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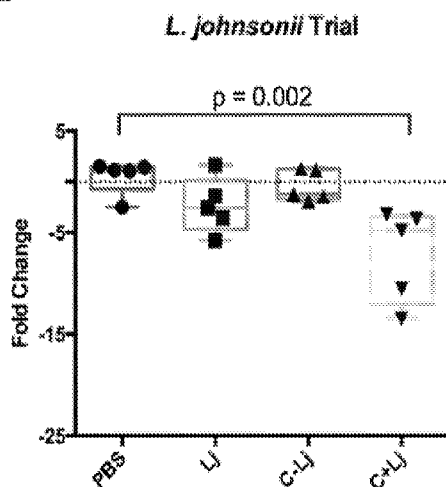
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(54) Title: MICROBIAL CONSORTIUM AND USES THEREOF

FIG. 5B



(57) Abstract: Provided herein are, *inter alia*, microbial compositions and methods of using the same. The microbial compositions provided include, *inter alia*, therapeutically effective amounts of *Lactobacillus johnsonii*, *Faecalibacterium prausnitzii*, *Akkermansia muciniphila*, *Myxococcus xanthus* and *Pediococcus pentosaceus* and are particularly useful for methods of treating and preventing inflammatory diseases.

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02 November 2017 (02.11.2017)

**(15) Information about Correction:**

see Notice of 02 November 2017 (02.11.2017)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US17/20809

## A. CLASSIFICATION OF SUBJECT MATTER

IPC - A61K 35/747, 35/744, 35/742, 35/741; C12N 1/20; C12R 1/24, 1/23, 1/01; G01N 33/68 (2017.01)  
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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)

See Search History document

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

See Search History document

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

See Search History document

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	WO 2007/138011 A1 (INSERM) 6 December 2007; abstract; page 2, lines 3-13; page 4, lines 5-14, 24-28; page 5, lines 11-19	53, 55-58, 60-61, 68, 70, 72, 75-76, 78-80 ----- 54, 59, 62-67, 73
X Y	WO 2011/094579 A2 (NEW CHAPTER INC., et al.) 4 August 2011; paragraph [0096]; Figure 3B  (WEINGARDEN, AR et al.) Microbiota Transplantation Restores Normal Fecal Bile Acid Composition in Recurrent Clostridium difficile Infection. American Journal of Physiology - Gastrointestinal and Liver Physiology. 15 February 2014, Vol. 306, No. 4; pages G310-G319; abstract; page G314, 1st column, 1st paragraph; page G315, 2nd column, 1st paragraph; DOI: 10.1152/ajpgi.00282.2013	77  54, 59, 62, 73
Y	(JANSEN, SS et al.) Differential Induction of Inflammatory Cytokines by Dendritic Cells Treated with Novel TLR-agonist and Cytokine Based Cocktails: Targeting Dendritic Cells in Autoimmunity. Journal of Inflammation. 27 July 2010, Vol. 7, No. 37; abstract; page 3, 2nd column, 4th paragraph to page 4, 1st column, 2nd paragraph; DOI: 10.1186/1476-9255-7-37	63-67
A	US 2015/0246081 A1 (MORRIS) 3 September 2015; abstract; paragraph [0005]; claims 1, 3, 9	1-52
A	CN 102132788 B (HUIYIN INSTITUTE OF TECHNOLOGY) 21 November 2012; abstract	1-52
A	WO 2012/039615 A2 (WINCLOVE BIO INDUSTRIES B.V.) 29 March 2012; page 3, lines 23-28; page 15, lines 9-30	1-52

 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

"P" document published prior to the international filing date but later than the priority date claimed

"&amp;" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

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## INTERNATIONAL SEARCH REPORT

International application No.

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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	(SOKOL, H et al.) Faecalibacterium prausnitzii is an Anti-inflammatory Commensal Bacterium Identified by Gut Microbiota Analysis of Crohn Disease Patients. Proceedings of the National Academy of Sciences of the U.S.A. 28 October 2008, Vol. 105, No. 43; pages 16731-16736; abstract; page 16735, 2nd column, 7th paragraph; DOI: 10.1073/pnas.0804812105	1-52

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US17/20809

**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.: 69, 71, 74  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.