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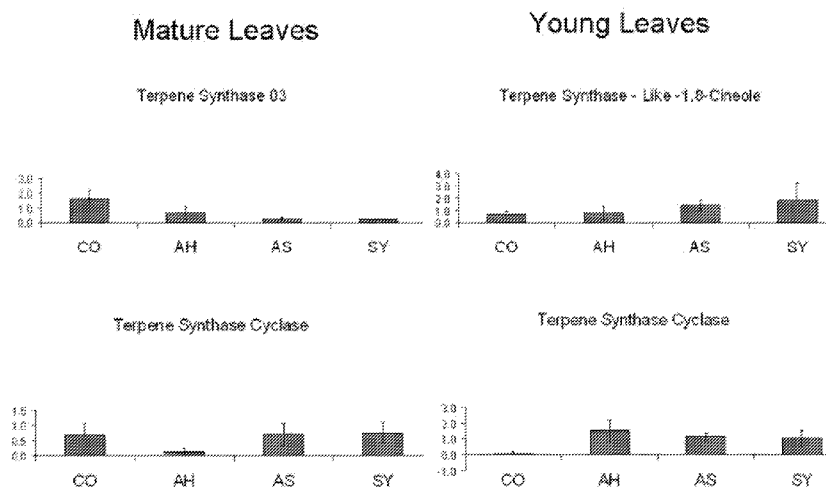
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[Continued on next page]

(54) Title: DISEASE DETECTION IN PLANTS

Figure 13



(57) Abstract: The present disclosure relates to disease detection in plants. In particular, it provides methods, compositions, and devices for the detection of diseases in plants.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *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))*

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A. CLASSIFICATION OF SUBJECT MATTER**G01N 33/48(2006.01)i, G01N 27/62(2006.01)i, H01J 49/26(2006.01)i, C12Q 1/68(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 33/48; C07H 21/04; C12P 19/34; A01N 65/08

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: Huanglongbing, citrus, Citrus tristeza virus(CTV), volatile chemical compound, and nucleic acid molecules

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATT, J. M. et al., 'Responses of the Asian citrus psyllid to volatiles emitted by the flushing shoots of its rutaceous host plants', Environ Entomol., April 2010, Volume 39, Issue 2, pages 618-624	1-6,8-13
A	See abstract; page 619, col. 1, para. 2 - col. 2, para. 4; page 620, col. 1, para. 2; page 621, col. 2, para. 1; tables 2-4.	14-18
A	ROUSEFF, RUSSELL L. et al., 'Sulfur Volatiles in Guava (Psidium guajava L.) Leaves: Possible Defense Mechanism', J. Agric. Food Chem., 2008, Volume 56, pages 8905-8910	1-6,8-18
	See abstract; page 8906, col. 1, para. 1 - page 8907, col. 2, para. 1; page 8909, col. 1, para. 3 - col. 2, para. 1; table 2.	
A	US 2010-0009002 A1 (SIMONETTA, ROCCO) 14 January 2010	1-6,8-18
	See abstract; paras. 30-325; claims 1-2, 4, 17.	
A	US 06140046 A (NIBLETT, CHARLES) 31 October 2000	1-6,8-18
	See abstract; col. 2, lines 55-67; col. 3, lines 14-51; col. 4, lines 1-16; claims 1, 4, 7.	



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

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"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

09 OCTOBER 2012 (09.10.2012)

Date of mailing of the international search report

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Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/030003

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WANG, Z. et al., 'Development and application of molecular-based diagnosis for 'Candidatus Liberibacter asiaticus' , the causal pathogen of citrus huanglongbing', Plant Pathology. October 2006, Volume 55, Issue 5, pages 630-638 See abstract; page 631, col. 1, para. 2 - page 633, col. 2, para. 4; page 636, col. 1, para. 2 - page 637, col. 1, para. 4.	1-6,8-18

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/030003Patent document
cited in search reportPublication
datePatent family
member(s)Publication
date

US 2010-0009002 A1

14.01.2010

None

US 06140046 A

31.10.2000

US 6869761 B1

22.03.2005

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/030003**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.:
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.: 7
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.