In one aspect, the present disclosure provides a composition comprising an antibody protein that binds human interleukin-6 receptor, wherein the antibody protein is an anti-IL-6R antibody protein with mannose-5 glycostructure (M5) attached thereto, and wherein the fraction of the anti-IL-6R antibody protein with M5 attached thereto in the composition is 2.7% to 10% of the sum comprising the anti-IL-6R antibody protein with M5, G(0), G(1), and G(2) oligosaccharide attached thereto; ~~and~~

wherein the G(0) glycostructure attached to the anti-IL-6R antibody is in the range from 40 % to 46 % and the G(2) glycostructure attached to the anti-IL- 6R antibody is in the range from 9 % to 11 %;

wherein the anti-IL-6R antibody protein is Tocilizumab; and

wherein the anti-IL-6R antibody protein with M5 attached thereto has been produced by a recombinant Chinese Hamster Ovary (CHO) cell.

In another aspect, the present disclsoure provides a composition comprising Tocilizumab protein with mannose-5 glycostructure (M5) attached to Asn297 thereof, wherein the fraction of Tocilizumab protein with M5 attached thereto in the composition is 2.7% to less than 6 % of the sum comprising Tocilizumab protein with ~~MS~~M5, G(0), G(1), and G(2) oligosaccharide attached thereto; ~~and~~

wherein the G(0) glycostructure attached to the Tocilizumab protein ~~anti-IL-6R antibody~~ is in the range from 40 % to 46 % and the G(2) glycostructure attached to the Tocilizumab protein ~~anti-IL- 6R antibody~~ is in the range from 9 % to 11 %; and

wherein the Tocilizumab protein with M5 attached thereto has been produced by a recombinant Chinese Hamster Ovary (CHO) cell.

Patent Claims

1. A composition comprising an antibody protein that binds human interleukin-6 receptor, wherein the antibody protein is an anti-IL-6R antibody protein with mannose-5 glycostructure (M5) attached thereto, and wherein the fraction of the anti-IL-6R antibody protein with M5 attached thereto in the composition is 2.7% to 10% of the sum comprising the anti-IL-6R antibody protein with M5, G(0), G(1), and G(2) oligosaccharide attached thereto; ~~and~~

wherein the G(0) glycostructure attached to the anti-IL-6R antibody is in the range from 40 % to 46 % and the G(2) glycostructure attached to the anti-IL-6R antibody is in the range from 9 % to 11 %;

wherein the anti-IL-6R antibody protein is Tocilizumab; and

wherein the anti-IL-6R antibody protein with M5 attached thereto has been produced by a recombinant Chinese Hamster Ovary (CHO) cell.

~~2. The composition according to claim 1, wherein the anti-IL-6R antibody protein is Tocilizumab.~~

~~3. The composition according to any one of claims 1 to 2, wherein the anti-IL-6R antibody protein with M5 attached thereto has been produced by a recombinant Chinese Hamster Ovary (CHO) cell.~~

~~4~~2. The composition according to ~~any one of claims 1 to 3~~claim 1, wherein the M5 fraction is 6% or less.

~~5~~3. The composition according to ~~any one of claims 1 to 4~~claim 1 or 2, wherein the M5 is attached to Asn297 of the anti-IL-6R antibody protein.

~~6~~4. The composition according to any one of claims 1 to ~~5~~3, further comprising anti-IL-6R antibody protein with G(0), G(1), or G(2) oligosaccharide attached thereto.

~~7~~5. The composition according to any one of claims 1 to ~~6~~4, wherein the M5 fraction is in the range from 2.8% to 6%.

~~8~~6. The composition according to any one of claims 1 to ~~7~~5, wherein the M5 fraction is 4% or less.

~~9~~7. A composition comprising Tocilizumab protein with mannose-5 glycostructure (M5) attached to Asn297 thereof, wherein the fraction of

Tocilizumab protein with M5 attached thereto in the composition is 2.7% to less than 6 % of the sum comprising Tocilizumab protein with ~~MS~~M5, G(0), G(1), and G(2) oligosaccharide attached thereto; ~~and~~

wherein the G(0) glycostructure attached to the Tocilizumab protein ~~anti-IL-6R antibody~~ is in the range from 40 % to 46 % and the G(2) glycostructure attached to the Tocilizumab protein ~~anti-IL-6R antibody~~ is in the range from 9 % to 11 %; and

wherein the Tocilizumab protein with M5 attached thereto has been produced by a recombinant Chinese Hamster Ovary (CHO) cell.

~~10. The composition according to claim 9, wherein the Tocilizumab protein with M5 attached thereto has been produced by a recombinant Chinese Hamster Ovary (CHO) cell.~~

~~11~~8. The composition according to ~~any one of claims 9 to 10~~claim 7, wherein the M5 fraction is 5% or less.

~~12~~9. The composition according to ~~any one of claims 9 to 10~~claim 7, wherein the M5 fraction is in the range from 2.8% to less than 5%.

~~13~~10. The composition according to any one of claims ~~9 to 12~~7 to 9, wherein the M5 fraction is 4% or less.

~~14~~11. The composition according to any one of claims ~~9 to 13~~7 to 10, further comprising the Tocilizumab protein with G(0), G(1), or G(2) oligosaccharide attached to Asn297 thereof.