CLAIMS

1. A composition for regulation of immunity homeostasis, comprising a combination of an *Aloe* extract enriched for one or more polysaccharides; a *Poria* extract enriched for one or more polysaccharides; and a *Rosemary* extract enriched for one or more polyphenolic compounds.

2. The composition of claim 1, wherein the *Aloe extract*, or *Poria extract* or *Rosemary* extract in the composition is in a range of 1% - 98% by weight of each extract with the optimized weight ratio of *Aloe:Poria:Rosemary* (APR) at 3:2:1 (50%:33.3%:16.7%) or 1:1:1 (33.3%:33.3%:33.3%) or 3:6:1 (30%:60%:10%).

3. The composition of claim 1, wherein the *Aloe* extract is whole leaf gel or inner leaf gel from *Aloe vera* or *Aloe barbadense*, the *Poria* extract is from mushroom or fruit body of *Poria cocos* or *Wolfiporia extensa*, and *Rosemary* extract is from leaf of *Rosmarinus officinalis*.

4. The composition of claim 1 wherein the *Aloe* extract comprises 0.01% to 99.9% of polysaccharides.

5. The composition of claim 1 wherein the *Poria* extract comprises 0.01% to 99.9% of polysaccharides.

6. The composition of claim 1 wherein the *Rosemary* extract comprises 0.01% to 99.9% of Rosmarinic acid.

7. The composition of claim 1, wherein the one or more polysaccharides from the *Aloe* extract is an acetylated polysaccharide or acemannan or any combination thereof.

8. The composition of claim 1, wherein the one or more polysaccharides from the *Poria* extract is a beta-glucan or a combination thereof.

9. The composition of claim 1, wherein the one or more polysaccharides are enriched from a plant species selected from the group consisting of or a combination thereof *Aloe vera, Aloe barbadense, Aloe ferox, Aloe arborescens, Astragalus membranaceus, Ganoderma lucidum, Hordeum vulgare, Agaricus (A. blazei) subrufescens, Echinacea purpurea, Echinacea angustifolia, Aconitum Napellus* (Monkshood), *Sambucus nigra, Poria cocos* Wolf, *Wolfiporia extensa, Withania somnifera, Bupleurum falcatum, Glycyrrhiza spp, Panax quinquefolium, Panax ginseng* C. A. Meyer, Korea red ginseng, *Lentinula edodes* (shiitake), *Inonotus obliquus* (Chaga mushroom), *Lentinula edodes, Lycium barbarum, Lycium chinense, Phellinus linteus* (fruit body), *Trametes versicolor* (fruit body), *Cyamopsis tetragonolobus Cyamopsis tetragonolobus* (guar gum), *Trametes versicolor, Cladosiphon okamuranus* Tokida, *Undaria pinnatifida,* mushrooms, seaweeds, yeasts, brown algae, Agave Nectar, brown seaweed, fermentable fiber, cereal, sea cucumber, agave, artichokes, asparagus, leeks, garlic, onions, rye, barley kernels, wheat, pears, apples, guavas, quince, plums, gooseberries, oranges and other citrus fruits.

10. The composition of claim 1, wherein the polyphenolic compounds are enriched from a plant species selected from the group consisting of or a combination thereof *Melissa officinalis, Momordica balsamina, Mentha piperita, Perilla frutescens, Salvia officinalis, Teucrium scorodonia, Sanicula europaea, Coleus blumei, Thymus spp., Hyptis verticillata, Lithospermum erythrorhizon,* hornwort *Anthoceros agrestis, Piper longum* Linn, *Coptis chinensis* Franch, *Angelica sinensis* (Oliv.) Diels, *Toxicodendron vernicifluum, Glycyrrhiza glabra, Glycyrrhiza uralensis, Curcuma longa, Salvia Rosmarinus, Rosmarinus officinalis, Zingiber officinalis, Polygala tenuifolia, Humulus lupulus, Lonicera Japonica, Salvia officinalis* L., *Centella asiatica, Boswellia carteri, Mentha longifolia, Picea crassifolia, Citrus nobilis* Lour, *Citrus aurantium* L. *Camellia sinensis* L. *Pueraria mirifica, Pueraria lobata, Glycine max, Capsicum species, Fallopia japonica,* tea,

tomato, cruciferous vegetables, grapes, blueberries, raspberries, mulberries, apple, chili peppers.

