vena cava or jugular vein, a tube (12) secured to the catheter for receiving, for directing blood plasma, a one-way valve (14) for preventing fluid flow from the tube to the catheters, a container (22) for receiving, and collecting the blood plasma. The treatment of the patient is performed by implanting the catheter, the plasmapheresis filter element in a patient's vena cava, passing of blood plasma containing the toxins to be removed from the patient's blood supply through the filter element along the catheters, collecting, and discarding the collected blood plasma.		



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US98/21371

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :A61M 37/00

US CL :604/4

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. : 604/4, 7; 623/12; DIG. 24/162

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)

APS

Search Terms: filter, catheter, implant, dialysis hollow fiber, seiving coefficient, plasmapheresis

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,878,564 A (YAO et al) 22 April 1975, claims 7 and 8.	20, 32
Y	US 4,382,445 A (SOMMERS) 10 May 1983, col. 2 lines 31-59.	5-7, 26, 37
Y	US 4,493,696 A (ULDALL) 15 January 1985, col. 1 lines 25-31.	20, 32
A	US 4,552,552 A (POLASCHEGG et al) 12 November 1985, entire patent.	1, 20, 32
Y	US 4,769,037 A (MIDCALF) 06 September 1988, col. 2 lines 9-27.	1, 20, 32
A	US 4,898,669 A (TESIO) 06 February 1990, entire patent.	5-7, 26, 37



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US98/21371

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,002,054 A (ASH et al) 26 March 1991, col 4 lines 24-54, and claim 1.	1, 20, 32
A	US 5,053,023 A (MARTIN) 01 October 1991, col 1 lines 7-10 and 59-62; col. 2 lines 15-28; and col. 6 lines 46-49.	1, 20, 32
A	US 5,300,086 A (GORY et al) 05 April 1994, entire patent.	1-42
Y,P	US 5,735,809 A (GORSUCH) 07 April 98, entire patent.	1-42
A	US 5,755,790 A (CHEVILLON et al) 26 May, 1998, entire patent.	1, 20, 32
Y,P	US 5,785,700 A (OLSON) 28 July 1998, col. 1 lines 19-32, and claims 1 and 3.	1, 20, 32, 29