

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 November 2007 (29.11.2007)

PCT

(10) International Publication Number
WO 2007/136810 A3

(51) International Patent Classification:

A61K 31/555 (2006.01) C07F 13/00 (2006.01)
A61K 31/28 (2006.01) C07F 1/08 (2006.01)
A61K 31/315 (2006.01)

(21) International Application Number:

PCT/US2007/012023

(22) International Filing Date: 18 May 2007 (18.05.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/437,871 18 May 2006 (18.05.2006) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

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

22 January 2009

(54) Title: COMPOSITIONS AND METHODS FOR ENHANCING MINERAL LEVELS IN ANIMALS WITH REDUCED ENVIRONMENTAL IMPACT

(57) Abstract: A method of enhancing a mineral level in an animal with reduced environmental impact can comprise orally administering a metal amino acid chelate to an animal, wherein the amino acid to metal molar ratio of the metal amino acid chelate is from about 1:1 to 4:1. The metal can contribute to a mineral level within the blood and tissues of the animal that is effective for stimulating growth of the animal to a greater degree than would be realized by administering the same amount of metal in the form of an inorganic metal salt. Additionally, the amount of the metal excreted in the feces of the animal can be less than would be present when administering the same amount of metal in the form of the inorganic metal salt. The metal amino acid chelate can also serve as a source highly bioavailable amino acids, so that the excretion of nitrates by the animal may be reduced while still promoting efficient growth.



WO 2007/136810 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US20/07012023

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: A61K 31/555(2006.01);A61K 31/28(2006.01);A61K 31/315(2006.01);C07F 13/00(2006.01);C07F 1/08(2006.01)

 USPC: 514/6,18,19,419,428,492,493,499,502
 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)
 U.S. : 514/6,18,19,419,428,492,493,499,502

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 J. Nutrition, 124: 2572S-2574S, 19914

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,863,898 (Ashmead et al) 05 September 1989 (05.09.1989), sbstract and column 3, lines 28-40; column 5, lines 10-35	1-33
Y	US 2004/0077714 A1 (Abdel-Menem et al) 22 April 2004 (22.04.2004), see abstract and paragraph 0016,0022,0030, 0069.	1-33

Further documents are listed in the continuation of Box C. See patent family annex.

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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	"&"	document member of the same patent family

Date of the actual completion of the international search 15 May 2008 (15.05.2008)	Date of mailing of the international search report 07 NOV 2008
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