[0007b] In a further aspect, the present disclosure refers to a method of modulating the level of TAF glycans of an antibody composition produced by glycosylation-competent cells, comprising adding fucose to a cell culture medium comprising the glycosylation-competent cells to achieve a fucose concentration of 0.17 g/L to 1.0 g/L to decrease the level of TAF glycans and adding glucose to a cell culture medium comprising the glycosylation-competent cells to achieve a glucose concentration less than 10 g/L to increase the level of TAF glycans. In a still further aspect, the present disclosure refers to a method of modulating the level of afucosylated glycans of an antibody composition produced by glycosylation-competent cells, comprising adding fucose to a cell culture medium comprising the glycosylation-competent cells to achieve a fucose concentration of 0.17 g/L to 1.0 g/L to decrease the level of afucosylated glycans and adding glucose to a cell culture medium comprising the glycosylation-competent cells to achieve a glucose concentration less than or 10 g/L to increase the level of afucosylated glycans.

WHAT IS CLAIMED IS:

1. A method of producing an antibody composition, wherein the level of total afucosylated (TAF) glycans in the antibody composition is less than 10%, the method comprising maintaining glycosylation-competent cells in a cell culture medium comprising fucose, wherein fucose is present in the culture medium at a concentration of 0.17 g/L to 1.0 g/L.
2. The method of claim 1, wherein fucose is present in the culture medium at a concentration less than 0.75 g/L.
3. The method of claim 2, wherein fucose is present in the culture medium at a concentration less than 0.6 g/L, optionally, 0.2 g/L to 0.5 g/L.
4. The method of any one of claims 1 to 3, wherein the fucose is present in the culture medium the entire duration the glycosylation-competent cells are maintained in cell culture.
5. The method of any one of claims 1 to 4, comprising maintaining the glycosylation-competent cells in a first cell culture medium for an initial time period and subsequently maintaining the glycosylation-competent cells in a second cell culture medium, wherein the first cell culture medium does not comprise fucose at a concentration of 0.17 g/L to 1.0 g/L and the second cell culture medium comprises fucose at a concentration of 0.17 g/L to 1.0 g/L.
6. The method of claim 5, wherein the initial time period is 24 to 72 hours or greater than 72 hours but less than or 156 hours.
7. The method of any one of claims 5 or 6, wherein fucose is added to the first culture medium on the 6th day post-cell culture inoculation to obtain the second cell culture medium.
8. The method of any one of claims 1 to 7, wherein the concentration of fucose fluctuates by 0.2 g/L or less during the time the glycosylation-competent cells are maintained in the cell culture medium comprising fucose.
9. The method of claim 8, wherein the concentration of fucose fluctuates by 0.1 g/L or less during the time the glycosylation-competent cells are maintained in the cell culture medium comprising fucose.
10. The method of any one of claims 1 to 9, wherein the cell culture medium comprises an initial glucose concentration for an initial time period.
11. The method of claim 10, wherein the initial glucose concentration is 1 g/L to 15 g/L.

12. The method of claim 11, wherein the initial glucose concentration is 12 g/L ± 1 g/L.
13. The method of any one of claims 1 to 12, wherein the level of TAF glycans is 2% to 6%.
14. The method of claim 13, wherein the level of TAF glycans is 2% to 5% or 2% to 4%.
15. The method of any one of claims 1 to 14, wherein the level of high mannose glycans and/or the level of afucosylated glycans in the antibody composition is less than 3.5%.
16. The method of claim 15, wherein the antibody composition has a level of high mannose glycans of 0.7% to 3.0%.
17. The method of any one of claims 1 to 16, wherein the antibody composition has a level of afucosylated glycans of 0.8% to 2.8%.
18. The method of any one of claims 1 to 17, wherein the glycosylation-competent cells produce IgG antibodies, optionally, IgG1 antibodies.
19. The method of claim 18, wherein the IgG1 antibodies are specific for a tumor-associated antigen.
20. The method of claim 19, wherein the tumor-associated antigen comprises SEQ ID NO. 3.
21. The method of any one of claims 1 to 20, wherein the culture medium does not comprise mannose.
22. A method of modulating the level of TAF glycans of an antibody composition produced by glycosylation-competent cells, comprising adding fucose to a cell culture medium comprising the glycosylation-competent cells to achieve a fucose concentration of 0.17 g/L to 1.0 g/L to decrease the level of TAF glycans and adding glucose to a cell culture medium comprising the glycosylation-competent cells to achieve a glucose concentration less than 10 g/L to increase the level of TAF glycans.
23. A method of modulating the level of afucosylated glycans of an antibody composition produced by glycosylation-competent cells, comprising adding fucose to a cell culture medium comprising the glycosylation-competent cells to achieve a fucose concentration of 0.17 g/L to 1.0 g/L to decrease the level of afucosylated glycans and adding glucose to a cell culture medium comprising the glycosylation-competent cells to achieve a glucose concentration less than or 10 g/L to increase the level of afucosylated glycans.
24. The method of any one of the preceding claims, wherein (A) the pH of the cell culture medium throughout the culture is greater than 7.0, optionally, higher than 7.05 and lower than 7.2, (B) the level of afucosylated glycans in the antibody composition is less

