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(54) Title: USE OF TOBACCO MILD GREEN MOSAIC VIRUS FOR WEED CONTROL

(57) Abstract: Tobacco mild green mosaic virus (TMGMV) induces a lethal, systemic, hypersensitive response in Tropical Soda Apple (TSA). TMGMV is a member of the tobamoviruses, which consist of mechanically transmitted, rod-shaped, RNA viruses that are strictly plant pathogens.

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x	M.PETTERSEN ET AL.: "Tobacco mi		,	1-17		
	mosaic tobamovirus strain U2 causes a lethal hypersensitive response in Solanum					
	viarum Dunal (tropical soda apple					
	ABSTR.MEET.WEED SCI.SOC.AM,					
	vol. 40, 2000, page 84 XP00801650 abstract	U8				
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X Furth	her documents are listed in the continuation of box C.	χ Patent family	members are listed	in annex.		
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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.				
X	M.PETTERSEN: "Tobacco mild green mosaic virus (TMGMV) induces a lethal hypersensitive response in tropical soda apple (Solanum viarum Dunal)" PHYTOPATHOLOGY, vol. 91, no. 6 supplement, June 2001 (2001-06), pages S71-S72, XP008016494 abstract	1-5,8-15				
Υ		1-17				
X	R.CHARUDATTAN ET AL.: "Biological control of tropical soda apple with plant pathogens and integration of biological control with other management options" ABSTR.MEET.WEED SCI.SOC.AM., vol. 41, 2001, page 80 XP008016509 abstract	1-17				
O,X	STUDENTS OF THE PLANT PATHOLOGY DEPARTMENT: "TheNEWSLETTEROfthePLANTPATHOLOGYDEPARTMEN TattheUNIVERSITYOFFLORIDA" PLPNEWS, vol. 5 (1), February 2001 (2001-02), XP002239454 page 3, column 2, paragraph 1	1-17				
O,X	STUDENTS OF THE PLANT PATHOLOGY DEPARTMENT: "TheNEWSLETTEROfthePLANTPATHOLOGYDEPARTMEN TattheUNIVERSITYOFFLORIDA" PLP NEWS, vol. 5 (2), June 2001 (2001-06), XP002239455 page 3, column 2, paragraph 2 - paragraph 3	1-17				
O,X	"SESSION AND ORAL PRESENTATIONS"  APS.SON.MSA JOINT MEETING AUGUST 25-29, 2001, 'Online! XP002239456  Retrieved from the Internet: <url:http: 2001="" meetings="" oral_sessions.htm="" www.apsnet.org=""> 'retrieved on 2003-04-22! 1-4:15 pm 250E / APS Oral Presentations / Biology of Plant Pathogens: Viruses I 2:30 M.S.Pettersen et al.:"Tobacco miuld green mosaic virus induces a lethal hypersensitive response in tropical soda apple" </url:http:>	1-17				

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT  Category Citation of document, with indication, where appropriate, of the relevant passages	
Category Citation of document, with indication, where appropriate, of the relevant passages	· <del></del>
	Relevant to claim No.
A US 4 162 912 A (CHARUDATTAN RAGHAVAN) 31 July 1979 (1979-07-31) column 1, line 41 - line 51 column 2, line 46 - line 49 claim 5	Relevant to claim No. 6,7,16, 17

mormation on patent ramily members

Inten lat Application No
PCT/US 02/38063

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4162912 A	31-07-1979	NONE	