

Claims

1. A method for the selection of an agent effective for the treatment of an intestinal motility disorder, wherein said method comprises:
 - 5 a) a step of spatiotemporal (ST) mapping carried out on a gastrointestinal segment to analyse the effect of said agent on gastrointestinal motility; and
 - b) a step of ex vivo nerve bundle recording carried out on a gastrointestinal segment to analyse the effect of said agent on mesenteric afferent nerve firing.
- 10 ~~2. The method of claim 1, wherein the ST mapping in step a) is carried out by video imaging.~~
- ~~23. The method of claim 1 or claim 2, wherein step a) comprises using an ST map to measure migrating motor complex (MMC) frequency and/or migrating motor~~
 - 15 ~~complex (MMC) velocity in said gastrointestinal segment.~~
- ~~34. The method of any one of claims 1 to 23, wherein step a) further comprises the measurement of intraluminal pressure.~~
- 20 ~~5. The method of claim 4, wherein said measurement of intraluminal pressure is intraluminal peak pressure (PPt).~~
- ~~46. The method of any one of claims 1 to 35, wherein step b) comprises measuring the spontaneous firing frequencies of mesenteric afferent nerve bundles.~~
 - 25 ~~57. The method of any one of claims 1 to 46, wherein said gastrointestinal segment is an ex vivo segment of jejunum or colon.~~
- ~~68. The method of any one of claims 1 to 57, wherein said gastrointestinal segment is from a mouse.~~
 - 30 ~~9. The method of any one of claims 1 to 8, wherein steps a) and b) are carried out before and after intraluminal application of the agent.~~

~~740.~~ The method of any one of claims 1 to ~~69~~, wherein said agent is a whole cell, microorganism, protein, peptide, enzyme, or other biological or chemical material.

~~844.~~ The method of claim ~~740~~, wherein said agent is a microorganism, more preferably a bacterial strain.

~~12. A bacterial strain selected by the method of any one of claims 1 to 11.~~

~~13. The bacterial strain of claim 12, wherein the intestinal motility disorder is one in which it is desired to reduce the transit time of material through the gastrointestinal tract and wherein in step a) said bacterial strain shows an ability to increase gastrointestinal motility and in step b) said bacterial strain shows an ability to decrease mesenteric afferent nerve firing.~~

~~14. The bacterial strain of claim 13, wherein in step a) said bacterial strain shows an ability to increase MMC frequency or increase MMC velocity or increase intraluminal pressure and in step b) said bacterial strain shows an ability to decrease pain signalling.~~

~~159.~~ The bacterial strain of claim ~~13 or claim 148~~, wherein said strain is LG345A (DSM 27123) or LG621A (DSM 27126).

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~~16. The bacterial strain of claim 12, wherein the intestinal motility disorder is one in which it is desired to increase the transit time of material through the gastrointestinal tract and wherein in step a) said bacterial strain shows an ability to decrease gastrointestinal motility and in step b) said bacterial strain shows an ability to decrease mesenteric afferent nerve firing.~~

~~17. The bacterial strain of claim 16, wherein in step a) said bacterial strain shows an ability to decrease MMC frequency or decrease MMC velocity or decrease intraluminal pressure and in step b) said bacterial strain shows an ability to decrease pain signalling.~~

~~18. The bacterial strain of claim 16 or claim 17, wherein said strain is LG621A (DSM 27126).~~

5 | ~~109.~~ A bacterial strain wherein said strain is LG345A (DSM 27123) or LG621A (DSM 27126).

~~1120.~~ The bacterial strain of claim ~~19-10~~ for use in therapy.

10 | ~~1221.~~ The bacterial strain of ~~any one of claims 12 to 19~~claim 10 for use in the treatment of an intestinal motility disorder.

~~1322.~~ The bacterial strain ~~of any one of claims 13 to 15 or the strain~~ LG345A (DSM 27123) for use in the treatment of constipation or colic.

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~~1423.~~ The bacterial strain for use of claim ~~22-13~~ wherein said constipation is in an elderly patient or a pregnant woman, or wherein said colic is infantile colic.

~~1524.~~ The bacterial strain ~~of any one of claims 16 to 18 or the strain~~ LG621A (DSM 27126) for use in the treatment of irritable bowel syndrome.

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