CLAIMS:

1. Use of fucoidan having an average molecular weight from 4,000 Daltons to 5 million Daltons derived from brown seaweed or green seaweed or echinoderms in the manufacture of a medicament for the inhibition of influenza virus~~A method for inhibiting a virus of the Orthomyxoviridae family or a condition or symptom associated with orthomyxoviral infection, said method comprising contacting the virus or a cell infected with the virus with an effective amount of a formulation comprising a sulfated polysaccharide having an average molecular weight of 4,000 Daltons or greater~~.

~~2. The method of Claim 1 wherein the sulfated polysaccharide has an average molecular weight from about 4,000 Daltons to about 5 million Daltons.~~

~~3~~2. Use~~The method~~ of Claim ~~2~~ 1 wherein the fucoidan is in a medicament~~ sulfated polysaccharide is in a formulation~~ at a concentration of from ~~about~~ 1% w/w to 100% w/w.

~~4~~3. Use~~The method~~ of Claim 1 or 2~~3~~ wherein the fucoidan~~ sulfated polysaccharide is selected from a fucan sulfate, galactofucan sulfate, other~~ is a fucose~~ rich~~ sulfated polysaccharide~~s, a rhamnose containing sulfated polysaccharide, chondroitin sulfate, heparin sulfate and glycosaminoglycan~~.

~~5. The method of Claim 3 wherein the sulfated polysaccharide is a fucoidan or a physically, chemically and/or enzymatically derivatized form thereof.~~

~~6~~4. Use~~The method~~ of any one of Claims 1 to ~~5~~ 3 wherein the Influenza virus is selected from~~Orthomyxoviridae virus is an influenza virus of species~~ Influenza A, Influenza B and~~/or~~ Influenza C~~ or a sub type or variant thereof~~.

~~7~~5. Use~~The method~~ of Claim ~~6~~ 4 wherein the Influenza A ~~sub type~~ is H_xN_y wherein H_x is a hemagglutin of type 1 to 9 inclusive and N_y is a neuraminidase of type 1 to 16 inclusive.

~~8~~6. Use~~The method~~ of Claim ~~7~~ 5 wherein the Influenza A sub-type is selected from H_1N_1, H_1N_2, H_3N_1, H_3N_2 and H_2N_3.

~~9~~7. Use~~The method~~ of Claim ~~8~~ 6 wherein the Influenza A sub-type is H_1N_1.

~~10~~8. Use~~The method~~ of Claim ~~9~~ 7 wherein the virus is swine flu virus.

~~11~~9. Use~~The method~~ of Claim ~~7~~ 5 wherein the Influenza A ~~sub-type virus~~ is selected from H_5N_1, H_7N_3, H_7N_7 and H_9N_2.

~~12~~10. Use~~The method~~ of Claim ~~12~~ 5 wherein the virus is avian flu virus which infects humans.

~~13. The method of Claim 1 wherein the sulfated polysaccharide reduces the effects of cytokine and growth factor production.~~

~~14~~11. Use~~The method~~ of any one of Claims 1 to ~~9~~ 10 further comprising the use of ~~administration of an anti-viral agent such as~~ oseltamivir ~~(tamiflu)~~, zanamivir ~~(relenza),~~ and/or amantadine ~~and a cytokine~~.

12. Use of Claim 1 wherein the fucoidan is derived from a species of *Undaria* or *Fucus*.

~~15~~13. A method for inhibiting ~~a~~ spread of an Influenza virus ~~of the Orthomyxoviridae family of viruses or ameliorating a condition or symptom associated with orthomyxoviral infection~~, said method comprising contacting a non-human or non-animal surface ~~the virus or a cell infected~~ with the virus with an amount of fucoidan having an average molecular weight of from 4,000 Daltons to 5 million Daltons derived from brown seaweed or green seaweed or ectoderms~~a formulation comprising a sulfated polysaccharide in a form selected from:~~

~~(i) a preparation comprising at least 1% w/w sulfated polysaccharide;~~

~~(ii) a preparation comprising at least 10% w/w sulfated polysaccharide;~~

~~(iii) a preparation comprising at least 50% w/w sulfated polysaccharide;~~

~~(iv) a preparation comprising at least 80% w/w sulfated polysaccharide;~~

~~(v) a preparation comprising at least 90% w/w sulfated polysaccharide;~~

~~(vi) a substantially pure form of the sulfated polysaccharide;~~

~~(vii) a fraction of sulfated polysaccharide;~~

~~(viii) a chemically derivatized form of sulfated polysaccharide; and~~

~~(ix) a sulfated polysaccharide admixed with another medicament or excipient such as an anti-viral agent or polyphloroglucinol or polyphenol;~~

~~wherein the sulfated polysaccharide comprises an average molecular weight of from about 4,000 Daltons to 5 million Daltons~~.

~~16~~14. The method of Claim ~~15~~ 13 wherein the fucoidan~~chemically derivatizational form of sulfated polysaccharide~~ is a cation modified sulfated polysaccharide.

~~17. The method of Claim 15 wherein the sulfated polysaccharide is a fucoidan.~~

~~18~~15. The method of Claim ~~16~~ 13 or ~~17~~ 14 wherein the ~~Orthomyxoviridae virus is an influenza~~ Influenza virus ~~of species~~is Influenza A, Influenza B and/or Influenza C ~~or a sub-type or recombinant hybrid thereof~~.

