CLAIMS

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

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

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

comparing said measured spontaneous and/or induced TRPVI activation with a control TRPV1 activation;

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

2. The method according to claim 1, 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.

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

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

comparing said spontaneous and/or induced measured mesenteric afferent firing with a control mesenteric afferent firing;

selecting said *Lactobacillus reuteri* strain or said conditioned medium from said *Lactobacillus reuteri* strain to be tested as a *Lactobacillus reuteri* strain or a conditioned

medium from said *Lactobacillus reuteri* 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.

4. The method according to any of the claims 1 to 3, wherein said *Lactobacillus reuteri* strain is *Lactobacillus reuteri* DSM 17938.

5. The method according to any of the claims 1 to 4, wherein said subject is suffering from an intestinal motility disorder causing said gastrointestinal pain in said subject.

6. The method according to any of the claims 1 to 5, 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.

7. A *Lactobacillus reuteri* strain capable of reducing spontaneous and/or induced transient receptor potential vanilloid 1, TRPV1, activation or a conditioned medium from said *Lactobacillus reuteri* strain capable of reducing spontaneous and/or induced TRPV1 activation obtainable by the selection method according to any of the claims 1 to 6 for use in reducing or preventing gastrointestinal pain in a subject.

8. The *Lactobacillus reuteri* strain or said conditioned medium from said *Lactobacillus reuteri* strain, for use according to claim 7, wherein said *Lactobacillus reuteri* strain is Lactobacillus reuteri DSM 17938.

9. A composition comprising a *Lactobacillus reuteri* strain capable of reducing spontaneous and/or induced transient receptor potential vanilloid 1, TRPV1, activation or a conditioned medium from said *Lactobacillus reuteri* strain capable of reducing spontaneous and/or induced TRPV1 activation obtainable by the selection method according to any of the claims 1 to 6 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.

10. The composition, for use according to claim 9, 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.

11. The composition, for use according to claim 9 or 10, wherein said *Lactobacillus reuteri* strain is *Lactobacillus reuteri* DSM 17938.