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(54) Title: COMPOSITIONS FOR REPROGRAMMING CELLS INTO DENDRITIC CELLS OR ANTIGEN PRESENTING CELLS, METHODS AND USES THEREOF

(57) Abstract: The present disclosure relates to compositions, nucleic acid constructs, methods and kits thereof for cell induction or reprogramming cells to the dendritic cell state or antigen presenting cell state, based, in part, on the surprisingly effect described herein of novel use and combinations of transcription factors that permit induction or reprogramming of differentiated or undifferentiated cells into dendritic cells or antigen presenting cells. Such compositions, nucleic acid constructs, methods and kits can be used for inducing dendritic cells in vitro, ex vivo, or in vivo, and these induced dendritic cells or antigen presenting cells can be used for immunotherapy applications.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C12N5/0784 A61K35/15 A61K38/17 C07K14/47
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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)

C12N A61K C07K

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)

EP0-Internal, BIOSIS, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	A. SCHLITZER ET AL: "Identification of CCR9- murine plasmacytoid DC precursors with plasticity to differentiate into conventional DCs", BLOOD, vol. 117, no. 24, 16 June 2011 (2011-06-16), pages 6562-6570, XP055416994, US ISSN: 0006-4971, DOI: 10.1182/blood-2010-12-326678 abstract page 6562, right-hand column, paragraph 2 page 6567, right-hand column, paragraph 2 ----- -/--	1-49



Further documents are listed in the continuation of Box C.



See patent family 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.
A	ALBERTO YÁÑEZ ET AL: "Interferon regulatory factor 8 and the regulation of neutrophil, monocyte, and dendritic cell production :", CURRENT OPINION IN HEMATOLOGY, vol. 23, no. 1, 1 January 2016 (2016-01-01), pages 11-17, XP055417001, US ISSN: 1065-6251, DOI: 10.1097/MOH.0000000000000196 abstract page 13; figure 1	1-49
A	----- WO 2013/036829 A1 (GENENTECH INC [US]; HOFFMANN LA ROCHE [CH]; GLASMACHER ELKE [US]; AGRA) 14 March 2013 (2013-03-14) abstract page 1, line 16 - line 25 page 4, line 4 - line 17	1-49
A	----- CATHERINE V. LAIOSA ET AL: "Reprogramming of Committed T Cell Progenitors to Macrophages and Dendritic Cells by C/EBP[alpha] and PU.1 Transcription Factors", IMMUNITY., vol. 25, no. 5, 1 November 2006 (2006-11-01), pages 731-744, XP055422195, US ISSN: 1074-7613, DOI: 10.1016/j.immuni.2006.09.011 abstract page 733, left-hand column, paragraph 2	1-49
A	----- NOBUYUKI ONAI ET AL: "A Clonogenic Progenitor with Prominent Plasmacytoid Dendritic Cell Developmental Potential", IMMUNITY., vol. 38, no. 5, 1 May 2013 (2013-05-01), pages 943-957, XP055483927, US ISSN: 1074-7613, DOI: 10.1016/j.immuni.2013.04.006 abstract page 948, left-hand column, last paragraph - right-hand column, paragraph 1 -----	1-49

INTERNATIONAL SEARCH REPORT

Information on patent family members

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		US 2017369885 A1	28-12-2017
		W0 2013036829 A1	14-03-2013
