CLAIMS

1. A method for selecting an agent for use in reducing or preventing gastrointestinal pain in a subject, said method comprising:

selecting, as said agent, a bacterial strain capable of reducing spontaneous and/or induced transient receptor potential vanilloid 1, TRPV1, activation or a conditioned medium from said bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation.

2. The method according to claim 1, further comprising:

contacting a cell expressing TRPV1 with a bacterial strain or a conditioned medium from said bacterial strain to be tested;

measuring spontaneous and/or induced TRPV1 activation in said cell following contacting said cell with said bacterial strain or said conditioned medium from said bacterial strain to be tested; and

comparing said measured spontaneous and/or induced TRPV1 activation with a control TRPV1 activation, wherein selecting said bacterial strain or said conditioned medium from said bacterial strain comprises selecting said bacterial strain or said conditioned medium from said bacterial strain to be tested as a bacterial strain or a conditioned medium from said bacterial strain effective in reducing or preventing gastrointestinal pain if said measured spontaneous and/or induced TRPV1 activation is lower than said control TRPV1 activation.

3. The method according to claim 2, wherein measuring said spontaneous and/or induced TRPV1 activation comprises measuring Ca^{2+} influx in said cell induced by capsaicin, pH change and/or heat.

4. The method according to claim 1, further comprising

contacting an *ex vivo* gastrointestinal segment with attached mesenteric tissue with a bacterial strain or a conditioned medium from said bacterial strain to be tested;

measuring spontaneous and/or induced mesenteric afferent firing in said *ex vivo* gastrointestinal segment following contacting said *ex vivo* gastrointestinal segment with said bacterial strain or said conditioned medium from said bacterial strain to be tested; and

comparing said spontaneous and/or induced measured mesenteric afferent firing with a control mesenteric afferent firing, wherein selecting said bacterial strain or said conditioned medium from said bacterial strain comprises selecting said bacterial strain or said conditioned medium from said bacterial strain to be tested as a bacterial strain or a conditioned medium from said bacterial strain effective in reducing or preventing gastrointestinal pain if said measured spontaneous and/or induced mesenteric afferent firing is lower than said control mesenteric afferent firing.

5. The method according to any of the claims 1 to 4, wherein selecting said bacterial strain or said conditioned medium from said bacterial strain comprises selecting a Lactic Acid bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation or a conditioned medium from said Lactic Acid bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation.

6. The method according to claim 5, wherein said Lactic Acid bacterial strain is a *Lactobacillus reuteri* strain capable of reducing spontaneous and/or induced TRPV1 activation.

7. The method according to claim 6, wherein said *Lactobacillus reuteri* strain is *Lactobacillus reuteri* DSM 17938.

8. The method according to any of the claims 1 to 7, wherein said subject is suffering from an intestinal motility disorder causing said gastrointestinal pain in said subject.

9. The method according to any of the claims 1 to 8, wherein said subject is suffering from a disease selected from a group consisting of colic, irritable bowel syndrome and constipation causing said gastrointestinal pain in said subject.

10. A bacterial strain capable of reducing spontaneous and/or induced transient receptor potential vanilloid 1, TRPV1, activation or a conditioned medium from said bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation obtainable by the selection method according to any of the claims 1 to 9 for use in reducing or preventing gastrointestinal pain in a subject.

11. The bacterial strain or said conditioned medium from said bacterial strain, for use according to claim 10, wherein said bacterial strain is a Lactic Acid bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation or said conditioned medium is a conditioned medium from said Lactic Acid bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation.

12. A composition comprising a bacterial strain capable of reducing spontaneous and/or induced transient receptor potential vanilloid 1, TRPV1, activation or a conditioned medium from said bacterial strain capable of reducing spontaneous and/or induced TRPV1 activation obtainable by the selection method according to any of the claims 1 to 9 and at least one additional component selected from a group consisting of a pharmaceutically acceptable carrier, a pharmaceutically acceptable diluent, a pharmaceutically acceptable excipient, a foodstuff, a food supplement and another preventive or therapeutic agent for use in reducing or preventing gastrointestinal pain in a subject.

13. The composition, for use according to claim 14, wherein said composition comprises said another preventive or therapeutic agent, wherein said another preventive or therapeutic agent is capable of modulating gastrointestinal motility and/or mixing in said subject.

14. The bacterial strain or said conditioned medium from said bacterial strain or composition, for use according to any of the claims 11 to 13, wherein said bacterial strain is a *Lactobacillus reuteri* strain.

15. The bacterial strain or said conditioned medium from said bacterial strain or composition, for use according to claim 14, wherein said *Lactobacillus reuteri* strain is *Lactobacillus reuteri* DSM 17938.