CLAIMS

~~We claim:~~

1. A medical dressing comprising:

a bottom layer including a vapor barrier, the bottom layer comprising at least one or more of aluminum foil, aluminum oxide or silicon oxide coated polymeric film, polyethylene, or polypropylene;

a gas permeable membrane layer over the bottom layer, the gas permeable membrane layer having an upper surface configured to interface with a person's skin; and

an antiseptic disposed within the gas permeable membrane layer, the antiseptic comprising at least one or more of hydrogen peroxide, carbamide peroxide, ethylenediaminetetraacetic acid, sodium citrate, or alcohol, wherein the antiseptic includes an infection inhibiting solution comprising: approximately 5 to approximately 50 mg/ml of ethylenediaminetetraacetic acid (EDTA); less than or equal to approximately 70% ethanol, by volume; less than or equal to approximately 7.5% hydrogen peroxide, by volume; and water.

2. The medical dressing of claim 1, further comprising a removable top layer including a vapor barrier comprising at least one or more of aluminum foil, aluminum oxide, silicon oxide coated polymeric film, polyethylene, polypropylene, polysilicone, polyvinyl chloride, polytetrafluoroethylene, or mylar.

3. The medical dressing of claim 2, wherein the removable top layer and the bottom layer are formed of identical materials.

4. The medical dressing of claim 2, wherein the removable top layer is removably connected to the bottom layer and the removable top layer is configured for removal by tearing at a perforation line between the bottom layer and the removable top layer.

5. The medical dressing of claim 2, further comprising an adhesive material region around a perimeter of the top layer.

6. A medical dressing comprising:

a bottom layer including a vapor barrier, the bottom layer comprising at least one or more of aluminum foil, aluminum oxide, silicon oxide coated polymeric film, polyethylene, polypropylene, polysilicone, polyvinyl chloride, polytetrafluoroethylene, or mylar;

a gas permeable membrane layer over the bottom layer;

an antiseptic disposed within the gas permeable membrane layer, the antiseptic comprising at least one or more of hydrogen peroxide, carbamide peroxide, ethylenediaminetetraacetic acid, citrate, alcohol, wherein the antiseptic includes an infection inhibiting solution comprising: approximately 5 to approximately 50 mg/ml of ethylenediaminetetraacetic acid (EDTA); less than or equal to approximately 70% ethanol, by volume; less than or equal to approximately 7.5% hydrogen peroxide, by volume; and water; and

an absorbent material layer over the gas permeable membrane layer, the absorbent material layer having an upper surface configured to interface with a person's skin.

7. The medical dressing of claim 6, wherein the medical dressing has a central opening passing through the medical dressing and a slit extending from the central opening through an outer edge of the medical dressing.

8. The medical dressing of claim 6, further comprising an adhesive material region around a perimeter of the medical dressing.

9. The medical dressing of claim 6, wherein the upper surface comprises at least one of a transparent material, a translucent material, or a semi-transparent material.

10. The medical dressing of claim 6, wherein the medical dressing comprises a partial opening to allow visual observation of progress of a site on the person's skin.

~~11. A method of inhibiting wound infection comprising:~~

~~identifying a wound site; and~~

~~applying an antimicrobial dressing to the wound site, the antimicrobial dressing comprising:~~

~~a bottom layer including a vapor barrier, the bottom layer comprising at least one or more of aluminum foil, aluminum oxide, silicon oxide coated polymeric film, polyethylene, polypropylene, polysilicone, polyvinyl chloride, polytetrafluoroethylene, or mylar;~~

~~a gas permeable membrane layer over the bottom layer;~~

~~an antiseptic disposed within the gas permeable membrane layer, the antiseptic comprising at least one or more of hydrogen peroxide, carbamide peroxide, ethylenediaminetetraacetic acid (EDTA), salts of EDTA, sodium citrate, or alcohol; and~~

an absorbent material layer over the gas permeable membrane layer, the absorbent material layer having an upper surface configured to interface with a patient's skin.

12. The method of claim 11, wherein the wound site is a site to be incised or a site where a catheter is to be placed and wherein the identifying and the applying are performed prior to incising or placement of the catheter to pretreat the wound site.

13. The method of claim 12, further comprising providing access through the antimicrobial dressing through the wound site to perform a surgical procedure while providing protection against microorganisms.

14. A method of inhibiting infection at a catheter site comprising:

providing a dressing that includes an antiseptic disposed within a gas permeable membrane layer, the antiseptic comprising at least one or more of hydrogen peroxide, ethylenediaminetetraacetic acid (EDTA, disodium EDTA, water, or ethanol;

inserting a catheter through a slit into a central opening in the dressing; and

applying a front surface of the dressing to skin of a patient.

15. The method of claim 14, wherein the dressing comprises:

a bottom layer including a vapor barrier, the bottom layer comprising at least one or more of aluminum foil, aluminum foil, aluminum oxide, silicon oxide coated polymeric film, polyethylene, polypropylene, polysilicone, polyvinyl chloride, polytetrafluoroethylene, or mylar;

a gas permeable membrane layer over the bottom layer; and

~~an absorbent material layer over the gas permeable membrane layer, the absorbent material layer having an front surface configured to interface with a person's skin.~~

~~16. The method of claim 14, wherein the dressing further comprises adding chelating agents to the antiseptic disposed within the gas permeable membrane layer.~~

~~17. The method of claim 14, wherein the dressing further comprises adding benzyl peroxide to the antiseptic disposed within the gas permeable membrane layer.~~

~~18~~11. An infection inhibiting solution comprising:

approximately 5 to approximately 50 mg/ml of ethylenediaminetetraacetic acid (EDTA);

less than or equal to approximately 70% ethanol, by volume;

less than or equal to approximately 7.5% hydrogen peroxide, by volume; and

water.

~~19~~12. The solution of claim ~~18~~11, comprising less than or equal to approximately 3% hydrogen peroxide, by volume.

~~20~~13. The solution of claim ~~18~~11, comprising applications in at least one of a medical dressing, a swab, a polymeric foam, or a hand cleanser.

~~21~~14. The solution of claim ~~18~~11, comprising EDTA and ethanol each in mutual concentrations that are in amounts that are not stable, possible by presence of hydrogen peroxide.

~~22~~15. The solution of claim ~~18~~11, further comprising:

adding a dry amount of EDTA to a vessel;

adding an amount of about 20% to about 30% hydrogen peroxide;

adding a minimal amount of water;

adding a dilute amount about 0.1 to about 1.0 M NaOH, while stirring in a presence of a pH electrode, wherein the stirring is continued until the pH reaches a minimal value and remains steady for approximately one minute;

adding an amount of ethanol to reach a desired percentage while stirring and monitoring the pH;

adding more NaOH to reach a desired pH value; and

adding more water to bring the infection inhibiting solution to desired concentrations.

~~23. A method of preparing a needle injection site or a catheter site, the method comprising:~~

~~identifying the needle injection site or the catheter site; and~~

~~applying an infection inhibiting solution in a medical dressing to skin of a patient at the identified site, the infection inhibiting solution comprising:~~

- ~~water;~~
- ~~ethanol;~~
- ~~ethylenediaminetetraacetic acid; and~~
- ~~hydrogen peroxide.~~