CLAIMS

What is claimed is:

1. A germicidal partition system comprising:

at least one negative ion generator comprising:

at least one negative voltage source configured to produce a potential between -3 kV and -10 kV and sufficient to produce negatively ionized air with a negative air ion concentration of at least 1 million negative air ions per cubic centimeter of air, and configured to produce a net increase in ozone concentration between zero and 0.01 parts per million;

at least one voltage conductor electrically connected to the at least one negative voltage source;

at least one output manifold; and

a plurality of anodes distributed along at least a portion of the at least one output manifold and electrically connected to the at least one voltage conductor; and

at least one fan configured to:

draw air into the system;

direct the air through the at least one output manifold and past the plurality of anodes to create the negatively ionized air; and

output the negatively ionized air through the at least one manifold, wherein the negatively ionized air outputted through the at least one manifold creates a barrier between a first air mass and a second air mass, such that the outputted negatively ionized air reduces at least one of the transfer of contaminants or the concentration of viable contagions between the first air mass and the second air mass.

2. The germicidal partition system of claim 1 wherein the system is mounted above a doorway or portal or on a ceiling.

3. The germicidal partition system of claim 2 wherein the outputted air subtends a majority of a width of the doorway or portal and extends downward for at least four feet.

4. The germicidal partition system of claim 1 wherein the germicidal partition system further comprises at least a first sensor and a control system and wherein the first sensor is in communication with the control system, such that the control system is configured to alter a state of at least one of the at least one fan or the at least one negative ion generator when the sensor receives a stimulus.

5. The germicidal partition system of claim 4, wherein the stimulus is at least one of a motion stimulus or a sound stimulus.

6. The germicidal partition system of claim 4 wherein, upon receiving the stimulus, the control system activates the fan for a set duration of time and, once the duration of time has lapsed, the control system deactivates the fan.

7. The germicidal partition system of claim 1 wherein:

the at least one manifold is attached to the at least one anode; and

the at least one manifold is removably attached to the system, such that the at least one manifold can be removed with the at least one anode from the system and cleaned or exchanged with at least one replacement manifold and at least one replacement anode.

8. The germicidal partition system of claim 1 wherein the system is configured to be portable and worn on a garment.

9. The germicidal partition system of claim 1 wherein:

the air outputted through the at least one manifold is laminar.

10. The germicidal partition system of claim 1 wherein acoustic noise produced by the system during operation is less than 55 dBA.

11. The germicidal partition system of claim 1 wherein the system is powered by at least one of mains AC, a battery, or any combination thereof.

12. The germicidal partition system of claim 1 wherein the air outputted through the at least one manifold has a net cross-sectional shape of at least one of a polygon, circle, ellipse, or oval.

13. The germicidal partition system of claim 1, wherein the system does not comprise a filter.

14. The germicidal partition system of claim 1, wherein the system is configured to produce the net increase in ozone concentration between zero and 0.01 parts per million without a filter, ozone scrubber, or heater.

15. The germicidal partition system of claim 1, wherein the system is configured to disinfect surfaces proximate to the barrier.

16. The germicidal partition system of claim 1, wherein the system is configured such that the negative air ion concentration in the barrier is at least 1 million ions per cubic centimeter at a distance of at least four feet from the output manifold over at least a majority of a width of the barrier.