CLAIMS

1. Use of *Lacticaseibacillus rhamnosus* HN001 or a derivative or component thereof in the manufacture of a medicament for increasing happiness in a subject.

2. Use of a *Lacticaseibacillus rhamnosus* comprising the AscI restriction enzyme digest profile of *Lacticaseibacillus rhamnosus* HN001 as shown in Figure 5 or a component thereof in the manufacture of a medicament for increasing happiness in a subject.

3. The use of claim 1 or 2, wherein increasing happiness comprises reducing unhappiness in a subject.

4. The use of any one of claims 1 to 3, wherein happiness is assessed with one or more of the: Oxford Happiness Inventory (OHQ), Subjective Happiness Scale (SHS), Satisfaction with Life Scale (SLS), Panas Scale (PS), Authentic Happiness Inventory (AHI), Psychological Wellbeing Scale (PWS) and the Fordyce Emotions Questionnaire (FEQ).

5. The method of any one of claims 1 to 4, wherein happiness is assessed with the Oxford Happiness Inventory (OHQ).

6. Use of *Lacticaseibacillus rhamnosus* HN001 or a derivative or component thereof in the manufacture of a medicament for increasing mental well-being in a subject.

7. Use of a *Lacticaseibacillus rhamnosus* comprising the AscI restriction enzyme digest profile of *Lacticaseibacillus rhamnosus* HN001 as shown in Figure 5 or a component thereof in the manufacture of a medicament for increasing mental well-being in a subject.

8. The use of any one of claims 1 to 7, wherein the subject has not been treated for one or more of the following: anxiety, depression, stress, enhancing calm, occasional anxiety, postnatal depression and postnatal anxiety.

9. The use of any one of claims 1 to 8, wherein the subject is male.

10. The use of any one of claims 1 to 9, wherein the subject is not pregnant, prenatal or postpartum and/or has not been pregnant.

11. The use of any one of claims 1 to 10, wherein the use comprises about $6x10^9$ to about $1x10^{10}$ *Lacticaseibacillus rhamnosus* HN001 or a derivative thereof colony forming units (CFU), and/or the medicament is for oral administration.

12. The use of any one of claims 1 to 11, wherein the subject has been or will be administered one or more other probiotic or postbiotic microorganism/s, and/or one or more prebiotics.

13. The use of any one of claims 1 to 12, wherein the subject is a human or a companion animal or a livestock animal.

14. The use of any one of claims 1 to 13, wherein the medicament is in a form selected from a: tablet, powder, capsule, liquid, syrup, gummy and a sachet.

15. The use of any one of claims 1 to 14, wherein the medicament is a nutritional supplement or food product.