~~19~~16. The method of Claim ~~18~~ 15 wherein the Influenza A ~~sub-type~~ is H_xN_y wherein H_x is a hemagglutin of type 1 to 9 inclusive and N_y is a neuraminidase of type 1 to 16 inclusive.

~~20~~17. The method of Claim ~~19~~ 16 wherein the Influenza A ~~sub-type~~ is selected from H_1N_1, H_1N_2, H_3N_1, H_3N_2 and H_2N_3.

~~21~~18. The method of Claim ~~20~~ 17 wherein the Influenza A ~~sub-type~~ is H_1N_1.

~~22~~19. The method of Claim ~~21~~ 18 wherein the virus is swine flu virus which infects humans.

~~23~~20. The method of Claim ~~19~~ 16 wherein the Influenza A ~~sub-type~~ virus is selected from H_5N_1, H_7N_3, H_7N_7 and H_9N_2.

~~24~~21. The method of Claim ~~23~~ 20 wherein the virus is avian flu virus which infects humans.

~~25. The method of Claim 15 wherein the sulfated polysaccharide reduces the effects of cytokine and growth factor production.~~

~~26. The method of any one of Claims 15 to 22 further comprising the administration of an anti viral agent such as oseltamivir (tamiflu), zanamivir (relenza), amantadine, rimantidine and a cytokine.~~

22. The method of Claim 13 wherein the fucoidan is derived from a species of *Undaria* or *Fucus*.

~~27. A method for inhibiting a virus of the Orthomyxoviridae family of viruses or ameliorating a symptom or condition associated with viral infection, said method comprising contacting the virus or cell inflected with the virus with a sulfated polysaccharide having an average molecular weight of 4,000 Daltons or greater wherein the virus is an Influenza A, Influenza B and/or Influenza C virus wherein the Influenza A virus component comprises a sub-type defined by H_xN_y wherein H_x is a hemagglutin wherein $_x$ is from 1 to 16 and N_y is neuraminidase wherein $_y$ is from 1 to 9.~~

~~28. A method for inhibiting an Influenza A sub-type of swine flu virus or ameliorating symptom or condition associated with viral infection, said method comprising contacting the virus or cell infected with the virus with a sulfated polysaccharide having an average molecular weight of from 4,000 Daltons to 5 million Daltons.~~

~~29. A method for inhibiting an Influenza A sub-type of avian flu virus or ameliorating symptom or condition associated with viral infection, said method comprising contacting the virus or cell infected with the virus with a sulfated polysaccharide having an average molecular weight of from 4,000 Daltons to 5 million Daltons.~~

~~30. A method for inhibiting an Influenza A H_1N_1 or H_5N_1 virus or ameliorating a symptom or condition associated with viral infection, said method comprising contacting the virus or cell infected with the virus with a sulfated polysaccharide having an average molecular weight of from 4,000 Daltons to 5 million Daltons.~~

~~31~~23. A functional food formulation for use in controlling infection or spread of an influenza virus, the formulation comprising fucoidan having an average molecular weight of from 4,000 Daltons to 5 million Daltons derived from brown seaweed or green seaweed or ectodermsa ~~sulfated polysaccharide selected from:~~

~~(i) a preparation comprising at least 1% w/w sulfated polysaccharide;~~

~~(ii) a preparation comprising at least 10% w/w sulfated polysaccharide;~~

~~(iii) a preparation comprising at least 50% w/w sulfated polysaccharide;~~

~~(iv) a preparation comprising at least 80% w/w sulfated polysaccharide;~~

~~(v) a preparation comprising at least 90% w/w sulfated polysaccharide;~~

~~(vi) a substantially pure form of the sulfated polysaccharide;~~

~~(vii) a fraction of sulfated polysaccharide;~~

~~(viii) a chemically derivatized form of sulfated polysaccharide; and~~

~~(ix) a sulfated polysaccharide admixed with another medicament or excipient such as an anti-viral agent or polyphloroglucinol or polyphenol.~~

~~32. The method of Claim 31 wherein the chemically derivatizational form of sulfated polysaccharide is a cation modified sulfated polysaccharide.~~

~~33. Use of a sulfated polysaccharide in the manufacture of a medicament for the treatment or control of influenza virus infection or conditions associated with viral infection.~~

~~34. Use of Claim 33 wherein the influenza virus is swine or avian flu virus.~~

~~35. Use of an extract from brown seaweed or a green seaweed comprising a sulfated polysaccharide having an average molecular weight of from about 4,000 Daltons to about 5 million Daltons in the manufacture of a medicament or functional food for the treatment or control of influenza virus infection.~~

~~36. Use of Claim 35 wherein the influenza virus is swine or avian flu virus.~~

~~37. A method for reducing flu-like symptoms associated with infection by an influenza virus, the method comprising administering to a subject an effective amount of a sulfated polysaccharide having an average molecular weight of 4,000 Daltons or greater.~~

~~38. The method of Claim 37 wherein sulfated polysaccharide has an average molecule weight of from about 4,000 Daltons to about 5 million Daltons~~.

24. The functional food formulation of Claim 23 wherein the fucoidan is derived from a species of *Undaria* or *Fucus*.