than 10%, optionally, wherein the level of afucosylated glycans in the antibody composition is 6.2% to 8.4%, (C) the temperature changes by less than 2 degrees C during the culture period, optionally, wherein the temperature changes by not more than 1.5 or 1.0 degrees C during the culture period, (D) the cell culture medium does not comprise any detectable amounts of manganese or betaine, (E) the cell culture medium comprises 0.17 to 1.0 g/L fucose, and optionally wherein fucose is present in the culture medium at a concentration less than 0.75 g/L, less than 0.6 g/L, or 0.2 g/L to 0.5 g/L, (F) the glycosylation-competent cells are not genetically modified to alter activity of an enzyme of the de novo pathway or the salvage pathway, (G) glucose is added to the cell culture medium according to a glucose feeding schedule that achieves an average glucose concentration of 10 g/L or less, or (H) any combination thereof.

25. A method of modulating the level of TAF glycans of an antibody composition produced by glycosylation-competent cells, comprising modulating, reducing or increasing the level of afucosylated glycans of the antibody composition in accordance with a method of claim 24.
26. The method of claim 22 or 23, wherein the fucose is present in the culture medium the entire duration the glycosylation-competent cells are maintained in cell culture.
27. The method of any one of claims 22-24 and 26, comprising maintaining the glycosylation-competent cells in a first cell culture medium for an initial time period and subsequently maintaining the glycosylation-competent cells in a second cell culture medium, wherein the first cell culture medium does not comprise fucose at a concentration of 0.17 g/L to 1.0 g/L and the second cell culture medium comprises fucose at a concentration of 0.17 g/L to 1.0 g/L.
28. The method of claim 27, wherein the initial time period is 24 to 72 hours or greater than 72 hours but less than 156 hours.
29. The method of any one of claims 27 or 28, wherein fucose is added to the first culture medium on the 6th day post-cell culture inoculation to obtain the second cell culture medium.
30. The method of any one of claims 22-24 and 26-29, wherein the concentration of fucose fluctuates by 0.2 g/L or less during the time the glycosylation-competent cells are maintained in the cell culture medium comprising fucose.

31. The method of claim 30, wherein the concentration of fucose fluctuates by 0.1 g/L or less during the time the glycosylation-competent cells are maintained in the cell culture medium comprising fucose.
32. The method of any one of claims 22-24 and 26-31, wherein the cell culture medium comprises an initial glucose concentration for an initial time period.
33. The method of claim 32, wherein the initial glucose concentration is 1 g/L to 15 g/L.
34. The method of claim 33, wherein the initial glucose concentration is 12 g/L ± 1 g/L.
35. The method of any one of claims 22-24 and 26-34, wherein the level of TAF glycans is 2% to 6%.
36. The method of claim 35, wherein the level of TAF glycans is 2% to 5% or 2% to 4%.
37. The method of any one of claims 22-24 and 26-36, wherein the level of high mannose glycans and/or the level of afucosylated glycans in the antibody composition is less than 3.5%.
38. The method of claim 37, wherein the level of high mannose glycans in the antibody composition is 0.7% to 3.0%.
39. The method of any one of claims 22-24 and 26-38, wherein the level of afucosylated glycans in the antibody composition is 0.8% to 2.8%.
40. The method of any one of claims 22-24 and 26-39, wherein the glycosylation-competent cells produce IgG antibodies, optionally, IgG1 antibodies.
41. The method of claim 40, wherein the IgG1 antibodies are specific for a tumor-associated antigen.
42. The method of claim 41, wherein the tumor-associated antigen comprises SEQ ID NO. 3.
43. The method of any one of claims 22-24 and 26-42, wherein the culture medium does not comprise mannose.