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**The Director of the United States
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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Michelle K. Lee

Director of the United States Patent and Trademark Office



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(12) **United States Patent**
Peneva et al.

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(54) **PROBIOTICS FOR DIETARY DAIRY PRODUCT**

(56) **References Cited**

(75) Inventors: **Daniela Peneva**, Sofia (BG); **Nikola Aleksandrov**, Sofia (BG)

FOREIGN PATENT DOCUMENTS

BG 52041 12/1996

(73) Assignee: **Daflorn LTD**, Sofia (BG)

OTHER PUBLICATIONS

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 212 days.

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Begovic et al., Analysis of Dominant Lactic Acid Bacteria From Artisanal Raw Milk Cheeses Produced on the Mountain Stara Planina, Serbia., *Arch. Biol. Sci.*, Belgrade, 63 (1), 11-20, 2011.*

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Primary Examiner — Taeyoon Kim

Assistant Examiner — Srikanth Patury

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(74) *Attorney, Agent, or Firm* — Andrea M. Porterfield; Polsinelli PC

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(57) **ABSTRACT**

The present invention relates to compositions containing probiotic microorganisms and methods of making and using probiotic associations containing these microorganisms. More particularly, the invention relates to an association of probiotic lactic acid microorganisms including newly identified strains of microorganisms and their use in dietary products. These microorganisms are cultured to produce a protective shell that enhances shelf-stability of compositions and products of the invention. The isolated microorganisms include new strains of *Lactobacillus delbrueckii* subsp. *bulgaricus*, *Lactobacillus helveticus*, *Lactobacillus delbrueckii* subsp. *lactis*, and *Streptococcus thermophilus*.

(58) **Field of Classification Search**

None

See application file for complete search history.

11 Claims, 16 Drawing Sheets