CLAIMS

1. A composition comprising recombinant human acid alpha-glucosidase (rhGAA) produced from Chinese hamster ovary (CHO) cells, wherein 40%-60% of the N-glycans on the rhGAA are complex type N-glycans; and wherein the rhGAA comprises 3.0-5.0 mol mannose-6-phosphate (M6P) residues per mol rhGAA.
2. The composition of claim 1, wherein the rhGAA comprises 3.0 to 4.0 mol M6P per mol rhGAA.
3. The composition of claim 1, wherein the rhGAA comprises 4.0 to 5.0 mol M6P per mol rhGAA.
4. The composition of claim 1, wherein the rhGAA further comprises at least 4 mol sialic acid per mol rhGAA.
5. The composition of claim 1, wherein the rhGAA further comprises 2.0 to 8.0 mol sialic acid residues per mol of rhGAA.
6. The composition of claim 1, wherein the composition further comprises a pharmacological chaperone.
7. The composition of claim 1, wherein the rhGAA comprises at least one bis-phosphorylated N-glycan per rhGAA.
8. The composition of claim 1, wherein 45%-55% of the N-glycans on the rhGAA are complex type N-glycans.
9. The composition of claim 1, wherein 50% of the N-glycans on the rhGAA are complex type N-glycans.

10. The composition of claim 1, wherein the rhGAA comprises 4 mol M6P per mol rhGAA, 4.5 mol sialic acid per mol rhGAA, and at least one bis-phosphorylated N-glycan per rhGAA.
11. The composition of claim 10, wherein the composition further comprises the pharmacological chaperone N-butyl-deoxynojirimycin or a pharmaceutically acceptable salt thereof.
12. The composition of any one of claims 1-11 for use in the treatment of Pompe disease in a subject.
13. The composition for use of claim 12, wherein the composition is to be administered to cardiac muscle of the subject.
14. The composition for use of claim 12, wherein the composition is to be administered to quadriceps, triceps, or other skeletal muscle of the subject.
15. The composition for use of claim 12, wherein the composition is to be administered to the diaphragm of the subject.
16. The composition for use of claim 12, wherein the composition is combined with a pharmacological chaperone, and wherein the composition and the pharmacological chaperone are to be either administered as a single pharmaceutical composition or administered separately.
17. The composition for use of claim 12, wherein the composition is combined with 1-deoxynojirimycin or a pharmaceutically acceptable salt thereof, and wherein the composition and the 1-deoxynojirimycin or pharmaceutically acceptable salt thereof

are to be either administered as a single pharmaceutical composition or administered separately.

18. The composition for use of claim 12, wherein the composition is combined with N-butyl-deoxynojirimycin or a pharmaceutically acceptable salt thereof, and wherein the composition and the N-butyl-deoxynojirimycin or pharmaceutically acceptable salt thereof are to be either administered as a single pharmaceutical composition or administered separately.

19. Use of the composition of any one of claims 1-11 in the manufacture of a medicament for the treatment of Pompe disease in a subject.

20. The use of claim 19, wherein the medicament is to be administered to cardiac muscle of the subject.

21. The use of claim 19, wherein the medicament is to be administered to quadriceps, triceps, or other skeletal muscle of the subject.

22. The use of claim 19, wherein the medicament is to be administered to the diaphragm of the subject.

23. The use of claim 19, wherein the medicament is combined with a pharmacological chaperone, and wherein the medicament and the pharmacological chaperone are to be either administered as a single pharmaceutical composition or administered separately.

24. The use of claim 19, wherein the medicament is combined with 1-deoxynojirimycin or a pharmaceutically acceptable salt thereof, and wherein the medicament and the

1-deoxynojirimycin or pharmaceutically acceptable salt thereof are to be either administered as a single pharmaceutical composition or administered separately.

25. The use of claim 19, wherein the medicament is combined with N-butyl-deoxynojirimycin or a pharmaceutically acceptable salt thereof, and wherein the medicament and the N-butyl-deoxynojirimycin or pharmaceutically acceptable salt thereof are to be either administered as a single pharmaceutical composition or administered separately.