

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 September 2007 (07.09.2007)

PCT

(10) International Publication Number
WO 2007/101223 A3

(51) International Patent Classification:
A61B 5/05 (2006.01)

(21) International Application Number:
PCT/US2007/062915

(22) International Filing Date:
27 February 2007 (27.02.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/365,169 28 February 2006 (28.02.2006) US

(71) Applicant (for all designated States except US): **ABBOTT DIABETES CARE, INC.** [US/US]; 1360 South Loop Road, Alameda, CA 94502 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HOSS, Udo** [DE/US]; 344 Westline Dr., Apt. C205, Alameda, CA 94501 (US). **LIU, Zenghe** [CN/US]; 101 Payot Court, Alameda, CA 94502 (US). **FELDMAN, Benjamin, J.** [US/US]; 5830 Colby Street, Oakland, CA 94618 (US).

(74) Agent: **OH, Kuni**; Jackson & Co., LLP, 6114 La Salle Ave., #507, Oakland, CA 94611-2802 (US).

(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, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), 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, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

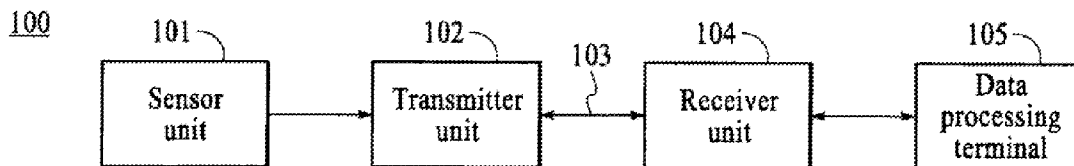
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
2 May 2008



WO 2007/101223 A3

(54) Title: ANALYTE SENSORS AND METHODS OF USE



(57) Abstract: An analyte sensor system including a substrate, a first electrode disposed on a first surface of the substrate, a second electrode disposed on a second surface of the substrate, a third electrode provided in electrical contact with at least one of the first or second electrodes, where at least a portion of the first electrode and the second electrode are subcutaneously positioned in a patient, and where the third electrode is substantially entirely positioned external to the patient, and corresponding methods are provided.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/62915

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61B 5/05 (2007.10) USPC - 600/345 According to International Patent Classification (IPC) or to both national classification and IPC</p>												
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC8 : A61B 5/05 (2007.10) USPC : 600/345</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC8 : A61B 5/00 (2007.10) USPC : 600/347, 600/365, 600/372</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST (PGPB,USPT,EPAB,JPAB), Google Scholar Search Terms : subcutaneous, in vivo, transcutaneous, ex vivo, on skin, external, electrode, anode, cathode, working, reference, counter, guard, analyte, glucose, sensor, sensing</p>												
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>US 6,175,752 B1 (SAY et al) 16 January 2001 (16.01.2001) see especially col 5, ln 28-32, col 6, ln 52-66, col 7, ln 14 to col 8, ln 30, col 9, ln 10-17, col 15, ln 1-31, col 34, ln 28 to col 35, ln 61, col 36, ln 54 to col 37, ln 4 and col 47, ln 33-47</td> <td>1-16</td> </tr> </tbody> </table> <p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/></p> <p>* 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 application or patent 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</p> <table border="1"> <tr> <td>Date of the actual completion of the international search 23 October 2007 (23.10.2007)</td> <td>Date of mailing of the international search report 04 MAR 2008</td> </tr> <tr> <td>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</td> <td>Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</td> </tr> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 6,175,752 B1 (SAY et al) 16 January 2001 (16.01.2001) see especially col 5, ln 28-32, col 6, ln 52-66, col 7, ln 14 to col 8, ln 30, col 9, ln 10-17, col 15, ln 1-31, col 34, ln 28 to col 35, ln 61, col 36, ln 54 to col 37, ln 4 and col 47, ln 33-47	1-16	Date of the actual completion of the international search 23 October 2007 (23.10.2007)	Date of mailing of the international search report 04 MAR 2008	Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
X	US 6,175,752 B1 (SAY et al) 16 January 2001 (16.01.2001) see especially col 5, ln 28-32, col 6, ln 52-66, col 7, ln 14 to col 8, ln 30, col 9, ln 10-17, col 15, ln 1-31, col 34, ln 28 to col 35, ln 61, col 36, ln 54 to col 37, ln 4 and col 47, ln 33-47	1-16										
Date of the actual completion of the international search 23 October 2007 (23.10.2007)	Date of mailing of the international search report 04 MAR 2008											
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774											