## BACKGROUND

Lifestyle choices as well as daily exposure to environmental elements accelerate the aging process by causing highly reactive molecules in the skin. These unstable molecules produce damaging reactive oxygen species (ROS) such as free radicals, oxygen ions, and peroxides. Increased ROS levels can result in DNA mutations, preventing cell regeneration and leading to signs of photodamage including fine lines, wrinkles, loss of elasticity, discoloration, and even skin cancer. For over a decade, SkinCeuticals has offered a variety of antioxidant treatments to combat environmental damage caused by ROS. Due to the strict regulations surrounding the Duke antioxidant patent, it was impossible to formulate a clinically proven antioxidant in any formulation besides an aqueous solution.

## TECHNOLOGICAL INNOVATION

Phloretin CF Gel defies the boundaries of gel formulations by featuring a patent-pending state-of-the art gelifier that meets the parameters of the Duke antioxidant patent, suspends actives in an aqueous solution, and is formulated at an acidic pH. The aqueous solution contains an optimized combination of 2% phloretin, 10% vitamin C, and 0.5% ferulic acid to provide broad-spectrum free radical protection. This trusted antioxidant trio stimulates collagen synthesis, accelerates cell turnover, and protects skin from the range of reactive molecules known to cause accelerated aging and DNA mutations. Instead of encapsulating actives, the open matrix gel delivery system suspends the actives and deliveryenhancing solvents in an acidic serum. This unique serum-in-a-gel technology maintains the integrity of the solution until it makes contact with the skin and can be safely released for maximum penetration. As the serum begins releasing from the open matrix in a controlled manner, the solvents flash off, leaving the empty gel network on top of skin to reinforce the barrier for reduced irritation while driving actives to the target site.

Using the same testing methodology as our serums, Phloretin CF Gel is proven to provide the same broad-range efficacy as Phloretin CF Serum.

## **KEY INGREDIENTS**

#### 2% Phloretin

- Comes from apples and the root bark of fruit trees including apple, pear, and grapefruit
- Classified as a dihydrochalcone (special group of flavonoids) known to prevent immunosuppression and for anti-inflammatory, antifungal, and anticancer properties
- Accelerates cell turnover
- Suppresses radiation-induced oxidative reactions
- Slows the degradation of collagen
- Increases the production of elastin
- Maintains the integrity of the extra cellular matrix
- Inhibits UV-induced melanogenesis

## 10% L-Ascorbic Acid (vitamin C)

- Water-soluble, chain-ending antioxidant essential for proper functioning of the human body
- Inhibits UVA and UVB radiation-induced damage
- Prevents UV immunosuppression
- Promotes collagen synthesis
- Regenerates vitamin E present in skin
- Anti-inflammatory and anticancer properties

#### 0.5% Ferulic Acid

- Ubiquitous plant antioxidant
- Neutralizes free radicals known as "superoxide," "hydroxyl radical," and "nitric oxide"
- Suppresses radiation-induced oxidative reactions
- Anti-inflammatory properties
- Easily absorbed by the skin
- Inhibits UV-induced melanogenesis

# IN-VIVO RESULTS