11. The composition of claim 1, wherein the polyphenolic compounds comprise Rosmarinic acid, conjugated catechins such as EGCG, ECG, epigallocatechin, oroxylin, Kaempferol, genistein, quercetin, Butein, Luteolin, chrysin, Apigenin, curcumin, resveratrol, capsaicin, glomeratose A, 6-shogaol, gingerol, berberine, Piperine or a combination thereof.

12. The composition of claim 1, wherein the polysaccharides and polyphenols are enriched from a plant part or a fungus selected from the group consisting of leaves, bark, trunk, trunk bark, stem, stem bark, twigs, tubers, root, rhizome, root bark, bark surface, young shoots, seed, fruit, fruitbody, mushroom, androecium, gynoecium, calyx, stamen, petal, sepal, carpel (pistil), flower, or any combination thereof.

13. The composition of claim 1, wherein the *Aloe* extract, the *Poria* extract and the *Rosemary* extract in the composition are extracted with any suitable solvent, including supercritical fluid of CO_2, water, methanol, ethanol, acetone, alcohol, a water-mixed solvent or a combination thereof.

14. The composition of claim 1, wherein the polysaccharides are enriched individually and/or in combination by solvent precipitation, ultrafiltration, enzyme digestion, column chromatograph with silica gel, XAD, HP20, LH20, C-18, alumina oxide, polyamide, CG161, and size exclusion column resins.

15. The composition of claim 1, wherein one or more polyphenols are enriched individually or in combination by solvent partition, precipitation, distillation, evaporation, ultrafiltration, column chromatograph with silica gel, XAD, HP20, LH20, C-18, alumina oxide, polyamide, size exclusion column and CG161 resins.

16. The composition of claim 1, wherein the composition further comprises a pharmaceutically or nutraceutically acceptable active, adjuvant, carrier, diluent, or excipient, and wherein

the pharmaceutical or nutraceutical formulation comprises from about 0.1 weight percent (wt%) to about 99.9 wt% of active compounds.

17. The composition of claim 16, wherein the active, adjuvant, excipient or carrier comprises *Cannabis sativa* oil or CBD/THC, turmeric extract or curcumin, terminalia extract, willow bark extract, Devil's claw root extract, cayenne pepper extract or capsaicin, Prickly Ash bark extract, philodendra bark extract, hop extract, *Boswellia* extract, rose hips extract, green tea extract, *Sophora* extract, Mentha or Peppermint extract, ginger or black ginger extract, green tea or grape seed polyphenols, Omega-3 or Omega-6 Fatty Acids, fish oil, Krill oil, gamma-linolenic acid, citrus bioflavonoids, *Acerola* concentrate, astaxanthin, pycnogenol, vitamin C, vitamin D, vitamin E, vitamin K, vitamin B, vitamin A, L-lysine, calcium, manganese, zinc, mineral amino acid chelate(s), amino acid(s), boron and boron glycinate, silica, probiotics, Camphor, Menthol, calcium-based salts, silica, histidine, copper gluconate, CMC, maltodextrin, beta-cyclodextrin, cellulose, dextrose, saline, water, oil, shark and bovine cartilage, or a combination thereof.

18. The composition of claim 1, wherein the composition is formulated as a tablet, hard capsule, soft gel capsule, powder, or granule, compressed tablet, pill, gummy, chewing gum, sashay, wafer, bar, or liquid form, tincture, aerial spread, semi solid, semi liquid, solution, emulsion, cream, lotion, ointment, gel base or like form.

19. Use of a composition in the manufacture of a medicament for treating, managing, promoting regulation of immunity homeostasis in a mammal, wherein the composition is to be administered in an effective amount from 0.01 mg/kg to 500 mg/kg body weight of the mammal.

20. The use of claim 19, wherein the composition comprises a combination of an *Aloe* extract enriched for one or more polysaccharides; a *Poria* extract enriched for one or more polysaccharides; and a *Rosemary* extract enriched for one or more polyphenolic compounds.

21. The use of claim 19, wherein administration of the composition is selected from the group comprising oral administration, topical administration, suppository administration, intravenous administration, intradermic administration, intragastric administration, intramuscular administration, intraperitoneal administration, and intravenous administration.

