## CLAIMS

What is claimed is:

1. A method of preparing a platelet composition, comprising:
   (a) providing:
      (i) a first container containing a first volume of a solution comprising a platelet additive solution (PAS) and a pathogen inactivation compound (PIC) and
      (ii) a second container containing a second volume of a solution comprising a PAS and a PIC, wherein the first and second volumes are different;
   (b) selecting the first or the second container for use in preparing the platelet composition;
   (c) admixing the solution of the selected container with a preparation of platelets; and
   (d) subjecting the admixture of step (c) to light sufficient to photochemically inactivate a pathogen, if present, thereby yielding the platelet composition.

2. The method of claim 1, wherein the first or second container is selected for use based at least in part on a volume of the preparation of platelets, an amount of platelets in the preparation of platelets, or number of platelet compositions to be prepared.

3. The method of claim 1, wherein the first volume is sufficient for preparing one therapeutic dose of platelets.

4. The method of claim 1, wherein the second volume is sufficient for preparing two therapeutic doses of platelets.

5. The method of claim 1, wherein step (a) further comprises providing a third container containing a third volume of a solution comprising a PAS and a PIC, wherein the first, second, and third volumes are different.

6. The method of claim 5, wherein the third volume is sufficient for preparing three therapeutic doses of platelets.

7. The method of claim 1, wherein the admixing of step (c) occurs in the selected first or second container.

8. The method of claim 1, wherein the admixing of step (c) occurs in a third container.

9. The method of claim 1, wherein subjecting the admixture to light of step (d) occurs in the selected first or second container.

10. The method of claim 1, wherein subjecting the admixture to light of step (d) occurs in a third container.

11. The method of claim 1, further comprising, after step (d), transferring the platelet composition to a container comprising a compound adsorption device (CAD).

12. The method of claim 1, further comprising, after step (d), transferring the platelet composition to a storage container suitable for storing the platelet composition.

13. The method of claim 1, wherein the PIC is a psoralen.

14. The method of claim 13, wherein the PIC is amotosalen.

15. The method of claim 1, wherein the admixture of step (c) comprises the PIC at a concentration of about 5 μM to about 500 μM.

16. The method of claim 1, wherein:

(i) the method is sufficient to inactivate at least 1 log of a pathogen, if present;

(ii) the concentration of PIC in the admixture of the preparation of platelets and the solution comprising PAS and PIC is about 15 μM to about 150 μM; and

(iii) the platelet composition after subjecting the admixture of the preparation of platelets and the solution comprising PAS and PIC to light comprises less than 5 μM of PIC.

17. The method of claim 1, wherein the method is sufficient to inactivate at least 1 log of a pathogen, if present, and wherein the platelet composition after step (d) is suitable for infusion into a subject without further processing to remove residual PIC or photoproducts thereof.

18. A method of preparing a platelet composition, comprising:
(a) providing in a first container a solution comprising a platelet additive solution (PAS) and a pathogen inactivation compound (PIC);
(b) connecting the first container to an apheresis device;
(c) admixing the solution of step (a) with a preparation of platelets prepared with the apheresis device; and
(d) subjecting the admixture of step (c) to light sufficient to photochemically inactivate a pathogen, if present, thereby yielding the platelet composition.

19. The method of claim 18, wherein the admixing of step (c) occurs in the first container.

20. The method of claim 18, wherein the admixing of step (c) occurs in a second container connected to the apheresis device.

21. The method of claim 18, wherein subjecting the admixture to light of step (d) occurs in the first container.

22. The method of claim 18, wherein subjecting the admixture to light of step (d) occurs in a second container.

23. The method of claim 18, further comprising, after step (d):

(e) transferring the platelet composition to a third container.

24. The method of claim 23, wherein the third container comprises a compound adsorption device (CAD).

25. The method of claim 23, wherein the third container is suitable for storage of the platelet composition.

26. The method of claim 18, wherein the PIC is a psoralen.

27. The method of claim 26, wherein the PIC is amotosalen.

28. The method of claim 18, wherein the admixture of step (c) comprises the PIC at a concentration of about 5 µM to about 500 µM.

