CLAIMS

1. An antimicrobial and/or anti-inflammatory composition comprising an extract of *Arthrospira*, and at least one organic acid in an amount of at least about 0.1 wt.% based on the total weight of the composition.

2. The composition of claim 1, wherein the organic acid is selected from the group comprising aromatic carboxylic acids, short chain fatty acids, medium and long chain saturated fatty acids, medium and long chain unsaturated fatty acids, polyphenols, phenolic acids, flavonoids, or a combination thereof.

3. The composition of claim 1 or claim 2, wherein the organic acid is selected from the group comprising benzoic acid, valproic acid, formic acid, acetic acid, propionic acid, butyric acid, isobutyric acid, valeric acid, isovaleric acid, cholorogenic acid , gallic acid, vanillin, salicylic acid, caffeic acid, syringic acid, coumaric acid, ferulic acid, cinnamic acid, quercetin, genstein, kaempferol, lauric acid, palmitic acid, sapienic acid, stearic acid, oleic acid, linoleic acid, gamma linolenic acid,docosodienoic acid or a combination thereof.

4. The composition of any one of the preceding claims, wherein the at least one organic acid is benzoic acid.

5. The composition of claim 4, wherein the amount of benzoic acid is between about 2 wt.% and about 15 wt.% based on the total weight of the composition.

6. The composition of any one of the preceding claims, wherein the composition further comprises titanium dioxide.

7. The composition of claim 6, wherein the amount of titanium dioxide is between about 0.5 wt.% and about 3.0 wt.% based on the total weight of the composition.

8. The composition of any one of the preceding claims, wherein the moisture content of the composition is less than about 20 wt.%.

9. The composition of any one of the preceding claims, wherein the composition is formulated for administration to a mammal by topical administration.

10. The composition of any one of the preceding claims, wherein the composition is in the form of a powder, cream or lotion.

11. A process for preparing an antimicrobial and/or anti-inflammatory composition comprising an extract of *Arthrospira*, and at least one organic acid, comprising the following steps:

(i) obtaining an extract of *Arthrospira*; and

(ii) adding at least one agent to decolorize and/or deodorize the *Arthrospira* extract to provide the antimicrobial and/or anti-inflammatory composition, wherein the addition of the at least one agent produces the organic acid.

12. The process of claim 11, wherein the agent to decolorize and/or deodorize is selected from the group comprising hydrogen peroxide, benzoyl peroxide, valproate peroxide, acetyl peroxide, formyl hydroperoxide, peroxypropionic acid, peroxybutyric acid, or a combination thereof.

13. The process of claim 11 or claim 12, wherein the agent is selected from hydrogen peroxide and benzoyl peroxide.

14. The process of claim 13, which further comprises adding at least one organic acid.

15. A process for preparing an antimicrobial and/or anti-inflammatory composition comprising an extract of *Arthrospira*, and at least one organic acid, comprising the following steps:

(i) obtaining an extract of *Arthrospira*; and

(ii) adding at least one organic acid to the *Arthrospira* extract to provide the antimicrobial and/or anti-inflammatory composition.

16. The process of any one of claims 11 to 15 which further comprises growing and harvesting *Arthrospira*.

17. The process of any one of claims 11 to 16, wherein the *Arthrospira* were/are grown under physiologically stressed conditions.

18. The process of any one of claims 11 to 17 which further comprises rinsing and/or drying the *Arthrospira* extract to provide a dried *Arthrospira* powder.

19. The process of any one of claims 11 to 18 which further comprises the addition of titanium dioxide.

20. The process of any one of claims 11 to 19, further comprising addition of a diluent, wherein the diluent is water.