22. The use of claim 19, wherein the use includes maintaining immune homeostasis by optimizing or balancing the immune response; improving aging and immune organ senescence compromised immunity; preventing chronic inflammation and inflammation-compromised immunity; helping to maintain a healthy immune response to influenza vaccination or COVID-19 vaccination; helping to maintain a healthy immune function against virus infection and bacterial infections; protecting the immune system from oxidative stress damage induced by air pollution of a mammal.

23. The use of claim 19, further comprising regulating HMGB1 as endogenous or exogenous response assault triggers and shifting host immune response to restore homeostasis by inhibition of HMGB1 release or counteract its action as targeting HMGB1 active or passive release by blocking cytoplasm translocation, or by blocking vesicle mediated release; or inhibiting intramolecular disulfide bond formation in the nucleus; targeting HMGB1 directly upon release and neutralize its effect; blocking HMGB1 pattern recognizing receptors such as Toll-like Receptor (TLR)-2/4/7/9 and receptor for advanced glycation end products (RAGE) or inhibiting their signal transductions; changing the physiochemical microenvironment and preventing formation of HMGB1 tetramer and interfere the binding affinity of HMGB1 to TLR and RAGE, preventing cluster formation or self-association of HMGB1.

24. The use of claim 19, further comprising supporting healthy inflammatory response; maintaining healthy levels of Complement C3 and C4 proteins, cytokines and cytokine responses to infections; mitigating , regulating and maintaining TNF-α, IL-1β, IL-6, GM-

CSF; IFN-α; IFN-γ; IL-1α; IL-1RA; IL-2; IL-4; IL-5; IL-7; IL-9; IL-10; IL-12 p70; IL-13; IL-15; IL17A; IL-18; IL-21; IL-22; IL-23; IL-27; IL-31; TNF-β/LTA, CRP, and CINC3.

25. The use of claim 19, further comprising controlling oxidative response and alleviating oxidative stress; augmenting antioxidant capacity by increasing catalase (CAT), glutathione peroxidase (GSH-Px), superoxide dismutase (SOD), and Nrf2; reducing or maintaining malondialdehyde (MDA), 8-iso-prostaglandin F2α, and advanced glycation end-products (AGEs); neutralizing reactive oxygen species; protecting UV and chemical oxidative stress caused DNA damage of a mammal.

26. The use of claim 19, further comprising improving innate immunity; improving adaptive immunity; increasing the activity and count of the white blood cells, enhancing Natural Killer (NK) cell function; increasing, regulating, maintaining the counts of T and B lymphocytes, neutrophils, lymphocytes, monocytes, eosinophils, basophils; increasing CD3+, CD3- CD56+ NK cells, CD3+ CD56+ NKT cells, CD3+ CD56- T lymphocytes, CD3-CD56- non-NK, non-T lymphocytes, CD3-CD57+ NK cells, CD3- CD56+CD57+ NK cells, CD4+ NKp46+ Natural Killer cells, TCRγδ+ Gamma delta T cells, and CD4+TCRγδ+ Helper Gamma delta T cells and CD8+ cell counts; regulating CD45+ cells, CD45RA naïve T and B cells,CD45R0 activated and memory T and B cells; protecting and promoting macrophage phagocytic activity; and supporting or promoting normal antibody IgG, IgM, IgA production, hemagglutinin inhibition (HI) titers for specific strains of virus of a mammal.

27. The use of claim 19, further comprising maintaining healthy pulmonary microbiota or symbiotic system in respiratory organs; maintaining lung cleansing and detox capability; protecting lung structural integrity and oxygen exchanging capacity; maintaining respiratory passages and enhancing oxygen absorption capacity of alveoli; protecting normal healthy lung function from virus infection, bacterial infections, smoking and air pollution; mitigating oxidative stress caused pulmonary damage; and promoting microcirculation of the lung and protecting normal coagulation function of a mammal.

