CLAIMS

What is claimed is:

1. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament in a combined prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus or a co-infection by an influenza virus and at least one other respiratory virus, preferably being selected from the group consisting of rhinovirus, coronavirus, and paramyxovirus.

2. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein the influenza virus is influenza virus A or B.

3. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein the paramyxovirus is respiratory syncytial virus, metapneumovirus or parainfluenzavirus.

4. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein the neuraminidase inhibitor is zanamivir or oseltamivir.

5. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein said condition or disease is selected from the group consisting of acute bronchitis, chronic bronchitis, rhinitis, sinusitis, croup, acute bronchiolitis, pharyngitis, tonsillitis, laryngitis, tracheitis, asthma and pneumonia.

6. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein said symptom is selected from the group consisting of fever, pain, dizziness, shivering, sweating, and dehydration.

7. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein iota- and/or kappa-carrageenan is applied in an amount of from 0.1 - 50 μg/kg/d, preferably from 2 - 35 μg/kg/d and most preferred from 8 - 25 μg/kg/d.

8. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein administration of said medicament is started 24 hours or more post infection.

9. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein administration of said medicament is started 48 hours or more post infection.

10. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use in the manufacture of a pharmaceutical composition or a kit of parts suitable for a combined prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus.

11. A method for the prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus or a co-infection by an influenza virus and at least one other respiratory virus, preferably being selected from the group consisting of rhinovirus, coronavirus, and paramyxovirus comprising administering to an individual at risk of or suffering from an influenza virus infection an anti-viral effective amount of iota- and/or kappa-carrageenan in combination with an anti-viral effective amount of a neuraminidase inhibitor.

12. The method of claim 11, wherein the neuraminidase inhibitor is zanamivir or oseltamivir.

13. The method of claim 11, wherein the administration of iota- and/or kappa-carrageenan in combination with the neuraminidase inhibitor is started 24 hours or more post infection.

14. The method of claim 11, wherein the administration of iota- and/or kappa-carrageenan in combination with the neuraminidase inhibitor is started 48 hours or more post infection.

15. The method of claim 11, wherein the administration is done by oral, inhalative or intranasal administration, or any combination thereof.

16. The method of claim 15, wherein the neuraminidase inhibitor is provided as a liquid pharmaceutical composition and administered orally, while the carrageenan component is provided as a liquid solution and administered intranasally.

17. A pharmaceutical composition suitable for prophylactic or therapeutic application against influenza virus infection, comprising an antiviral effective amount of iota and/or kappa carrageenan and an antiviral effective amount of a neuraminidase inhibitor.

18. The pharmaceutical composition of claim 17, adapted as a nasal spray.

19. The pharmaceutical composition of claim 18, wherein said neuraminidase inhibitor is zanamivir.

20. The pharmaceutical composition of claim 18, wherein said neuraminidase inhibitor is oseltamivir, in particular oseltamivir carboxylate.

21. A kit of parts suitable for prophylactic or therapeutic treatment of influenza virus infection, comprising a first container comprising an antiviral effective amount of iota and/or kappa carrageenan together with a pharmaceutcially acceptable carrier, and a second container comprising an antiviral effective amount of a neuraminidase inhibitor together with a pharmaceutcially acceptable carrier, and instructions for a combined use of said antiviral effective components.

CLAIMS

1. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament in a combined prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus or a caused by or associated with a co-infection by an influenza virus and at least one other respiratory virus.

2. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein the influenza virus is influenza virus A or B, and/or the respiratory virus is selected from the group consisting of rhinovirus, coronavirus, and paramyxovirus

3. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein the neuraminidase inhibitor is selected from the group consisting of zanamivir, laninamivir, peramivir, and oseltamivir.

4. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1 , wherein said condition or disease is selected from the group consisting of acute bronchitis, chronic bronchitis, rhinitis, sinusitis, croup, acute bronchiolitis, pharyngitis, tonsillitis, laryngitis, tracheitis, asthma and pneumonia.

5. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein iota- and/or kappa-carrageen is applied in an amount of from 0.1 – 50 µg/kg/d, preferably from 2 – 35 µg/kg/d and most preferred from 8 - 25 µg /kg/d.

6. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein administration of said medicament is started 24 hours or more post infection.

7. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein administration of said medicament is started 48 hours or more post infection.

8. The use of Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor in the manufacture of a pharmaceutical composition or a kit of parts suitable for a combined prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus or caused by or associated with a co-infection by an influenza virus and at least one other respiratory virus.

9. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein said medicament is suitable for oral, inhalative or intranasal administration, or any combination thereof.

10. Iota- and/or kappa-carrageenan together with a neuraminidase inhibitor for use as a medicament according to claim 1, wherein the neuraminidase inhibitor is provided as a liquid pharmaceutical composition for oral administration, while the carrageenan component is provided as a liquid solution for intranasal administration.

11. A pharmaceutical composition for use in the prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus and at least one other respiratory virus, comprising an antiviral effective amount of iota and/or kappa carrageenan and an antiviral effective amount of a neuraminidase inhibitor.

12. The pharmaceutical composition of claim 11, wherein said a neuraminidase inhibitor is selected from the group consisting of zanamivir, laninamivir, peramivir, and oseltamivir.

13. The pharmaceutical composition of claim 11 or 12, dapted as a nasal spray.

14. A kit of parts for use in the prophylactic or therapeutic treatment of a symptom, condition or disease caused by or associated with an infection by an influenza virus or caused by or associated with a co-infection by an influenza virus, comprising a first container comprising an antiviral effective amount of iota and/or kappa carrageenan together with a pharmaceutically acceptable carrier, and a second container comprising an antiviral effective amount of a neuraminidase inhibitor together with a pharmaceutically acceptable carrier, and instructions for a combined use of said antiviral effective components.

15. The kit of parts of claim 14, wherein the neuraminidase inhibitor is selected from the group consisting of zanamivir, laninamivir, peramivir, and oseltamivir.

16. The use according to claim 8, wherein the influenza virus is influenza virus A or B, and/or the respiratory virus is selected from the group consisting of rhinovirus, coronavirus, and paramyxovirus

17. The use according to claim 8, wherein the neuraminidase inhibitor is selected from the group consisting of zanamivir, laninamivir, peramivir, and oseltamivir.

18. The use according to claim 8, wherein said condition or disease is selected from the group consisting of acute bronchitis, chronic bronchitis, rhinitis, sinusitis, croup, acute bronchiolitis, pharyngitis, tonsillitis, laryngitis, tracheitis, asthma and pneumonia.

19. The use according to claim 8, wherein iota- and/or kappa-carrageen is applied in an amount of from 0.1 – 50 µg/kg/d, preferably from 2 – 35 µg/kg/d and most preferred from 8 - 25 µg /kg/d.

20. The use according to claim 8, wherein the pharmaceutical composition or kit of parts is for administration and wherein said administration is started 24 hours or more post infection.

21. The use according to claim 8, wherein the pharmaceutical composition or kit of parts is for administration and wherein said administration is started 48 hours or more post infection.

22. The use according to claim 8, wherein said pharmaceutical composition or kit of parts is suitable for oral, inhalative or intranasal administration, or any combination thereof.

23. The use according to claim 8, wherein the neuraminidase inhibitor is provided as a liquid pharmaceutical composition for oral administration, while the carrageenan component is provided as a liquid solution for intranasal administration.