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(71) Applicant *(for all designated States except US)*: **INDEVR, INC.** [US/US]; 2100 Central Avenue, Suite 106, Boulder, Colorado 80301 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **ROWLEN, Kathy, L.** [US/US]; 2100 Central Avenue, Suite 106, Boulder, Colorado 80301 (US).

(74) Agent: **KINNEAR, Brian**; PO Box 8749, Denver, Colorado 80201 (US).

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4 April 2013

(54) Title: LOW DENSITY MICROARRAYS FOR VACCINE RELATED PROTEIN QUANTIFICATION, POTENCY DETERMINATION AND EFFICACY EVALUATION

(57) Abstract: Methods for the quantification of influenza HA proteins and anti-influenza antibodies for the fields of vaccine-related protein quantification, potency determination, and efficacy evaluation are provided. According to the technology, quantification is achieved by providing capture agents attached to an array in a series of decreasing concentrations. Serial dilutions of a reference material also may be introduced. The reference material within each solution binds to the capture agents on the array and is labeled with a label agent capable of producing a detectable signal used to construct a calibration curve. A target material of unknown concentration is introduced to a separate identical array, and the target material binds to the capture agents and also is labeled by a label agent to produce a detectable signal. The calibration curve based on the reference material is then utilized to determine the concentration of the target material without the need to perform replicate experiments.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

G01N 33/53(2006.01)i, G01N 33/68(2006.01)i, G01N 33/543(2006.01)i, G01N 33/52(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 33/53; G01N 33/563; G01N 33/533; B01L 3/00; C12Q 1/68; G01N 33/68; C07K

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: KOMPASS, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2010-0074743 A (CHUNGBUK NATIONAL UNIVERSITY INDUSTRY-ACADEMIC COOPERATION FOUNDATION) 02 July 2010	1-9,16,17
A	See abstract; paragraphs [0001]-0054]; claims 1; figures 1a-6b.	10-15,18-21
A	WO 2002-25287 A2 (OXFORD GLYCOSCIENCES (UK) LTD.) 28 March 2002 See entire document.	1-21
A	WO 2005-007677 A2 (THE INSTITUTE FOR SYSTEMS BIOLOGY) 27 January 2005 See entire document.	1-21
A	WO 2000-04389 A2 (ZYOMYX INC.) 27 January 2000 See entire document.	1-21
A	US 2009-0124512 A1 (ROWLEN, K. L. et al.) 14 May 2009 See entire document.	1-21

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

☒ See patent family annex.

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"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	Date of mailing of the international search report
28 JANUARY 2013 (28.01.2013)	**29 JANUARY 2013 (29.01.2013)**

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Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan City, 302-701, Republic of Korea

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Authorized officer

Inho Han

Telephone No. 82-42-481-3483

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Information on patent family members

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