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(71) Applicant (for all designated States except US): **RELIA DIAGNOSTIC SYSTEMS, INC.** [US/US]; 1700 Owens Street, Suite 515, San Francisco, CA 94158 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RUTTER, William, J.** [US/US]; 1700 Owens Street, Suite 515, San Francisco, CA 94158 (US). **HAN, Jang, H.** [US/US]; 1700 Owens Street, Suite 515, San Francisco, CA 94158 (US). **KWON, Taewoo** [KR/US]; 1700 Owens Street, Suite 515, San Francisco, CA 94158 (US).

(74) Agent: **BENNETT, Dennis, A.**; Global Patent Group, LLC, 1005 North Warson Road, Suite 201, St. Louis, MO 63132 (US).

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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:

21 April 2011

(54) Title: SYSTEMS AND METHODS FOR DETERMINING THE PERCENTAGE OF GLYCATED HEMOGLOBIN

(57) Abstract: Described herein are systems and methods for assaying a sample to quantitatively determine the percentage of glycated hemoglobin in the sample.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/035648**A. CLASSIFICATION OF SUBJECT MATTER****G01N 33/72(2006.01)i, G01N 33/533(2006.01)i, G01N 33/538(2006.01)i**

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)

G01N 33/72; H01L 21/302; H01L 21/304; G11B 7/24; G01N 33/558; G01N 33/53

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords:glycated hemoglobin, antibody, label, marker, boronic acid, chromatographic strip

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PARK, J. et al., "Selective Electrochemical Sensing of Glycated Hemoglobin (HbA1c) on Thiophene-3-Boronic Acid Self-Assembled Monolayer Covered Gold Electrodes", Chem., 2008, vol.80, pp.8035-8044 See abstract	1-4,8-11,24-32
A	US 2008-0096230 A1 (YUAN CHONG-SHENG et al.) 24 April 2008 See abstract, claim 1	1-4,8-11,24-32
A	US 2005-0014249 A1 (STAIMER NORBERT et al.) 20 January 2005 See claim 26	1-4,8-11,24-32
A	KR 10-0662021 B1 (INFOPIA CORPORATION) 27 December 2006 See abstract, claims 1,5,13	1-4,8-11,24-32
A	US 5882935 A1 (HIRAI; KIKUO et al.) 16 March 1999 See abstract, claim 1	1-4,8-11,24-32

☐ Further documents are listed in the continuation of Box C.☒ 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

"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 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

28 FEBRUARY 2011 (28.02.2011)

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Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

CHO, Hyun Kyung

Telephone No. 82-42-481-5629



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2010/035648**Box No. 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.: 7, 18-22,
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:
Claims 7, 18-22 is dependent on claims 6 or 8 which is multiple dependent claim.
3. ☒ Claims Nos.: 5-6, 12-17, 23, 33-35
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. 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:

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.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0096230 A1	24.04.2008	None	
US 2005-0014249 A1	20.01.2005	None	
KR 10-0662021 B1	27.12.2006	US 2007-0154351 A1	05.07.2007
US 5882935 A1	16.03.1999	EP 0708337 A2	24.04.1996
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		JP 03-150857 B2	19.01.2001
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		JP 3150857 B2	26.03.2001