



- (51) International Patent Classification:
A61M 5/32 (2006.01)
- (21) International Application Number:
PCT/EP2011/068593
- (22) International Filing Date:
25 October 2011 (25.10.2011)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10188656.2 25 October 2010 (25.10.2010) EP
- (71) Applicant (for all designated States except US): **SANOFI-AVENTIS DEUTSCHLAND GMBH** [DE/DE]; Brüningstraße 50, 65929 Frankfurt (DE).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **HOFMANN, Verena** [DE/DE]; Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main (DE).

HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

8 November 2012

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,

(54) Title: INJECTION DEVICE HAVING A TWO-PART PLUNGER ROD

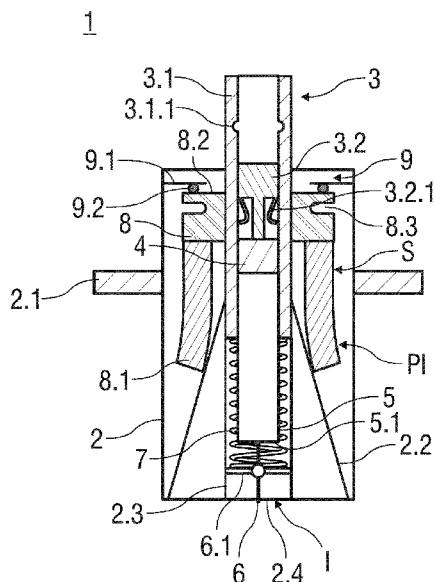


FIG 1

(57) Abstract: An injection device (1) comprises a housing (2), a plunger rod (3) and an injection needle (6) that is movably arranged within the housing (2). The plunger rod (3) is separated into a first plunger rod part (3.1) and a second plunger rod part (3.2). The injection needle (6) is movable from a first position (I) to a second position (II) by actuating the first plunger rod part (3.1). The injection needle (6) is retained within the housing (2) in the first position (I) and projects from the housing (2) in the second position (II). The second plunger rod part (3.2) couples to the first plunger rod part (3.1) when the injection needle (6) reaches the second position (II).

INTERNATIONAL SEARCH REPORT

International application No PCT/EP2011/068593

A. CLASSIFICATION OF SUBJECT MATTER INV. A61M5/32 ADD.		
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) 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 practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 10 2005 038933 A1 (L & N PLAST VERTRIEBS GMBH [DE]) 22 February 2007 (2007-02-22)	1,3,10, 12-14
A	paragraphs [0017], [0037], [0043]; figures 2,5,6 -----	11
X	US 2003/212362 A1 (ROSER BRUCE J [US] ROSER BRUCE J [GB]) 13 November 2003 (2003-11-13)	1,3,10, 12-14
A	paragraphs [0074], [0075]; figures 2-4 -----	11
X	WO 03/092771 A1 (PA KNOWLEDGE LTD; MARTIN JEFFREY [GB]; HUGHES MARTIN LAWRENCE [GB]) 13 November 2003 (2003-11-13)	1-7,9, 10,12-14
A	page 2, line 10 page 18, line 1 - line 25; claim 18; figure 6 ----- -/--	11
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
"A" document defining the general state of the art which is not considered to be of particular relevance	"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	
"E" earlier application or patent but published on or after the international filing date	"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	
"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)	"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	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"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	Date of mailing of the international search report	
10 September 2012	19/09/2012	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Messmer, Melitta	

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2011/068593

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	WO 2004/047891 A1 (TECPHARMA LICENSING AG [CH]; HOMMANN EDGAR [CH]; SCHERER BENJAMIN [CH]) 10 June 2004 (2004-06-10) page 7, line 24 - page 8, line 12 page 11, line 5 - line 18; figures 2-4 -----	1,3,4, 7-10, 12-14 11
A	WO 2005/113039 A1 (ABBOTT LAB [US]; FATHALLAH MARWAN [US]; GRABENKORT RICHARD W [US]) 1 December 2005 (2005-12-01) page 22, line 9 - page 30, line 11; figures 1-4 -----	1-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/EP2011/068593

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102005038933 A1	22-02-2007	AT 445431 T	15-10-2009
		DE 102005038933 A1	22-02-2007
		EP 1846067 A1	24-10-2007
		WO 2007020090 A1	22-02-2007

US 2003212362 A1	13-11-2003	AU 2003223720 A1	11-11-2003
		CA 2484817 A1	20-11-2003
		CN 1652834 A	10-08-2005
		EP 1506028 A1	16-02-2005
		KR 20050025179 A	11-03-2005
		RU 2300396 C2	10-06-2007
		US 2003212362 A1	13-11-2003
		WO 03095003 A1	20-11-2003
		ZA 200409474 A	28-06-2006

WO 03092771 A1	13-11-2003	AT 353021 T	15-02-2007
		AU 2003229994 A1	17-11-2003
		CA 2483935 A1	13-11-2003
		CN 1658919 A	24-08-2005
		DE 60311571 T2	15-11-2007
		DK 1503816 T3	23-04-2007
		EP 1503816 A1	09-02-2005
		ES 2279947 T3	01-09-2007
		IL 164969 A	03-11-2008
		JP 4413772 B2	10-02-2010
		JP 2005524447 A	18-08-2005
		MX PA04010861 A	14-07-2005
		NZ 536306 A	28-07-2006
		PT 1503816 E	30-04-2007
		SI 1503816 T1	31-08-2007
		US 2005124940 A1	09-06-2005
		WO 03092771 A1	13-11-2003

WO 2004047891 A1	10-06-2004	AU 2003280269 A1	18-06-2004
		CH 695926 A5	31-10-2006
		CN 1713929 A	28-12-2005
		WO 2004047891 A1	10-06-2004

WO 2005113039 A1	01-12-2005	AT 426422 T	15-04-2009
		EP 1747034 A1	31-01-2007
		EP 2060292 A2	20-05-2009
		ES 2323315 T3	13-07-2009
		WO 2005113039 A1	01-12-2005
