CLAIMS

1. An antimicrobial and/or anti-inflammatory composition comprising an extract of *Arthrospira;* at least one organic acid in an amount of at least 0.1 wt.% based on the total weight of the composition; and titanium dioxide of between 0.5 wt.% and about 3.0 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, 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 claim 1, wherein the at least one organic acid is benzoic acid.

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

6. The composition of claim 1, wherein the moisture content of the composition is less than 20 wt.%.

7. The composition of claim 1, wherein the composition is formulated for administration to a mammal by topical administration.

8. The composition of claim 1, wherein the composition is in the form of a powder, cream or lotion.

9. 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 decolorizing and/or deodorizing agent to the *Arthrospira* extract to produce the organic acid and provide the antimicrobial and/or anti-inflammatory composition.

10. The process of claim 9, wherein the decolorizing and/or deodorizing agent is selected from the group comprising hydrogen peroxide, benzoyl peroxide, valproate peroxide, acetyl peroxide, formyl hydroperoxide, peroxypropionic acid, peroxybutyric acid, or a combination thereof.

11. The process of claim 9 or claim 10, wherein the decolorizing and/or deodorizing agent is selected from hydrogen peroxide and benzoyl peroxide.

12. The process of claim 11, which further comprises adding at least one organic acid.