CLAIMS

1. Use of a composition comprising bacteria of the species *Enterococcus hirae* and bacteria selected from the group consisting of *Akkermansia muciniphila, Christensenella minuta* and mixtures thereof, in the manufacture of a medicament in the form of an immunostimulating anti-cancer agent, for the treatment of cancer amenable to treatment by PD1 blockade, in combination with an anti-PD1/PD-L1/PD-L2 Ab-based therapy.

2. The use of claim 1, wherein the composition further comprises bacteria of at least one species selected from the group consisting of *Barnesiella intestinihominis, Alistipes shahii*, *Eubacterium* species, *Ruminococcacae, Clostridiales* species, *Bacteroidales* species*, Actinobacteria, Coriobacteriales* species and *Methanobrevibacter smithii*.

3. The use of claim 1 or claim 2, wherein the composition comprises bacteria of the species *Enterococcus hirae* and *Akkermansia muciniphila.*

4. The use of any of claims 1 to 3, wherein said composition further comprises bacteria of the species *Burkholderia cepacia* and/or *Bacteroides fragilis* and/or *Actinotignum schaalii* and/or *Alistipes indistinctus* and/or *onderdonkii.*

5. The use of any of claims 1 to 4, wherein said composition further comprises:

- *Erysipelotrichia* of the species *Dielma fastidiosa or Erysipelatoclostridium ramosum*; and/or
- *Alistipes* bacteria of species selected from the group consisting of *Alistipes shahii, Alistipes indistinctus, Alistipes onderdonkii* and *Alistipes finegoldii*; and/or
- *Eubacterium* bacteria of the species *Eubacterium limosum*; and/or
- *Bacteroidales* bacteria of the species *Bacteroides salyersiae* and/or *Barnesiella intestinihominis*; and/or
- *Actinobacteria* of the species *Actinotignum schaalii;* and/or
- *Coriobacteriales bacteria* of the species *Collinsella intestinalis* and/or *Collinsella tanakaei*; and/or
- *Firmicutes bacteria* of the species *Flavonifractor plautii.*

6. The use of any of claims 1 to 4, wherein said composition comprises:

(i) *Enterococcus hirae* selected from the group consisting of *Enterococcus hirae* strain 13144 deposited on November 7, 2013 at the *Collection Nationale de Cultures de Microorganismes* (CNCM) under the number I-4815, *Enterococcus hirae* strain IGR7 deposited on August 31, 2017 at the CNCM under the number I-5224, *Enterococcus hirae* strain IGR4 deposited on November 27, 2017 at the CNCM under the number CNCM I-5260, *Enterococcus hirae* strain IGR11 deposited on November 27, 2017 at the CNCM under the number CNCM I-5261 and mixtures thereof; and

(ii) *Akkermansia muciniphila* selected from the group consisting of *Akkermansia muciniphila* strains p2261 and p3415, both deposited at the *Collection de souches de l'Unité des Rickettsies* (CSUR) and mixtures thereof; and

(iii) *Eubacterium limosum.*

7. The use of any of claims 1 to 4, wherein said composition further comprises:

(i) *Enterococcus hirae* selected from the group consisting of *Enterococcus hirae* strain 13144 deposited on November 7, 2013 at the *Collection Nationale de Cultures de Microorganismes* (CNCM) under the number I-4815, *Enterococcus hirae* strain IGR7 deposited on August 31, 2017 at the CNCM under the number I-5224, *Enterococcus hirae* strain IGR4 deposited on November 27, 2017 at the CNCM under the number CNCM I-5260, *Enterococcus hirae* strain IGR11 deposited on November 27, 2017 at the CNCM under the number CNCM I-5261 and mixtures thereof; and

(ii) *Barnesiella intestinihominis.*

8. The use of any of claims 1 to 4, wherein said composition comprises:

(i) *Enterococcus hirae* selected from the group consisting of *Enterococcus hirae* strain 13144 deposited on November 7, 2013 at the *Collection Nationale de Cultures de Microorganismes* (CNCM) under the number I-4815, *Enterococcus hirae* strain IGR7 deposited on August 31, 2017 at the CNCM under the number I-5224, *Enterococcus hirae* strain IGR4 deposited on November 27, 2017 at the CNCM under the number CNCM I-5260, *Enterococcus hirae* strain IGR11

deposited on November 27, 2017 at the CNCM under the number CNCM I-5261 and mixtures thereof; and

(ii) *Christensenella minuta.*

9. The use of any of claims 1 to 8, wherein the medicament is for compensating dysbiosis in a cancer patient.

10. The use of any of claim 1 to 9, wherein the medicament is for an individual who is to be treated with anti-PD1 and anti-CTLA4 coblockade or with anti-PD-L2 and anti-CTLA4 coblockade.

11. Use of a composition as described in claim 3, for the manufacture of a medicament for decreasing or preventing gut toxicity of an anti-PD1/PD-L1/PD-L2 Ab-based therapy and/or an anti-CTLA-4 Ab-based therapy.

12. Use of a fecal microbial composition comprising *Akkermansia muciniphila* and *Enterococcus hirae* and further comprising bacterial species selected from the group consisting of *Clostridiales* species, *Alistipes shahii*, *Eubacterium* species, *Bacteroidales* species and *Methanobrevibacter smithii,* in the manufacture of an agent for treating a cancer amenable to treatment by PD1 blockade, in combination with an anti-PD1/PD-L1/PD-L2 Ab-based therapy.

13. The use of claim 12, wherein said composition has been enriched with a composition as described in any of claims 1 to 9.