

(19)



(11)

EP 4 299 061 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
28.02.2024 Bulletin 2024/09

(51) International Patent Classification (IPC):
A61K 31/155 ^(2006.01) **A61K 31/436** ^(2006.01)
A61K 31/573 ^(2006.01) **A61P 35/00** ^(2006.01)
A61K 38/28 ^(2006.01) **A61P 3/10** ^(2006.01)
A61P 43/00 ^(2006.01)

(43) Date of publication A2:
03.01.2024 Bulletin 2024/01

(21) Application number: **23209796.4**

(52) Cooperative Patent Classification (CPC):
A61K 31/155; A61K 38/28; A61P 3/10;
A61P 35/00; A61P 43/00

(22) Date of filing: **18.04.2016**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR

(72) Inventors:

- **LONGO, Valter D.**
Playa del Rey, 90293 (US)
- **DI BIASE, Stefano**
LOS ANGELES, 90015 (US)

(30) Priority: **16.04.2015 US 201562148451 P**

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
16780985.4 / 3 283 073

(74) Representative: **GPI Brevets**
1330, rue Guillibert de la Lauzière
EuroParc de Pichaury
Bât B2
13856 Aix en Provence Cedex 3 (FR)

(71) Applicant: **University of Southern California**
Los Angeles, CA 90015 (US)

(54) **FASTING MIMICKING DIET (FMD) AND GLUCOSE LOWERING DRUGS PROTECT NORMAL CELLS AND GENERATE CANCER SENSITIZING CONDITIONS IN RESPONSE TO STANDARD AND HIGH GLUCOSE CONDITIONS INDUCED BY RAPAMYCIN AND DEXAMETHASONE**

(57) A method comprising administering a fasting mimicking diet for a first time period and administering metformin during the re-feeding period.

EP 4 299 061 A3



EUROPEAN SEARCH REPORT

Application Number

EP 23 20 9796

5

DOCUMENTS CONSIDERED TO BE RELEVANT

10

15

20

25

30

35

40

45

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	<p>CHERYL A. KRONE ET AL: "Controlling Hyperglycemia as an Adjunct to Cancer Therapy", INTEGRATIVE CANCER THERAPIES, vol. 4, no. 1, 1 March 2005 (2005-03-01), pages 25-31, XP055508931, US ISSN: 1534-7354, DOI: 10.1177/1534735404274167 * abstract * * Section: Glycemic Control as an Adjunct to Cancer Therapy * * Section: Mechanism for the Beneficial Effects of Blood Glucose Control in Cancer *</p>	1-18	<p>INV. A61K31/155 A61K31/436 A61K31/573 A61P35/00 A61K38/28 A61P3/10 A61P43/00</p>
A	<p>ERIC C. WOOLF ET AL: "The ketogenic diet for the treatment of malignant glioma", JOURNAL OF LIPID RESEARCH, vol. 56, no. 1, 6 February 2014 (2014-02-06), pages 5-10, XP055508934, US ISSN: 0022-2275, DOI: 10.1194/jlr.R046797 * abstract * * page 7, column 1, paragraph 1 * * page 8, column 1, paragraph 2 *</p>	1-18	<p>TECHNICAL FIELDS SEARCHED (IPC) A61K</p>
X,P	<p>WO 2015/134837 A2 (UNIV SOUTHERN CALIFORNIA [US]) 11 September 2015 (2015-09-11) * paragraphs [0041], [0043], [0047], [0056] *</p>	1-18	
X,D	<p>WO 2011/050302 A2 (UNIV SOUTHERN CALIFORNIA [US]; LONGO VALTER D [US]; LEE CHANGHAN [US]) 28 April 2011 (2011-04-28) * experiment 1-3 * * claims 1, 9, 10, 12, 23 *</p>	1-18	

The present search report has been drawn up for all claims

2

50

Place of search The Hague	Date of completion of the search 17 January 2024	Examiner Strack, Eberhard
-------------------------------------	--	-------------------------------------

55

EPO FORM 1503 03:82 (P04C01)

CATEGORY OF CITED DOCUMENTS
 X : particularly relevant if taken alone
 Y : particularly relevant if combined with another document of the same category
 A : technological background
 O : non-written disclosure
 P : intermediate document

T : theory or principle underlying the invention
 E : earlier patent document, but published on, or after the filing date
 D : document cited in the application
 L : document cited for other reasons
 & : member of the same patent family, corresponding document

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 23 20 9796

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-01-2024

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2015134837 A2	11-09-2015	AU 2015227009 A1	15-09-2016
		AU 2020200726 A1	20-02-2020
		CA 2941667 A1	11-09-2015
		CN 106456631 A	22-02-2017
		EP 3113776 A2	11-01-2017
		ES 2846153 T3	28-07-2021
		JP 6859567 B2	14-04-2021
		JP 7038432 B2	18-03-2022
		JP 2017513460 A	01-06-2017
		JP 2021020926 A	18-02-2021
		KR 20160127076 A	02-11-2016
		RU 2016136638 A	06-04-2018
		WO 2015134837 A2	11-09-2015
WO 2011050302 A2	28-04-2011	AU 2010310515 A1	17-05-2012
		AU 2016201607 A1	31-03-2016
		BR 112012009423 A2	13-06-2017
		CA 2779282 A1	28-04-2011
		CN 102753162 A	24-10-2012
		DK 2490684 T3	09-04-2018
		EP 2490684 A2	29-08-2012
		ES 2659353 T3	14-03-2018
		JP 2013508411 A	07-03-2013
		PL 2490684 T3	31-07-2018
		PT 2490684 T	02-04-2018
		RU 2012118588 A	27-11-2013
		US 2011118528 A1	19-05-2011
		US 2021209516 A1	08-07-2021
		WO 2011050302 A2	28-04-2011