

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 May 2003 (30.05.2003)

PCT

(10) International Publication Number
WO 03/043537 A1

- (51) International Patent Classification⁷: **A61F 2/02**
- (21) International Application Number: PCT/US01/43227
- (22) International Filing Date:
19 November 2001 (19.11.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (for all designated States except US): **MARAN-TECH HOLDING COMPANY, LLC** [US/US]; One Turks Head Place, Suite 810, Providence, RI 02903 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **ANTELMAN, Marvin, W.** [US/IL]; 31/1 Sereni Street, Rehovot, IL 76229 (IL).
- (74) Agents: **SALTER, Elliot, A.** et al.; Salter, Michaelson, 321 South Main Street, Providence, RI 02903-7128 (US).
- (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, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, 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, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- 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.*



WO 03/043537 A1

(54) Title: IMPROVEMENTS IN CURING AIDS WITH TETRASILVER TETROXIDE MOLECULAR CRYSTAL DEVICES

(57) Abstract: A cure for treatment of AIDS which specifically represents an improvement over the instant inventor's U.S. Patent 5,676,977 entitled Method of curing aids with tetrasilver tetroxide molecular crystal devices. The improvement embodies curing non-terminal AIDS patients with 15 PPM of the tetroxide, as well as curing terminal patients by the administration of slow injections at 40 PPM so as to reduce side effects such as benign hepatomegaly. Only a single injection is required to achieve a cure.

1 marketed under the trademark Tetrasil, owned by Marantech Holding
2 Company, LLC, for which a U.S. registration is pending.

Disease Group	PATIENT			Medication Regimen	Date of Ag ₂ O ₄ (1994)	WBC		CD4		CD8	Hepatic megaly	Date of Death (1994)	Weight (lbs.)		Elevated Temp Pain Reported Fatigue	Response To Therapy
	Sex	Condition	Age			Initial	Final	Initial	Final				Initial	Final		
Candidiasis	M	p	28	Diffucan	5/5	1,200	4,200	41	-	221	Yes	6/11	82	76	T	Pos
	F	m	33	Diffucan	5/5	6,000	6,700	554	872	394	No	N/A	98	98	T	Pos
	F	m	33	Ketaconazole	5/27	2,600	3,850	248	181	951	Yes	N/A	123	123	T	Pos
	M	p	62	Ketaconazole	6/2	3,300	3,700	89	237	59	Yes	N/A	105	92	F	Pos
	F	m	31	Pentamidine	6/2	2,400	3,050	9	181	65	Yes	N/A	121	118	P	Pos
Wasting Syndrome	M	m	27		5/27	3,600	4,600	39	14	709	Yes	N/A	119	120	T	Pos
	M	m	28		5/27	2,750	-	10	-	60	Yes	7/19	121	119	T, F	No
	F	p	43		5/27	3,600	2,700	68	246	248	Yes	N/A	101	98	T, F	Pos
	M	m	19		5/10	3,850	5,400	137	36	48	Yes	N/A	103	106	T, F	Pos
	F	p	52		6/3	2,550	3,450	230	-	998	No	N/A	130	127	T	Pos

16 Table 1. Response of AIDS Patients to Single Administration of Tetrasilver Tetroxide at 40 ppm Blood Volume.

17 The aforesaid patent also called for effective treatment at optimum
18 Tetrasil concentrations of 40 PPM. It was thought that this concentration
19 might be too high for non-terminal and new AIDS cases. Accordingly,
20 arrangements were made for clinical studies to be performed by a contract
21 research organization named Exetec Lab SA in Honduras on non-terminal
22 AIDS patients, using slow infusion IV at 15 PPM of Tetrasil. All patients were
23 cured of AIDS, and none manifested hepatomegaly. Thereafter,
24 arrangements were made for toxicity tests in rats, in order to study the
25 parameters of intravenous injections. The tests were performed by Harlan
26 Biotech Israel on Sprague-Dawley rats. They concluded in a report dated
27 May 10, 2001 that with respect to Tetrasil concentrations of "48mg/kg
28 (corresponding to 800 ppm in blood)...administered by slow IV infusion and
29 corresponding to about 20x the anticipated applied therapeutic level (40 ppm
30 in blood), may be considered as a test article dose level not presenting an
31 acute toxic risk." With this information, arrangements were made for slow
32 infusion clinical studies with patients in advanced and/or terminal stages of

1 AIDS, in the Republic of South Africa. Eight patients exhibiting Wasting
2 Syndrome or p. carinii pneumonia etiologies of AIDS were tested with Tetrasil
3 at 40 PPM, administered in slow IV injections. All patients were cured of
4 AIDS, and only three patients manifested hepatomegaly.

5 3. Summary

6 The main object of this invention is to reduce the collateral side effects
7 to patients afflicted with AIDS who undergo Tetrasil therapy, and especially
8 the side effect of hepatomegaly. Another object of this invention is to quantify
9 the Tetrasil IV treatment of non-terminal AIDS patients.

