

CLAIMS

1. A composition comprising purified hydrogen peroxide gas (PHPG) at a concentration of at least 0.01 parts per million (ppm) wherein said PHPG is non-hydrated and less than 0.015 ppm of ozone, for use in a medical treatment of a human or veterinary respiratory disease, said PHPG is provided to an enclosed space in a therapeutic amount to a person in need thereof.
2. The composition according to claim 1, wherein said purified hydrogen peroxide gas (PHPG) at concentration of at least 0.05 parts per million and said enclosed space is a dwelling.
3. Use of a composition comprising purified hydrogen peroxide gas (PHPG) in the manufacture of a medicament for treating a viral respiratory illness in a subject in need thereof, wherein said PHPG gas composition is free of hydration, organic species and less than 0.015 ppm ozone, and provided to a habitable enclosed space that is at a final concentration of between 0.01 ppm and 1.0 ppm ; and wherein said subject is to be exposed to said environment for at least two hours, wherein said treating comprises reducing the severity of said respiratory infection, reducing the duration of said respiratory infection, preventing transmission of said respiratory infection, or any combination thereof.
4. The use of claim 3, wherein said period of time is at least 3 hours.
5. The use of claim 3, wherein said period time is at least 180 minutes over a 24 hour period.
6. The use of claim 3, wherein said period time is at least 8 hours over a 7 day period.

7. The use of claim 3, wherein the total time of exposure is at least 5 hours.
8. The use of claim 3, wherein said exposure is repeated daily.
9. The use of claim 3, wherein said environment comprises PHPG at a final concentration of at least at least 0.05 ppm.
- 5 10. The use of claim 3, wherein said composition is for reducing the severity of a respiratory infection, wherein said respiratory infection is selected from the group consisting of severe acute respiratory syndrome (SARS), Middle East Respiratory Syndrome (MERS), porcine reproductive and respiratory syndrome virus (PRRSV) infection, and respiratory syncytial virus.
- 10 11. Use of a purified hydrogen peroxide gas (PHPG) in the manufacture of a medicament for controlling a pathogen in the respiratory system of a subject selected from the group consisting of a virus, a bacterium, a fungus, wherein said medicament comprises an environment comprising PHPG that is free of hydration, organic species and less than 0.015 ppm ozone, at a final concentration of at least 0.01 ppm, and
15 wherein said subject is to be exposed to said PHPG containing environment for a period of time to receive a therapeutic dose of at least 0.05 units of PHPG, wherein said controlling comprises preventing infection of a subject by said pathogen; preventing the transmission of said pathogen from a subject to a second subject, reducing the number or severity of the symptoms of infection with said pathogen,
20 decreasing the length of time a subject is infected with said pathogen, decreasing the number of sick days taken by a subject infected with said pathogen, or decreasing the use of over-the-counter medication by a subject.
12. The use of claim 12, wherein said virus is selected from the group consisting of of a double stranded DNA virus, a single-stranded DNA virus, a double-stranded RNA
25 virus, a positive sense single-stranded RNA virus, a negative sense single-stranded RNA virus, a single stranded RNA retrovirus, and a double-stranded DNA retrovirus.

13. The use of claim 11, wherein said fungus is from the genus *Aspergillus*.
14. The use of claim 11, wherein said fungus is selected from the group consisting of
5 *Histoplasma capsulatum*, blastomyces, *Cryptococcus neoformans*, *Pneumocystis jiroveci*, *Coccidioides immitis*, *Blastomyces dermatitidis*, *Pneumocystis jirovecii*, *Sporothrix schenckii*, *Cryptococcus neoformans*, *Aspergillus fumigatus*, and *Candida albicans*.

15. The use of claim 11, wherein said virus selected from the group consisting of influenza virus, severe acute respiratory syndrome (SARS), Middle East Respiratory Syndrome (MERS), and respiratory syncytial virus (RSV).
- 5 16. The use of claim 11, wherein said bacterium is *Acinetobacter baumannii*, *Mycoplasma*, *Pneumococcus*, *Chlamydophila pneumoniae*, *Mycobacterium tuberculosis*, *Streptococcus pneumoniae*, *Haemophilus* species, or *Staphylococcus aureus*.
- 10 17. The use of claim 11, wherein said controlling comprises preventing infection of a subject by said pathogen; preventing the transmission of said pathogen from a subject to a second subject, decreasing the length of time a subject is infected with said pathogen, or decreasing the number of sick days taken by a subject infected with said pathogen.
18. The use of claim 3, wherein said period of time is at least four hours.
19. The use of claim 3, wherein said final concentration is at least 0.02 ppm and 1.0 ppm.
- 15 20. The use of claim 4, wherein said total time of exposure is at least 8 hours daily.
21. The use of claim 3, wherein said patient is to be exposed to a minimum dose of 0.05 units of PHPG per day.