CLAIMS

1. Use of a composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) in the manufacture of a medicament for the treatment of inflammatory bowel disease in a human subject in need thereof, in which the subject is refractory to a single biologic therapy, and in which the subject has:

a partial clinical and/or endoscopic response at least 28 days after treatment;

a clinical and/or endoscopic response at least 28 days after treatment; or

the subject is in clinical and/or endoscopic remission at least 28 days after treatment.

2. Use of a composition comprising mesenchymal lineage precursor or stem cells (MLPSCs) in the manufacture of a medicament for the treatment of inflammatory bowel disease in a human subject that is refractory to a single biologic therapy, in which a total dose of less than 600 million mesenchymal lineage precursor or stem cells are to be administered to the subject, and in which the subject has:

a partial clinical and/or endoscopic response at least 28 after treatment;

a clinical and/or endoscopic response at least 28 after treatment; or

the subject is in clinical and/or endoscopic remission at least 28 days after treatment.

3. Use according to Claim 1 or 2, in which the biologic therapy is an anti-TNF therapy.

4. Use according to Claim 1, 2 or 3, in which the biologic therapy is infliximab, adalimumab, certolizumab pegol, vedolizumab or ustekinumab.

5. Use according to any preceding claim, in which the biologic therapy is infliximab or adalimumab.

6. Use according to any preceding claim, in which the subject is also refractory one or more of azathioprine, Mercaptopurine (6-MP), Methotrexate, cyclosporine or a steroid.

7. Use according to any preceding claim, in which the inflammatory bowel disease is Crohn’s disease or ulcerative colitis.

8. Use according to Claim 7, in which the inflammatory bowel disease is Crohn’s disease.

9. Use according to Claim 8, in which the Crohn’s disease presents in the rectum and/or colon of the subject.

10. Use according to Claim 8 or 9, in which the Crohn’s disease is moderate to severe.

11. Use according to Claim 8, 9 or 10, in which the Crohn’s disease is fistulizing Crohn's disease.

12. Use according to any of Claims 8 to 11, in which the subject has a CDAI greater than 300.

13. Use according to any preceding claim, in which:

the subject has a C-reactive protein (CRP) level < 23, preferably < 20;

treatment reduces CRP by > 20% from baseline;

treatment reduces CRP to less than 2.95 mg per litre; or

treatment normalizes CRP levels in a subject.

14. Use according to any preceding claim, in which the subject has a partial clinical and/or endoscopic response at least 28 to 56 days after treatment, a clinical and/or endoscopic response at least 28 to 56 days after treatment, or is in clinical and/or endoscopic remission at least 28 to 56 days after treatment:

in which partial clinical response is characterized by one or more or all of:

> 25% reduction in C-reactive protein (CRP);

decrease in CD Activity Index (CDAI) by < 100 points;

radiographic healing as assessed via MR enterography with improvement of inflammation; and

in which partial endoscopic response is characterized by one or both of:

decreased Simple Endoscopic Score for Crohn Disease (SES-CD) by > 25% and an SES-CD < 50%;

SES-CD score of 10-15;

in which clinical response is characterized by one or more or all of:

reduction in CRP by > 50%;

normalization of CRP;

≥100 point drop in CDAI;

radiographic healing as assessed via MR enterography with improvement of inflammation, and

in which endoscopic response is characterized by one or both of:

decreased SES-CD by > 25% but < 50%;

SES-CD score of 5-10

in which clinical remission is characterized by one or both of:

normalization of CRP to < 2.87 mg per litre;

radiographic healing as assessed via MR enterography with improvement of inflammation, and

in which endoscopic remission is characterized by one or both of:

absence of mucosal ulceration;

SES-CD score of 0-5.

15. Use according to any preceding claim, in which the composition is:

to be administered to the gastrointestinal tract wall of the subject;

to be administered to the submucosal layer of the subject's gastrointestinal tract wall;

to be administered to a site of inflammation in the subject's gastrointestinal tract wall;

to be administered to the colon and/or rectum of the subject;

to be administered via intra-luminal injection;

to be administered to the submucosal layer of the subject's colon wall;

to be administered to multiple sites in the subject's gastrointestinal tract wall;

to be administered via an endoscope; or

to be administered intravenously.

16. Use according to any preceding claim, in which the formulation is to be administered to the submucosal layer of the subject's gastrointestinal tract wall.

17. Use according to any preceding claim, in which the formulation is to be administered to the gastrointestinal tract wall of the subject at two, three, four, five, six or more sites.

18. Use according to any preceding claim, in which the MLPSCs are mesenchymal stem cells (MSCs), and/or in which the MLPSCs are allogeneic.

19. Use according to any preceding claim, in which between 1 x 10^7 and 2 x 10^8 cells are to be administered to the subject.

20. Use according to any of Claims 1 to 18, in which 7.5 x 10^7 cells are to be administered to the subject.

21. Use according to any of Claims 1 to 18, in which 1.5 x 10^8 cells are to be administered to the subject.

22. Use according to any of Claims 1 to 18, in which the composition further comprises Plasma-Lyte A (70%), dimethyl sulfoxide (DMSO) (10%), human serum albumin (HSA) (25%) solution, the HSA solution comprising 5% HSA and 15% buffer, optionally in which the composition comprises greater than 6.68x10^6 viable cells/mL.

23. Use according to any preceding claim, in which the subject has a CDAI between 220 and 450.

24. Use according to any of Claims 1 to 22, in which the subject has a CDAI greater than 450.

25. Use according to any of Claims 1 to 22, in which the subject has a CDAI between 250 and 400.