28. The use of claim 19, further comprising relieving or reducing cold/flu-like symptoms comprising body aches, sore throat, cough, minor throat and bronchial irritation, nasal congestion, sinus congestion, sinus pressure, runny nose, sneezing, loss of smell, loss of taste, muscle sore, headache, fever and chills; helping loosen phlegm (mucus) and thin bronchial secretions to make coughs more productive; reducing severity of bronchial irritation; reducing severity of lung damage or edema or inflammatory cell infiltration caused by virus infection, microbial infection and air pollution; supporting bronchial system and comfortable breathing through the cold/flu or pollution seasons; preventing or treating lung fibrosis; reducing duration or severity of common cold/flu; reducing severity or duration of virus and bacterial infection of respiratory system; preventing, or treating or curing respiratory infections caused by virus, microbial, and air pollutants; managing or treating or preventing, or reversing the progression of respiratory infections; and managing or treating or preventing, or reversing the progression of pneumonia, promoting and strengthening and rejuvenating the repair and renewal function of lung and the entire respiratory system of a mammal.

29. A composition for maintenance of immunity homeostasis by regulating HMGB1, comprising a combination of one or more polysaccharides and one or more polyphenolic compounds, wherein the composition modulates HMGB1 by inhibition of HMGB1 release or counteract its action as targeting HMGB1 active or passive release by blocking cytoplasm translocation, or by blocking vesicle mediated release; or inhibiting intramolecular disulfide bond formation in the nucleus; or targeting HMGB1 directly upon release and neutralize its effect; or blocking HMGB1 pattern recognizing receptors such as Toll-like Receptor (TLR)-2/4/7/9 and receptor for advanced glycation end products (RAGE) or inhibiting their signal transductions; or changing the physiochemical microenvironment and preventing formation of HMGB1 tetramer and interfere the binding affinity of HMGB1 to TLR and RAGE; or preventing cluster formation or self-association of HMGB1.

30. The composition of claim 29, wherein the polysaccharides and phenolic compounds in the composition is in a range of 1%: 99% and 99% :1% by weight of each type of compound.

31. The composition of claim 29, wherein the one or more polysaccharides are enriched from a plant species comprising *Aloe vera*, *Aloe barbadense*, *Aloe ferox*, *Aloe arborescens*, *Astragalus membranaceus*, *Ganoderma lucidum*, *Hordeum vulgare*, *Agaricus (A. blazei) subrufescens*, *Echinacea purpurea*, *Echinacea angustifolia*, *Aconitum Napellus* (Monkshood), *Sambucus nigra*, *Poria cocos* Wolf, *Wolfiporia extensa*, *Withania somnifera*, *Bupleurum falcatum*, *Glycyrrhiza spp*, *Panax quinquefolium*, *Panax ginseng* C. A. Meyer, Korea red ginseng, *Lentinula edodes* (shiitake), *Inonotus obliquus* (Chaga mushroom), *Lentinula edodes*, *Lycium barbarum*, *Lycium chinense*, *Phellinus linteus* (fruit body), *Trametes versicolor* (fruit body), *Cyamopsis tetragonolobus Cyamopsis tetragonolobus* (guar gum), *Trametes versicolor*, *Cladosiphon okamuranus* Tokida, *Undaria pinnatifida*, mushrooms, seaweeds, yeasts, brown algae, Agave Nectar, brown seaweed, fermentable fiber, cereal, sea cucumber, agave, artichokes, asparagus, leeks, garlic, onions, rye, barley kernels, wheat, pears, apples, guavas, quince, plums, gooseberries, oranges and other citrus fruits, or a combination thereof.

32. The composition of claim 29, wherein the polyphenolic compounds are enriched from a plant species comprising *Melissa officinalis*, *Momordica balsamina*, *Mentha piperita*, *Perilla frutescens*, *Salvia officinalis*, *Teucrium scorodonia*, *Sanicula europaea*, *Coleus blumei*, *Thymus spp*., *Hyptis verticillata*, *Lithospermum erythrorhizon*, hornwort *Anthoceros agrestis*, *Piper longum* Linn, *Coptis chinensis* Franch, *Angelica sinensis* (Oliv.) Diels, *Toxicodendron vernicifluum*, *Glycyrrhiza glabra*, *Glycyrrhiza uralensis*, *Curcuma longa*, *Salvia Rosmarinus*, *Rosmarinus officinalis*, *Zingiber officinalis*, *Polygala tenuifolia*, *Morus alba*, *Humulus lupulus*, *Lonicera Japonica*, *Salvia officinalis* L., *Centella asiatica*, *Boswellia carteri*, *Mentha longifolia*, *Picea crassifolia*, *Citrus nobilis* Lour, *Citrus aurantium* L. *Camellia sinensis* L. *Pueraria mirifica*, *Pueraria lobata*, *Glycine max*, *Capsicum species*, *Fallopia japonica*, tea, tomato, cruciferous vegetables, grapes, blueberries, raspberries, mulberries, apple, chili peppers, or a combination thereof.

