significant need for treatments which actually accelerate the growth of nails and cuticles and restore the health of nails and cuticles. The problem with current treatments for improving nail health is that they are mainly cosmetic in nature, largely ineffective, are generally taken systemically (e.g., biotin and silicon) and time consuming. There is a need for compositions which actually enhance or accelerate the growth of nails and cuticles and restore nails and cuticles to their natural health to thicken, strengthen and smooth the nail.

Summary ~~of the Invention~~

In one aspect, there is provided the use of an oil-in-water emulsion comprising cyclosporine A, and a surfactant in the manufacture of a medicament for therapeutically accelerating nail growth, or treating brittle nails in a human or animal, wherein the medicament is to be topically applied to the nails or cuticles of the human or animal at least once a day.

In another aspect, there is provided a non-therapeutic method for accelerating nail growth in a human or animal, the method comprising topically applying an oil-in-water emulsion comprising cyclosporine A, and a surfactant to the nails or cuticles of the human or animal at least once a day.

The present ~~invention~~disclosure is directed to compositions and methods for stimulating the growth of nails (including both toenails and fingernails) and cuticles (eponychium) in a mammal, including humans. The compositions may be administered topically to the nail bed, nail matrix, the end or tip of the nail and cuticle in an amount effective to increase nail growth and thicken, strengthen and smooth the nail and cuticle. The composition may be administered once a day, twice a day, three times a day, four times a day, twice a week, three times a week, four times a week, five times a week and six times a week. The composition may come in a kit comprising a vial or dispenser containing the composition and an applicator brush.

The compositions of the present ~~invention~~disclosure include but are not limited to emulsions, microemulsions, reverse emulsions, solutions, colloids, suspensions, dispersions, gels, pastes and polishes and may optionally contain an active compound such as cyclosporine, in particular, cyclosporine A retinoids (including but not limited to tazortene), biotin, and silicone may be included.

More specifically, the present ~~invention~~disclosure is directed to oil-in-water emulsions optionally containing an active compound wherein the emulsions may contain at least one oil and/or surfactant. In one embodiment the emulsion contains castor oil, polysorbate 80, glycerine, NaOH and may optionally contain polyacrylates such as carbomer and PEMULEN® and other additional ingredients.

One possible solution of the present ~~invention~~disclosure includes 0.5% w/v carboxy methyl cellulose, 0.9% w/v glycerine, 0.25% carnitine and 0.25% w/v erythritol and purite. Other preferred emulsions of the present ~~invention~~disclosure are described in the Examples below which optionally may omit or contain cyclosporine A:

% w/v, 0.01 – 0.05% w/v, 0.01 – 0.04% w/v, 0.01 – 0.03% w/v, 0.01 - 0.02% w/v and 0.01 – 0.0125% w/v.

One preferred emulsion of the present ~~invention~~disclosure contains: 1.0% w/w polysorbate 80, 0.05% w/w glycerine, 1.0% w/w castor oil, 0.08% w/w pemulin TR-2, 1.5% w/w mannitol, sodium hydroxide to a pH of 7.4 and purified water. Another preferred emulsion of the present ~~invention~~disclosure contains: 1.0% w/w polysorbate 80, 1.0% w/w glycerine, 1.25% w/w castor oil, 0.05% w/w pemulin TR-2, 2.0% w/w mannitol, sodium hydroxide to a pH of 7.4 and purified water. Another preferred emulsion contains: 1.5 % w/w polysorbate 80, 0.05% w/w glycerine, 0.05% w/w castor oil, 0.08% w/w pemulin TR-2, 1.5% w/w mannitol, sodium hydroxide to a pH of 7.4 and purified water. Another preferred emulsion of the present ~~invention~~disclosure contains 1.2 % w/w polysorbate 80, 1.0% w/w glycerine, 1.50% w/w castor oil, 0.05% w/w pemulin TR-2, 2.5 % w/w mannitol, sodium hydroxide to a pH of 7.4 and purified water. Another preferred emulsion of the present ~~invention~~disclosure 0.5% w/w polysorbate 80, 1.0% w/w glycerine, 1.25% w/w castor oil, 0.05% w/w pemulin TR-2, 1.0% w/w mannitol, sodium hydroxide to a pH of 7.4 and purified water.

Certain embodiments of the ~~invention~~disclosure include:

1. A composition for use in accelerating nail growth, treating brittle nails and strengthening nails in a human or animal, the composition comprising an oil-in-water emulsion topically applied to the fingernails or cuticles of a patient at least once a day.

2. The composition of paragraph 1 wherein the emulsion contains castor oil and a surfactant.

3. The composition of paragraphs 1 and 2 wherein the emulsion contains a cyclosporine A derivative or segment.

4. The composition of paragraphs 1 – 3 wherein the emulsion also contains one component selected from the group consisting of glycerin, polysorbate 80 and carbomer 1342.

5. The composition of paragraph 4 wherein the composition contains 1.0% w/v polysorbate 80, 2.2% w/v glycerine, 1.25% w/v castor oil, 0.05% w/v pemulin.