[0012] Further advantageously, the composition may have an improved ability to absorb water due to the combination of the surfactants having different HLB values.

[0013] Still further advantageously, the composition having a reduced stiffness and an improved ability to absorb water may be more effectively applied in medical uses.

[0014] In another aspect, the present disclosure relates to a method of forming a composition comprising the steps of: (a) heating a first surfactant, a second surfactant, a third surfactant, cholesterol, an active agent and a first solvent to form a mixture; and (b) heating the mixture of step (a) with a second solvent and cooling the mixture to form the composition, wherein the first surfactant has a transition temperature of at least 50 ℃, the second surfactant has a transition temperature of less than 20 ℃, and the third surfactant has a hydrophilic-lipophilic balance (HLB) value of at least 15.

[0015] In another aspect, the present disclosure relates to a kit comprising the composition as described herein and instructions for using the composition as described herein.

[0016] The present disclosure relates to a method of treating a disease in a patient, comprising administering to the patient an effective amount of the composition as described herein, wherein the disease is selected from the group consisting of inflammation, cancer, infection and combinations thereof.

[0017] The present disclosure also relates to a method of delivering an active agent to a target site, comprising the steps of:

(a) providing a composition comprising the active agent as described herein or as formed according to the method as described herein; and

(b) administering the composition at a first site to allow the active agent to move to or be transported to the target site.

[0017a] In another aspect, the present disclosure relates to an *in vitro* method of delivering an active agent to a target site, comprising the steps of:

(a) providing a composition comprising the active agent as described herein or as formed according to the method as described herein; and

(b) administering the composition at a first site to allow the active agent to move to or be transported to the target site.

[0018] Advantageously, the composition can be administered to a subject via topical administration or dermal administration. The composition can be used to administer the active agent to a subject with a disease (such as osteoarthritis (OA)), allowing local accumulation of the active agent while avoiding their systemic side effects.

[0019] Advantageously, the combination of surfactants with different physical properties may aid to facilitate spreading of the composition (in a gel form) onto a subject's skin, enhancing the release of the active agent from the composition and thereby increasing increase the amount of active agent delivered through the skin.

[0020] In another aspect, the present disclosure relates to the composition as described herein for use in therapy.

Claims

1. A composition comprising:
   a) a first surfactant having a transition temperature of at least 50 °C;
   b) a second surfactant having a transition temperature of less than 20 °C;
   c) a third surfactant having a hydrophilic-lipophilic balance (HLB) value of at least 15;
   d) cholesterol;
   e) an active agent;
   f) a first solvent; and
   e) a second solvent.

2. The composition according to claim 1, wherein at least one of the first surfactant, the second surfactant or the third surfactant is a non-ionic surfactant.

3. The composition according to claim 1 or 2, wherein said composition is a proniosome.

4. The composition according to any one of the preceding claims, wherein:
   the first surfactant has a weight percentage in the range of 5.7wt% to 74.8 wt%;
   the second surfactant has a weight percentage in the range of 2.8 wt% to 72 wt%;
   the third surfactant has a weight percentage in the range of 0.71 wt% to 69.8 wt%;
   the cholesterol has a weight percentage in the range of 0.74 wt% to 69.8 wt%;
   the active agent has a weight percentage in the range of 0.9 wt% to about 70 wt%;
   the first solvent has a weight ratio in the range of 10 wt% to 79.1 wt%; or
   the second solvent has a weight ratio in the range of 10 wt% to 79.1 wt%, based on the total weight of the composition.

5. The composition according to claim 4, wherein the first surfactant, the second surfactant, the third surfactant, cholesterol, the first solvent, the second solvent and the active agent have a weight ratio of 24.8: 12.4 : 3.4 : 3.2 : 30.5 : 24.8 : 0.9.

6. The composition according to any one of the preceding claims, wherein
   (a) the first surfactant is sorbitan monostearate;

(b) the second surfactant is sorbitan monooleate, sorbitan monolaurate or combinations thereof;
(c) the third surfactant is polyoxyethylene (20) sorbitan monolaurate;
(d) cholesterol;
(e) the active agent is a hydrophobic molecule;
(f) the first solvent is selected from the group consisting of methanol, ethanol, propanol, isopropanol, butanol, 1,2-propanediol, 1,3-propanediol or combinations thereof; or
(g) the second solvent is selected from the group consisting of water, a phosphate buffered saline or combinations thereof.

7. A method of forming a composition comprising the steps of:
(a) heating a first surfactant, a second surfactant, a third surfactant, cholesterol, an active agent and a first solvent to form a mixture; and
(b) heating the mixture of step (a) with a second solvent and cooling the mixture to form the composition,
wherein the first surfactant has a transition temperature of at least 50 ℃, the second surfactant has a transition temperature of less than 20 ℃, and the third surfactant has a hydrophilic-lipophilic balance (HLB) value of at least 15.

8. The method according to claim 7, wherein said heating steps (a) and (b) are undertaken at a temperature in the range of 50 °C to 80 ℃.

9. The method according to claim 7 or 8, wherein said cooling of the mixture in step (b) is undertaken at room temperature or until the composition reaches room temperature.

10. A kit comprising:
a) the composition according to any one of claims 1 to 6; and
b) instructions for using the composition in a).

11. The kit according to claim 10, wherein the composition comprises 200 mg to 400 mg of the active agent.

12. An *in vitro* method of delivering an active agent to a target site, comprising the steps of:
    (a) providing a composition comprising the active agent as described in any one of claims 1 to 6 or as formed according to the method as described in any one of claims 7 to 10; and
    (b) administering the composition at a first site to allow the active agent to move to or be transported to the target site.

13. The composition according to any one of claims 1 to 6 for use in therapy.

14. The composition according to any one of claims 1 to 6 for use in treating or preventing of a disease selected from the group consisting of inflammation, cancer, infection and combinations thereof.

15. Use of the composition according to any one of claims 1 to 6 in the manufacture of a medicament for the treatment or prevention of a disease selected from the group consisting of inflammation, cancer, infection and combinations thereof.

16. The composition for use of claim 13 or 14 or the use of claim 15, wherein said composition is to be administered dermally or topically 2 to 3 times daily to a patient.

17. The composition for use of claim 13 or 14 or the use of claim 15, wherein the composition comprises 200 mg to 400 mg of the active agent.

18. The composition for use of claim 13 or 14 or the use of claim 15, wherein the inflammation disease is osteoarthritis.