

The  
United  
States  
of  
America



**The Director of the United States  
Patent and Trademark Office**

*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 for the term set forth below, subject to the payment of maintenance fees as provided by law.*

*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.*

A handwritten signature in black ink that reads "Jon W. I. Dudas". The signature is written in a cursive style with a large, looped initial 'J'.

*Director of the United States Patent and Trademark Office*



US007172777B2

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

(10) **Patent No.:** **US 7,172,777 B2**

(45) **Date of Patent:** **Feb. 6, 2007**

- (54) **POWDER FOR PREPARATION OF A PROBIOTIC YOGURT FOOD**
- (75) **Inventors:** **Gerhard Schmitt**, Bensheim (DE);  
**Franz Fritzmeier**, Gunzenhausen (DE);  
**Horst Schwietz**, Allersberg (DE)
- (73) **Assignee:** **PM-International AG**, Luxembourg (LU)
- (\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 312 days.

- (21) **Appl. No.:** **10/942,826**
- (22) **Filed:** **Sep. 17, 2004**

- (65) **Prior Publication Data**  
US 2005/0064067 A1 Mar. 24, 2005
- (30) **Foreign Application Priority Data**  
Sep. 18, 2003 (EP) ..... 03021216

- (51) **Int. Cl.**  
**C12N 1/38** (2006.01)  
**A23C 9/123** (2006.01)
- (52) **U.S. Cl.** ..... **426/43**; 426/71; 426/583;  
435/252.9
- (58) **Field of Classification Search** ..... 426/34,  
426/41, 43, 71, 583; 435/252.9  
See application file for complete search history.

- (56) **References Cited**  
**U.S. PATENT DOCUMENTS**  
5,145,698 A 9/1992 Cajigas  
7,071,384 B2\* 7/2006 Howard et al. .... 800/298
- FOREIGN PATENT DOCUMENTS**  
EP 0 231 643 A 8/1987  
EP 1 269 857 A 1/2003  
FR 2 750 298 A 1/1998  
JP 59 051747 A 3/1984

\* cited by examiner  
*Primary Examiner*—Keith Hendricks  
(74) *Attorney, Agent, or Firm*—Jean C. Edwards, Esq.;  
Akerman Senterfitt

- (57) **ABSTRACT**  
The invention relates to a powder for preparation of a probiotic yogurt food. The powder contains probiotic cultures with a prespecified proportion of living probiotic lactic-acid bacteria and a thermogenetic-lipolytic resorption-enhancing agent, in particular pepper extract, to intensify the resorptive processes in the intestine, as well as a capillary-dilating agent, in particular nicotinic acid, to achieve dilation of the capillaries in the intestinal tract.

**12 Claims, No Drawings**