33. The composition of claim 29, wherein the polyphenolic compounds comprise rosmarinic acid, conjugated catechins such as EGCG, ECG, epigallocatechin etc. Oroxylin, Kaempferol, genistein, quercetin, Butein, Luteolin, chrysin, Apigenin, curcumin, resveratrol, capsaicin, glomeratose A, 6-shogaol, gingerol, berberine, Piperine, or a combination thereof.

34. The composition of claim 29, wherein the polysaccharides and polyphenolic compounds are enriched from a plant part or a fungus selected from the group consisting of leaves, bark, trunk, trunk bark, stem, stem bark, twigs, tubers, root, rhizome, root bark, bark surface, young shoots, seed, fruit, fruitbody, mushroom, androecium, gynoecium, calyx, stamen, petal, sepal, carpel (pistil), flower, or any combination thereof.

35. The composition of claim 29, wherein the polysaccharides and polyphenolic compounds in the composition are extracted from biomasses with any suitable solvent, including supercritical fluid of CO_2, water, methanol, ethanol, alcohol, a water-mixed solvent or a combination thereof.

36. The composition of claim 29, wherein the polysaccharides are enriched individually or in combination by solvent precipitation, ultrafiltration, enzyme digestion, column chromatograph with silica gel, XAD, HP20, LH20, C-18, alumina oxide, polyamide, size exclusion column, and CG161 resins.

37. The composition of claim 29, wherein one or more polyphenolic compounds are enriched individually or in combination by solvent partition, precipitation, ultrafiltration, distillation, evaporation, column chromatograph with silica gel, XAD, HP20, LH20, C-18, alumina oxide, polyamide and CG161 resins.

38. The composition of claim 29, wherein the composition further comprises a pharmaceutically or nutraceutically acceptable active, adjuvant, carrier, diluent, or

excipient, wherein the pharmaceutical or nutraceutical formulation comprises from about 0.1 weight percent (wt%) to about 99.9 wt% of active compounds.

39. The composition of claim 38, wherein the active, adjuvant, excipient or carrier is selected from one or more of *Cannabis sativa* oil or CBD/THC, turmeric extract or curcumin, terminalia extract, willow bark extract, Devil's claw root extract, cayenne pepper extract or capsaicin, Prickly Ash bark extract, philodendra bark extract, hop extract, *Boswellia* extract, rose hips extract, green tea extract, *Sophora* extract, Mentha or Peppermint extract, ginger or black ginger extract, green tea or grape seed polyphenols, Omega-3 or Omega-6 Fatty Acids, Krill oil, gamma-linolenic acid, citrus bioflavonoids, *Acerola* concentrate, astaxanthin, pycnogenol, vitamin C, vitamin D, vitamin E, vitamin K, vitamin B, vitamin A, L-lysine, calcium, manganese, Zinc, mineral amino acid chelate(s), amino acid(s), boron and boron glycinate, silica, probiotics, Camphor, Menthol, calcium-based salts, silica, histidine, copper gluconate, CMC, maltodextrin, beta-cyclodextrin, cellulose, dextrose, saline, water, oil, shark and bovine cartilage, or a combination thereof.

40. The composition of claim 29, wherein the composition is formulated as a tablet, hard capsule, soft gel capsule, powder, or granule, compressed tablet, pill, gummy, chewing gum, sashay, wafer, bar, or liquid form, tincture, aerial spread, semi solid, semi liquid, solution, emulsion, cream, lotion, ointment, or gel base.

41. The composition of claim 29, wherein the composition has a route of administration comprising oral administration, topical administration, suppository administration, intravenous administration, intradermic administration, intragastric administration, intramuscular administration, intraperitoneal administration, and intravenous administration.

42. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for treating, managing, promoting regulation of immunity homeostasis in a

mammal, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of the mammal.

43. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for maintaining immune homeostasis by optimizing or balancing the immune response; helping to maintain a healthy immune function against virus infection and bacterial infections; protecting immune system from oxidative stress damage induced by air pollution; protecting normal healthy lung function from virus infection, bacterial infections and air pollution, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of a mammal.

44. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for regulating HMGB1 as endogenous or exogenous response assault triggers and shifting host immune response to restore homeostasis, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of a mammal.

45. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for supporting healthy inflammatory response; maintaining healthy level of Complement C3 and C4 proteins, cytokines and cytokine responses to infections; mitigating, regulating and maintaining TNF-α, IL-1β, IL-6, GM-CSF; IFN-α; IFN-γ; IL-1α; IL-1RA; IL-2; IL-4; IL-5; IL-7; IL-9; IL-10; IL-12 p70; IL-13; IL-15; IL17A; IL-18; IL-21; IL-22; IL-23; IL-27; IL-31; TNF-β/LTA, CRP, and CINC3, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of a mammal.

46. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for controlling oxidative response and alleviating oxidative stress; augmenting antioxidant capacity by increasing catalase (CAT), glutathione peroxidase (GSH-Px), superoxide dismutase (SOD), and Nrf2; reducing or maintaining malondialdehyde (MDA), 8-iso-prostaglandin F2α, and advanced glycation end-products (AGEs); neutralizing

reactive oxygen species; protecting UV and chemical oxidative stress from causing DNA damage, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of a mammal.

47. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for improving innate immunity; improving adaptive immunity; increasing the activity and count of the white blood cells, enhancing Natural Killer (NK) cell function; increasing, regulating, maintaining the counts of T and B lymphocytes, neutrophils, lymphocytes, monocytes, eosinophils, basophils; increasing CD3+, CD3- CD56+ NK cells, CD3+ CD56+ NKT cells, CD3+ CD56- T lymphocytes, CD3-CD56- non-NK, non-T lymphocytes, CD3-CD57+ NK cells, CD3- CD56+CD57+ NK cells, CD4+ NKp46+ Natural Killer cells, TCRγδ+ Gamma delta T cells, and CD4+TCRγδ+ Helper Gamma delta T cells and CD8+ cell counts; regulating CD45+ cells, CD45RA naïve T and B cells, CD45R0 activated and memory T and B cells; protecting and promoting macrophage phagocytic activity; supporting or promoting normal antibody IgG, IgM, IgA production, hemagglutinin inhibition (HI) titers for specific strains of virus, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of a mammal.

48. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for maintaining healthy pulmonary microbiota or symbiotic system in respiratory organs; maintaining lung cleanse and detox capability; protecting lung structure integrity and oxygen exchanging capacity; maintaining respiratory passages and enhancing oxygen absorption capacity of alveoli; mitigating oxidative stress caused pulmonary damage; promoting microcirculation of the lung and protecting normal coagulation function, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of a mammal.

49. Use of an effective amount of the composition of claim 29 in the manufacture of a medicament for relieving or reducing cold or flu-like symptoms comprising body aches,

sore throat, cough, minor throat and bronchial irritation, nasal congestion, sinus congestion, sinus pressure, runny nose, sneezing, loss of smell, loss of taste, muscle sore, headache, fever and chills; helping loosen phlegm (mucus) and thin bronchial secretions to make coughs more productive; reducing severity of bronchial irritation; reducing severity of lung damage or edema or inflammatory cell infiltration caused by virus infection, microbial infection and air pollution; supporting bronchial system and comfortable breathing through the cold/flu or pollution seasons; preventing or treating lung fibrosis; reducing duration or severity of common cold/flu; reducing severity or duration of virus and bacterial infection of respiratory system; preventing, or treating or curing respiratory infections caused by virus, microbial, and air pollutants; managing or treating or preventing, or reversing the progression of respiratory infections; and managing or treating or preventing, or reversing the progression of pneumonia, promoting and strengthening and rejuvenating the repair and renewal function of lung and the entire respiratory system of a mammal, wherein the composition is to be administered in an amount from 0.01 mg/kg to 500 mg/kg body weight of the mammal.