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— 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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(54) Title: MELON PLANTS COMPRISING TETRA-CIS-LYCOPENE

(57) Abstract: A Cucumis melo plant is disclosed, wherein a flesh of a fruit of the plant comprises tetra-cis-lycopene (pro-lycopene). Methods of generating same are also disclosed.



WO 2011/101855 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 11/00177

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A01H 5/00; C12N 5/04 (2011.01)

USPC - 800/309

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)

USPC: 800/309

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

USPC: 800/309; 800/282, 800/278, 800/279, 435/410 (text search)

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

Electronic data bases: PubWEST (EPAB, USPT, PGPB, JPAB); Google Scholar

Search terms: Cucumis melo (melon), tetra-cis-lycopene (pro-lycopene), all-trans-lycopene, carotenoid isomerase (CRTISO), zeta carotene desaturase (ZDS), carotenoid desaturation, siRNA, antisense, ribozyme, loss of function mutation ovule, plant, seed, F1

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2005/0022269 A1 (HIRSCHBERG et al.) 27 January 2005 (27.01.2005). Especially para [0039], [0045], [0186], [0206], [0207], [0208], [0225], [0232], pg 24 table 1.	1-31
Y — A	TADMOR et al., Induced mutagenesis to augment the natural genetic variability of melon. Isr J Plant Sci, 2007, Vol 55, Pages 159-169. Especially abstract; pg 162 col 2 para 2, pg 166 fig 11G.	1-31 ----- 32, 33
Y	US 6,198,022 B1 (DE BOTH et al.). 6 March 2001 (06.03.2001). Especially col 1 ln 9-14, col 3 ln 31-33, col 12 ln 32-34.	21, 22
A	BURRI et al., Tangerine tomatoes increase total and tetra-cis-lycopene isomer concentrations more than red tomatoes in healthy adult humans. Int J Food Sci Nutr., 10 April 2008, Vol 10, Pages 1-16. Abstract only.	1, 6
X,P	PORTNOY et al., Molecular Characterization Of A Melon Carotenoid Isomerase (CRTISO) EMS Induced Mutant. Plant and Animals XIX Conference abstract P756, 15 January 2011 [online]. [Retrieved 24 August 2011]. Retrieved from the internet: <URL: http://www.intl-pag.org/19/abstracts/P07b_PAGXIX_756.html >. Especially abstract.	32,33

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“&” document member of the same patent family

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International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EZURA et al. Research tools for functional genomics in melon (<i>Cucumis melo</i> L.): Current status and prospects. <i>Plant Biotechnology</i> , 25 September 2009, Vol 26, No 4, Pages 359-368. Especially pg 363 left col para 4 continued to right col para 3.	1-31
A	US 2009/0007301 A1 (WINTZ et al.). 1 January 2009 (01.01.2009). Especially Para [0105], [0187], claim 18.	1-31