



(51) International Patent Classification:

A61K 36/04 (2006.01) A61P 1/00 (2006.01)
A23K 1/00 (2006.01)

(21) International Application Number:

PCT/AU2015/000030

(22) International Filing Date:

21 January 2015 (21.01.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2014900182 21 January 2014 (21.01.2014) AU

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

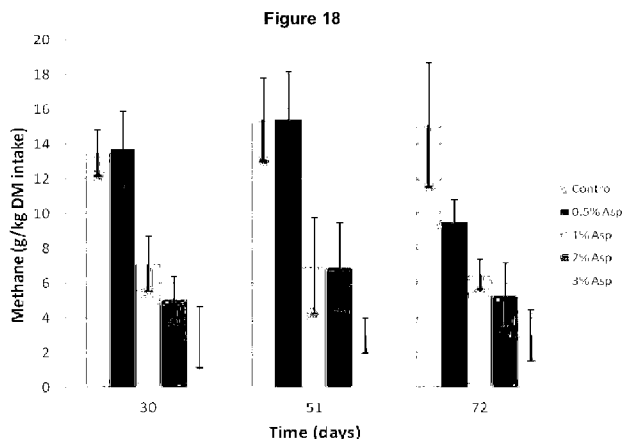
Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:

14 July 2016

(54) Title: METHOD FOR REDUCING TOTAL GAS PRODUCTION AND/OR METHANE PRODUCTION IN A RUMINANT ANIMAL



(57) Abstract: The present application relates to animal feed and feed supplements comprising red marine macroalgae species. The present application also relates to methods of reducing total gas production and/or methane production in a ruminant animal by administering red marine macroalgae species, or by administering feed or feed supplements comprising red marine macroalgae.

WO 2015/109362 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2015/000030

A. CLASSIFICATION OF SUBJECT MATTER

A61K 36/04 (2006.01) A23K 1/00 (2006.01) A61P 1/00 (2006.01)

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)

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

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

Epuboc, WPI, Caplus, biosis, medline, agricola; Keywords - rhodophyta, red marine algae, red seaweed, feed, supplement, food, nutrition, ruminant, cow, sheep, methane, gas, rumen

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	

 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	"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	
"E" earlier application or patent but published on or after the international filing date	"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	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"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	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search
15 April 2015Date of mailing of the international search report
15 April 2015

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INTERNATIONAL SEARCH REPORT		International application No.
C (Continuation).		PCT/AU2015/000030
DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2006/105634 A1 (HL DISTRIBUTION COMPANY) 12 October 2006 [0021] and [0032], example 2 and claims	15-19
X	US 2011/0287132 A1 (EINO et al) 24 November 2011 [0029], [0046], [0049], Example 1 and claims	15-19
X	DUBOIS, B. et al "Effect of Tropical Algae as Additives on Rumen <i>in vitro</i> Gas Production and Fermentation Characteristics". American Journal of Plant Sciences, No. 4, page 34-43. Published online December 2013. Whole Document, abstract especially	1-20
X	RAI, S.N. et al "chemical composition and mineral profiles of certain sea wweds of Indian coast." Indian Journal of Animal Sciences, Vol. 78, No. 11, page 1278-1280. November 2008. Whole Document	15-19
X	WANG, J.K. et al "Feasibility of <i>Porphyra haitanensis</i> as protein source for ruminants." Journal of Animal and Feed Sciences, Vol. 16, Suppl. 2, page 278-283. 2007. Whole Document	1-20
P,X	KINLEY, R.D. et al "In vitro evaluation of feeding North Atlantic Stormtoss seaweeds on ruminal digestion." Journal of Applied Phycology, published online 24 December 2014. http://link.springer.com/article/10.1007%2Fs10811-014-0487-z# Whole Document	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2015/000030

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document/s Cited in Search Report		Patent Family Member/s	
Publication Number	Publication Date	Publication Number	Publication Date
WO 2006/105634 A1	12 October 2006	EP 1874141 A1	09 Jan 2008
		US 2006223730 A1	05 Oct 2006
		US 2009053324 A1	26 Feb 2009
		US 2010278940 A1	04 Nov 2010
US 2011/0287132 A1	24 November 2011	CA 2654022 A1	13 Dec 2007
		EP 2037757 A1	25 Mar 2009
		EP 2037757 B1	19 Jun 2013
		US 2007280998 A1	06 Dec 2007
		WO 2007140589 A1	13 Dec 2007

End of Annex

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

Form PCT/ISA/210 (Family Annex)(July 2009)