10 4. Detailed Description of the Preferred Embodiment

11 This invention relates to improvements in the administration of Tetrasil
12 therapy against AIDS. In conventional Tetrasil therapy, as described in U.S.
13 Patent 5,676,977, the invention relates to a molecular scale device not only
14 capable of destroying the AIDS virus, but of purging the human bloodstream
15 of pathogens and restoring immunity to AIDS patients. Said molecular device
16 consists of a single crystal of tetrasilver tetroxide (Ag_4O_4). The crystal lattice
17 of this molecule has a unique structure since it is a diamagnetic
18 semiconducting crystal containing two monovalent and two trivalent silver
19 ions, which in effect are capable of "firing" electrons under certain conditions
20 which will destroy AIDS viruses, other pathogens and immune suppressing
21 moieties (ISM), not only through the electrocution mode, but also by a binding
22 process which occurs simultaneously with electron firing, namely, binding and
23 chelation of divalent silver, i.e., the resulting product of the electron transfer
24 redox that occurs when the monovalent silver ions are oxidized and the
25 trivalent ions are reduced in the crystal. The binding/chelation effect occurs
26 at active sites of the AIDS virus, pathogens and ISM. Because of the
27 extremely minute size of a single molecule of this crystal, several million of

1 these devices may be employed in concert to destroy a virus colony to purge
2 a life support system of ISM and pathogens with the consumption of only
3 parts per trillion of the crystal devices. Thus an optimum of 40 PPM of the
4 devices by weight of human blood was found to be sufficient to completely
5 obliterate AIDS.

6 The actual destruction of pathogens, ISM and the AIDS virus is
7 effectuated by injection of a suspension of these devices in distilled or
8 deionized water with a non-reacting electrolyte directly, i.e., intravenously, into
9 the bloodstream. A single injection is all that is required under these
10 conditions. Accordingly, humans injected in this manner, upon being
11 inspected after three weeks or more had elapsed and compared with similar
12 humans that had been given placebos, were completely cured of AIDS.

13 Despite the fact that this AIDS cure was highly effective, there were
14 side effects. Turning to Table I, it will be noted that eight out of the ten
15 patients treated suffered from hepatomegaly, four patients experienced
16 fatigue, and one suffered pain (a headache). This invention addresses itself
17 to the amelioration of these side effects. Furthermore, in the course of the
18 amelioration of said side effects, the invention concerns itself with the
19 quantification of a least side effect therapeutic dose of Tetrasil for non-
20 terminal patients. In essence, this invention concerns itself with the afore-
21 delineated improvements in Tetrasil therapy of AIDS patients.

22 5. Detailed Description of Specific Examples

23 Improvements in Tetrasil AIDS therapy were experimented with
24 clinically with variables of Tetrasil dosage concentration, type of patient, and
25 length of time administration of Tetrasil to ameliorate side effects without
26 compromising efficacy.

27 Other objects and features of the present invention shall become
28 apparent to those skilled in the art when the present invention is considered

1 in view of the accompanying examples. It should, of course, be recognized
2 that the accompanying examples illustrate preferred embodiments of the
3 present invention. It should of course be also recognized that those skilled
4 in the art can design an oral-administered tablet of tetrasilver tetroxide
5 optimized in a controlled release vehicle such as enteric coating for delivery
6 to the blood stream based on the preferred embodiments of the present
7 invention.

8 Example 1

9 Clinical testing was performed at Exetec Lab, SA, in Honduras. Thirty
10 AIDS patients were selected who were non-terminal from three etiological
11 AIDS groups, ten for each group, namely, Candidiasis, Wasting Syndrome,
12 and p. carinii pneumonia. Each patient was given an intravenous infusion of
13 15 PPM Tetrasil dispersed in a sodium acetate buffer solution administered
14 over a three-hour period. All patients experienced temperature elevation
15 within 48 hours of administering the Tetrasil, which was indicative that the
16 immune system was now functioning, along with the fact that all patients also
17 started to have dramatic increases in their white blood cell counts. At the end
18 of 30 days of observation, all patients were cured of AIDS. All patients
19 presenting Wasting Syndrome were completely cured of the Syndrome, the
20 average patient gaining approximately one-half pound per day. Three
21 patients were completely cured of their pneumonia, and all patients
22 presenting Candidiasis were cured of that affliction. Because the protocol
23 was changed from direct injection to slow IV infusion of the Tetrasil, there
24 were no side effects of hepatomegaly, pain or fatigue.

