of lactose, 0.1 to 0.5 g/l of medium of ascorbic acid and 0.5 and 3 g/l of medium of potassium dihydrogen phosphate.

According to one embodiment which can be combined with the previous ones, the pH of said culture medium is not regulated during the incubation.

Finally, according to another embodiment, the pH of said culture medium is maintained between 4 and 7 during the incubation.

The disclosure~~invention~~ relates to the use of the macromolecular complex of bacterial origin disclosed herein~~according to the invention~~ for preventing and treating joint disorders, and for regulating the intestinal flora and bacterial translocation.

According to another embodiment~~aspect~~, ~~a subject of~~ the present disclosure relates to~~invention is~~ the use of said macromolecular complex of bacterial origin obtained according to the method described previously, in products intended for the pharmaceutical, food-processing and/or nutraceutical industry.

A subject of the invention is in particular a pharmaceutical composition comprising at least said macromolecular complex, as active ingredient, and at least one pharmaceutically acceptable support.

The weight concentration of said macromolecular complex represents from 0.1 μg/g to 50 μg/g of the pharmaceutical composition.

Accordingly, in a first aspect, there is provided a bacterial macromolecular complex which can be produced by bacteria belonging to the *Bifidobacterium longum* strain deposited according to the treaty of Budapest under number CNCM I-3994, on May 23, 2008, with the Collection Nationale de Cultures de Microorganismes (CNCM) [National Collection of Microorganism Cultures], consisting of chains combining a lipoprotein and an oligosaccharide, characterized in that:

- the lipoprotein has a molecular weight of from 30 kDa to 60 kDa ;
- the oligosaccharide has a molecular weight of less than 15 kDa, and preferably less than 10 kDa;
- the lipoprotein component, which consists of all the lipoproteins of each of the chains, represents from 75 to 99%, preferentially from 80 to 98%, more preferentially from 85 to 95% by weight of the total weight of the complex, and the oligosaccharide component, which consists of all the oligosaccharides combined with each of the chains, represents from 1 to 25%, preferentially from 2 to 20%, and more preferentially from 5 to 15% of the total weight of the complex.

In another aspect, there is provided a pharmaceutical composition, characterized in that it comprises at least the macromolecular complex as defined herein, as active ingredient, and at least one pharmaceutically acceptable support.

In another aspect, there is provided the pharmaceutical composition as defined herein, for use in the treatment or prevention of inflammatory rheumatism and osteoarthritis.

In another aspect, there is provided a food composition, characterized in that it contains at least said macromolecular complex as defined herein, and at least one food ingredient.

In another aspect, there is provided a nutraceutical composition, characterized in that it contains at least said macromolecular complex as defined herein, and at least one nutraceutically acceptable support.

The term "pharmaceutically acceptable" is intended to mean any support which makes it possible not only to preserve the immunomodulatory properties of the macromolecular complex obtained according to the method described previously, but also to carry said macromolecular complex.

The use of the pharmaceutical composition makes it possible to regulate the intestinal flora and bacterial translocation. It is consequently intended for the prophylaxis and treatment of inflammatory rheumatism, such