Claims

1. A composition comprising an infusion ready population of mammalian allogeneic mesenchymal stem cells that have been activated by exposure to one or more activating agents selected from the group consisting of a Toll-like receptor 3 (TLR3) agonist, a Toll-like receptor 9 (TLR9) agonist, a Toll-like receptor 4 (TLR4) agonist, a nuclear oligodimerization domain (NOD) receptor agonist, an RIG-I receptor (RLR) agonist, a cytosolic DNA sensor (CDS) agonist, and a STING receptor agonist, and one or more pharmaceutically acceptable carriers, diluents, or excipients.

2. The composition of claim 1, wherein the composition is formulated for intravenous administration.

3. The composition of claim 2, wherein the population of allogeneic mesenchymal stem cells are obtained or derived from bone marrow, adipose tissue, cord blood, tissue biopsies, or induced pluripotent stem cells (iPSC).

4. The composition of claim 1, wherein the population of allogeneic mesenchymal stem cells is activated by *in vitro* or *ex vivo* incubation with the one or more activating agents for at least 2 hours.

5. The composition of claim 1, wherein the TLR3 agonist is selected from the group consisting of polyadenylic-polyuridylic acid (poly(A:U), polyinosine-polycytidylic acid (pIC), and UV-inactivated viral particles.

6. The composition of claim 1, wherein the TLR9 agonist is selected from the group consisting of CpG oligodeoxynucleotides (CpG ODNs), inhibitory oligodeoxynucleotides (ODNs), purified DNA, and purified or synthetic plasmid DNA.

7. The composition of claim 1, wherein the TLR4 agonist is selected from the group consisting of bacterial lipopolysaccharides (LPS) and monophosphoryl lipid A (MPLA) or heat killed Gram-negative bacteria.

8. The composition of claim 1, wherein the NOD receptor agonist is selected from the group consisting of NOD1, NOD2, and NOD1/2 mixed agonists.

9. The composition of claim 1, wherein the RLR receptor agonist is selected from the group consisting of double stranded RNA, synthetic pAT RNA, and synthetic pIC RNA.

10. The composition of claim 1, wherein the CDS agonist is double stranded DNA isolated from bacteria.

11. The composition of claim 1, wherein the STING receptor agonist is selected from the group consisting of cyclic dinucleotides; 3,3 cyclic gAMP; 2,3 cyclic gAMP; 2,2 cyclic gAMP; cyclic Di-GMP; and cyclic di-UMP.

12. The composition of claim 1, wherein the composition further comprises an effective amount of one or more antimicrobial agents, and wherein the one or more antimicrobial agents is a bactericidal antibiotic or a bacteriostatic antibiotic.

13. The composition of claim 12, wherein the bactericidal antibiotic is selected from the group consisting of penicillin derivatives (penams), cephalosporins (cephams), monobactams, carbapenems, vancomycin, daptomycin, fluoroquinolones, metronidazole, nitrofurantoin, co-trimoxazole, telithromycin, and aminoglycosidic antibiotics.

14. The composition of claim 12, wherein the bacteriostatic antibiotic is selected from the group consisting of tetracycline antibiotics, choloramphenicol, erythromycin, clindamycin, and linezolid, and wherein the tetracycline antibiotic is selected from the group consisting of tetracycline, doxycycline, and minocycline.

15. The composition of claim 1, wherein the allogenic mesenchymal stem cells are human mesenchymal stem cells.

16. The composition of claim 1, wherein the composition enhances healing of a chronically-infected wound with MDR bacteria in a mammal.

17. Use of the composition of any one of claims 1-16 in the manufacture of a medicament for treating a chronically infected wound in a mammal,

wherein the activated mesenchymal stem cells induce bacterial clearance, reduce bacterial burden, or induce bacterial clearance and reduce bacterial burden in the infected wound, and

wherein the activated mesenchymal stem cells have increased antimicrobial activity compared to mesenchymal stem cells that have not been activated.

18. The -use of claim 17, wherein the medicament is formulated for intravenous administration .

19. The use of claim 17, wherein the infected wound is selected from the group consisting of abrasions, lacerations, contusions, concussions, stab wounds, skin cuts, surgical wounds, gunshot wounds, burns, sunburns, frostbite, chemical wounds, bites, stings and electrical wounds.

20. The use of claim 17, wherein the medicament is for administration at the time of or after the wound occurs.