

(19) World Intellectual Property
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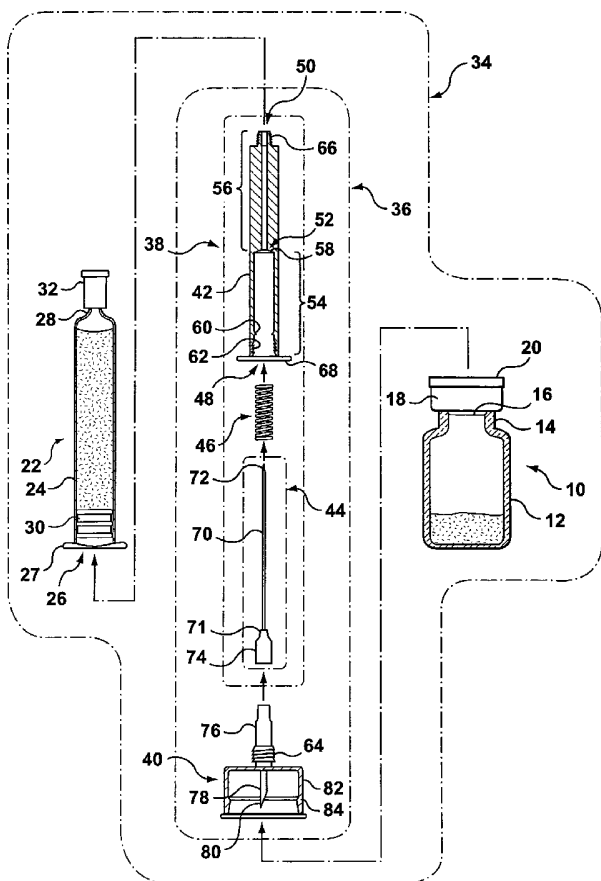
(43) International Publication Date
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number
WO 2004/064706 A3

- (51) International Patent Classification⁷: **A61J 1/00** L. [CA/CA]; 50 rue de Gaspé, Complex B-5, Bromont, Québec J2L 2N8 (CA).
- (21) International Application Number: PCT/CA2004/000064 (74) Agent: **BERESKIN & PARR**; 40 King Street West, 40th Floor, Toronto, Ontario M5H 3Y2 (CA).
- (22) International Filing Date: 22 January 2004 (22.01.2004)
- (25) Filing Language: English (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, 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.
- (26) Publication Language: English
- (30) Priority Data:
60/441,352 22 January 2003 (22.01.2003) US
60/518,345 10 November 2003 (10.11.2003) US
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- (75) Inventor/Applicant (for US only): **REYNOLDS, David,** [Continued on next page]

(54) Title: PHARMACEUTICAL DELIVERY SYSTEMS AND METHODS FOR USING SAME



(57) Abstract: The present invention provides for an assembly (36) for transferring a fluid between a vessel (22) having a body (24) with an open end (26) and a slidable piston (30) positioned within the body and a vial (10) having a penetrable seal. The assembly includes a housing (42) having first (48) and second (50) open ends, and a bore (52) extending between the first and second open ends. The housing is removably connectable to the piston. The assembly also includes a conduit having first and second ends and first and second apertures adjacent to the first and second ends, respectively. The conduit (70) is longitudinally slidable within the bore between a retracted position and an activated position. The assembly further includes a vial socket assembly (40) having a vial socket (82) for receiving and engaging at least a portion of the vial including the penetrable seal and a hollow piercing member (78) having a first open end in fluid communication with the conduit and a second open end for piercing the penetrable closure. The vial socket assembly is moveable longitudinally relative to the housing in concert with the conduit.

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Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(15) Information about Correction:

Previous Correction:

see PCT Gazette No. 43/2004 of 21 October 2004, Section II

Published:

— *with international search report*

(88) Date of publication of the international search report:
9 December 2004

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.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA2004/000064

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61J1/00

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)

IPC 7 A61J A61M

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 4 180 070 A (GENESE JOSEPH N) 25 December 1979 (1979-12-25) the whole document -----	1,2, 9-14,21 3-8, 15-20, 22-24
X A	US 5 393 497 A (SMEDLEY WILLIAM H ET AL) 28 February 1995 (1995-02-28) column 5, line 47 - column 6, line 30; figures 3-8 -----	1,2, 9-14,21 3-8, 15-20, 22-24
A	WO 00/13723 A (MEYER GABRIEL ; OWEN MUMFORD LTD (GB)) 16 March 2000 (2000-03-16) page 12, line 7 - page 13, line 12; figures 9A-9D ----- -/--	1-24

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"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)

"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

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search

18 June 2004

Date of mailing of the international search report

17. 09. 2004

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA2004/000064

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 569 191 A (MEYER GABRIEL) 29 October 1996 (1996-10-29) figures 1-4	1-24
A	----- GB 1 372 549 A (IMS LTD) 30 October 1974 (1974-10-30) figures 3,4 -----	1-24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/000064

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-24

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-24

Assembly for transferring a fluid between a vessel with a piston and a vial, comprising a housing, a conduit and a vial socket assembly.

2. claims: 25-28

Piston backstop for use with a syringe, comprising a bottom plate, a pair of top plate extensions, a pair of side walls and a retainer member.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA2004/000064

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4180070	A	25-12-1979	NONE
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