CLAIMS

We claim:

1. A composition comprising a nonlinear saccharide conjugate that comprises a saccharide selected from a polysaccharide and an oligosaccharide, wherein the saccharide linked to at least two carrier peptides, wherein the at least two carrier peptides comprise at least one T-cell epitope and have no conformational B-cell epitopes ~~and~~ , wherein at least one of the at least two peptides is internally linked to the saccharide and wherein at least one of the at least two peptides comprise a PV1 T-cell epitope.

2. The composition of claim 1, wherein the at least two peptides comprise a linear B-cell epitope.

3. The composition of claim 1, wherein the at least two peptides do not comprise a linear B-cell epitope.

~~4. The composition of any one of claims 1-3, wherein at least one of the at least two peptides comprise a PV1 T-cell epitope.~~

~~5~~4. The composition of any one of claims ~~1-4~~1-3, wherein the at least two peptides have the same amino acid sequence.

~~6~~5. The composition of any one of claims ~~1-4~~1-3, wherein the at least two peptides have different amino acid sequences.

~~7~~6. The composition of any one of claims 1-~~6~~5, wherein the at least two peptides are linked directly to the saccharide.

~~8~~7. The composition of any one of claims 1-~~7~~6, wherein the at least two peptides are linked to the saccharide via a linker.

~~9~~8. The composition of claim ~~8~~7, wherein the linkers for the at least two peptides are the same.

~~10~~9. The composition of claim ~~8~~7, wherein the linkers for the at least two peptides are different.

~~11~~10. The composition of any one of claims ~~8~~7-~~10~~9, wherein the linker is linear.

~~12~~11. The composition of any one of claims ~~8~~7-~~11~~10, wherein the linker is N-kappa-Maleimidoundecanoic acid hydrazide-TFA (KMUH) or N-β-Maleimidopropionic acid hydrazide-TFA (BMPH).

~~13~~12. The composition of any one of claims 1-~~12~~11, wherein the saccharide is not linked to a carrier protein.

~~14~~13. The composition of any one of claims 1-~~13~~12, wherein the saccharide is linked to at least one peptide per five to thirty-five monosaccharides, at least one peptide per five to twenty-five monosaccharides, at least one peptide per five to twenty monosaccharides, or at least one peptide per seven to fifteen monosaccharides.

~~15~~14. The composition of any one of claims 1-~~14~~13, wherein the saccharide is linked to at least three peptides, at least four peptides, at least five peptides, at least six peptides, at least seven peptides, at least eight peptides, at least nine peptides, or at least ten peptides.

~~16~~15. The composition of any one of claims 1-~~15~~14, wherein the saccharide is a capsular saccharide.

~~17~~16. The composition of claim ~~16~~15, wherein the capsular saccharide is from *N. meningitidis, S. pneumoniae, S. pyogenes, S. agalactiae, H. influenzae, P. aeruginosa, S. aureus, E. faecalis, E. faecium, Y. enteracolitica, V. cholerae* or *S. typhi*.

~~18~~17. The composition of any one of claims 1-~~15~~14, wherein the saccharide is a glucan.

~~19~~18. The composition of claim ~~18~~17, wherein the glucan is from *C. albicans, Coccidioides immitis, Trichophyton verrucosum, Blastomyces dermatidis, Cryptococcus neoformans, Histoplasma capsulatum, Saccharomyces cerevisiae, Paracoccidioides brasiliensis,* or *Pythiumn insidiosum*.

~~20~~19. The composition of any one of claims 1-~~19~~18, wherein the saccharide comprises at least ten monosaccharides, at least fifteen monosaccharides, at least twenty monosaccharides, at least twenty-five monosaccharides, at least thirty monosaccharides, at least thirty- five monosaccharides, or at least forty monosaccharides.

~~21~~20. The composition of any one of claims 1 -~~20~~19, further comprising a pharmaceutically acceptable carrier.

~~22~~21. The composition of any one of claims 1-~~21~~20, further comprising an adjuvant.

~~23~~22. The composition of any one of claims 1-~~22~~21, further comprising an additional component selected from: a *Neisseria meningitidis* antigen, a *Streptococcus pneumoniae* antigen, a *Streptococcus pyogenes* antigen, a *Moraxella catarrhalis* antigen, a *Bordetella pertussis* antigen, a *Staphylococcus aureus* antigen, a *Staphylococcus epidermis* antigen, a *Clostridium tetani* antigen, a *Cornynebacterium diphtheriae* antigen, a *Haemophilus influenzae* type B (Hib) antigen, a *Pseudomonas aeruginosa* antigen, a *Legionella pneumophila* antigen, a *Streptococcus agalactiae* antigen, a *Neiserria gonorrhoeae* antigen, a *Chlamydia trachomatis* antigen, a *Treponema pallidum*

antigen, a *Haemophilus ducreyi* antigen, an *Enterococcus faecalis* antigen, an *Enterococcus faecium* antigen, a *Helicobacter pylori* antigen, a *Staphylococcus saprophyticus* antigen, a *Yersinia enterocolitica* antigen, an *E. coli* antigen, a *Bacillus anthracis* antigen, a *Yersinia pestis* antigen, a *Mycobacterium tuberculosis* antigen, a *Rickettsia* antigen, a *Listeria monocytogenes* antigen, a *Chlamydia pneumoniae* antigen, a *Vibrio cholerae* antigen, a *Salmonella typhi* antigen, a *Borrelia burgdorferi* antigen, a *Porphyromonas gingivalis* antigen, a Shigella antigen and a Klebsiella antigen.

~~24~~23. Use of the composition of any one of claims 1-~~23~~22 in the manufacture of a medicament for inducing an immune response in a subject.

~~25~~24. The use of claim ~~24~~23, wherein the subject is human.

~~26. The use of claims 24 or 25, wherein the immune response recognizes the polysaccharide.~~

~~27. The use of 26, wherein the immune response to the polysaccharide is more T-cell dependent that an immune response induced by the polysaccharide unlinked to carrier proteins or other T-cell epitopes.~~

~~28~~25. The use of the composition of claims of any one of claims 1-~~23~~22 in the manufacture of a medicament to induce an enhanced immune response in a mammalian subject to the saccharide.

~~29~~26. A composition comprising a saccharide conjugate that comprises a saccharide selected from a polysaccharide and an oligosaccharide, wherein the saccharide linked to a peptide comprising at least two T-cell epitopes having no conformational B-cell epitopes and wherein at least one of the T-cell epitopes is the PV1 epitope.