29. The method of claim 18, wherein:

(i) the method is sufficient to inactivate at least 1 log of a pathogen, if present;

(ii) the concentration of PIC in the admixture of the preparation of platelets and the solution comprising PAS and PIC is about 15 µM to about 150 µM; and

(iii) the platelet composition after subjecting the admixture of the preparation of platelets and the solution comprising PAS and PIC to light comprises less than 5 µM of PIC.

30. A kit for preparing a platelet composition, comprising:
(a) a first container comprising a solution comprising a platelet additive solution (PAS) and a pathogen inactivation compound (PIC), and
(b) a second container suitable for containing a preparation of platelets in admixture with the solution comprising the PAS and the PIC,
wherein the first container is not coupled to the second container.

31. The kit of claim 30, comprising two or more first containers, wherein each of the two or more first containers contains a different volume of a solution comprising a PAS and a PIC.

32. The kit of claim 30, wherein the first container is suitable for admixing the preparation of platelets with the solution comprising the PAS and the PIC.

33. The kit of claim 30, wherein the second container is suitable for admixing the preparation of platelets with the solution comprising the PAS and the PIC.

34. The kit of claim 30, wherein the second container comprises a compound adsorption device (CAD).

35. The kit of claim 30, wherein the second container is suitable for storing the platelet composition.

36. The kit of claim 30, further comprising a third container, wherein the third container comprises a compound adsorption device (CAD), and wherein the third container is coupled to the second container.

37. The kit of claim 30, further comprising at least one storage container, wherein the at least one storage container is suitable for storing the platelet composition, and wherein the at least one storage container is coupled to the second container or to a third container, if present.

38. The kit of claim 30, wherein the first container, the second container, or both the first container and second container is suitable for connecting to an apheresis device or to a container containing a preparation of platelets.

39. The kit of claim 30, wherein the PIC is a psoralen.

40. A kit for preparing a platelet composition, comprising:
    (a) a first container comprising a platelet additive solution (PAS);
    (b) a second container comprising a pathogen inactivation compound (PIC); and
    (c) a third container suitable for containing a preparation of platelets in admixture with the with the PAS and the PIC,

wherein the first and second containers are coupled to one another, and wherein neither of the first and second containers is coupled to the third container.

41. The kit of claim 40, wherein the second container is suitable for combining the PAS with the PIC.

42. The kit of claim 40, wherein the first container is suitable for combining the PAS with the PIC.

43. The kit of claim 40, wherein the second container is suitable for admixing the preparation of platelets with the PAS and the PIC.

44. The kit of claim 40, wherein the first container is suitable for admixing the preparation of platelets with the PAS and the PIC.

45. The kit of claim 40, wherein the third container is suitable for admixing the preparation of platelets with the PAS and the PIC.

46. The kit of claim 40, wherein the third container is suitable for subjecting the preparation of platelets in admixture with the PAS and the PIC to light sufficient to photochemically inactivate a pathogen, if present.

47. The kit of claim 40, wherein the second container is suitable for subjecting the preparation of platelets in admixture with the PAS and the PIC to light sufficient to photochemically inactivate a pathogen, if present.

48. The kit of claim 40, wherein the first container is suitable for subjecting the preparation of platelets in admixture with the PAS and the PIC to light sufficient to photochemically inactivate a pathogen, if present.

49. The kit of claim 40, wherein the third container comprises a compound adsorption device (CAD).

50. The kit of claim 40, wherein the third container is suitable for storing the platelet composition.

51. The kit of claim 40, further comprising a fourth container, wherein the fourth container comprises a compound adsorption device (CAD), and wherein the fourth container is coupled to the third container.

52. The kit of claim 40, further comprising at least one storage container, wherein the at least one storage container is suitable for storing the platelet composition, and wherein the at least one storage container is coupled to the third container or to a fourth container, if present.