25 Example 2

26 During the summer of 2001, three patients in the Republic of South
27 Africa who presented advanced AIDS, in moderate and non-terminal
28 conditions, were each administered a single slow injection of Tetrasil. The

1 injection comprised 40 PPM of Tetrasil calculated on a blood volume estimate
2 for the patient, e.g., 200 mg. of Tetrasil for a patient having 5 liters of blood.
3 Said injection comprised Tetrasil and a sodium acetate buffer having a total
4 volume of 25-30 mL. Each patient was fitted with a catheter having a leur
5 interface with a syringe containing the injection. The injection was
6 administered intravenously at the rate of 1 mL per minute. Since Tetrasil is
7 insoluble in water, the finest particle size was utilized, and the administering
8 physician periodically removed the syringe from the catheter and shook the
9 Tetrasil/buffer mixture in order to keep suspended matter from settling,
10 thereafter continuing the injection. The first patient, a 41-year-old male with
11 Wasting Syndrome, was completely cured of AIDS and the Syndrome within
12 30 days. He gained 11 pounds during that period. After 60 days had
13 elapsed, he was running his business and was in excellent condition. The
14 next two patients were afflicted with the p. carinii etiology of AIDS, one a
15 female 38 years old, and the other a male age 34. Both were completely
16 cured of their AIDS and pneumonia. Both were examined after 30 and 60
17 days and were found to be cured, and normal after 30 days, having no signs
18 of remission on day 60.

19 Example 3

20 Four terminal AIDS patients presenting the etiology of Wasting
21 Syndrome were all treated with Tetrasil IV injections in the manner of
22 Example 2 by the same South African clinic. Two were females ages 29 and
23 30, the others, males ages 30 and 33. The latter requested a priest to give
24 him last rites. He was also suffering from pulmonary TB and Candida of the
25 esophagus. One week after taking his injection his state had changed from
26 drowsy to alert, and he had gained 11 pounds. By week two he had gained
27 22 pounds. He was found to be normal and fully recovered from AIDS and
28 collateral infections after 30 days. The other male was borderline terminal

1 and completely recovered of AIDS within 30 days, showing no signs of
2 remission after 60 days. Initially this patient was very depressed. On day 60
3 he was optimistic and looking for a job.

4 As for the females, the 29-year old was cured of AIDS within 30 days.
5 The 30-year old was initially in worse shape than the 29-year old. She had
6 a baby who died of AIDS and suffered from oral candida and skin
7 hyperpigmentation. She was constantly depressed. She required feeding by
8 caregivers because of collateral chest infections. By day 30 after the Tetrasil
9 injection she was cured of AIDS and was feeding herself and doing house
10 work. She was no longer depressed, and her skin had returned to its original
11 pigmentation. At day 60 she had no signs of remission. As for the patients
12 having a 30-day examination but no 60-day one, this was due to the fact that
13 their reports had been received shortly after their 30-day report, and the 60
14 days had not elapsed since receiving their single Tetrasil injection.

15 As this invention may be embodied in several forms without departing
16 from the spirit or essential characteristics thereof, the present embodiments
17 are therefore illustrative and not restrictive, since the scope of the invention
18 is defined by the appended claims rather than by the description preceding
19 them, and all changes that fall within the metes and bounds of the claims or
20 that form their functional as well as conjointly cooperative equivalents, are
21 therefore intended to be embraced by these claims.

1

Claims

- 2 1. An improved method in tetrasilver tetroxide AIDS therapy
3 comprising:
4 administering an IV injection of a therapeutically effective
5 amount of tetroxide against AIDS at a slow-enough rate so as to
6 minimize side effects of hepatomegaly and/or fatigue and/or pain in
7 contradistinction to a fast injection.
- 1 2. The method of claim 1 wherein the tetrasilver tetroxide is
2 dispersed in a carrier medium at a concentration corresponding to
3 5-20,000 PPM of patient blood volume.
- 1 3. The method of claim 2 where the concentration is from about
2 8-1200 PPM.
- 1 4. The method of claim 1 wherein collateral infections associated
2 with AIDS such as Candidiasis, p.c. pneumonia and Wasting Syndrome are
3 cured as well.
- 1 5. The method of claim 2, where the carrier medium is sodium
2 acetate buffer.
- 1 6. The method of claim 1 where the period of time of administering
2 the IV solution varies from 5-500 minutes.
- 1 7. The method of claim 6 where the time elapsed is from 10-180
2 minutes.

1 8. The method according to claim 1 where said silver tetroxide
2 dosage is administered by a controlled release vehicle to the blood stream
3 instead of as an IV injection.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/48227

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61F 2/02

US CL : 424/423

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. : 424/423

Documentation searched other than minimum documentation to the extent that such documents are included in the searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to classification
X	US, 5,676,977 A (ANTELMAN) 14 October 1997, see Abstract; column 2, lines 10-15, 53, and 65; column 4, lines 1-4; claims.	1-6

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

* Special categories of cited documents:	"I"	later document published after the international filing date or priority date and not in conflict with the application but cited to underpin the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier document published on or after the international filing date	"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
"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)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"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 09 JULY 2002	Date of mailing of the international search report 06 SEP 2002
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-8230	Authorized Officer <i>Carlos Azpuru</i> CARLOS AZPURU Telephone No. (703) 308-1235