

STALEAF™

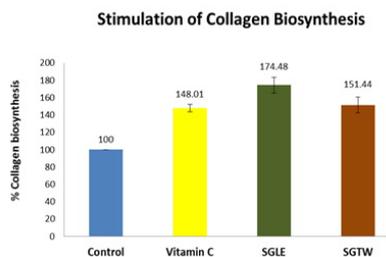
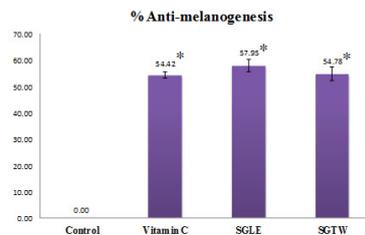
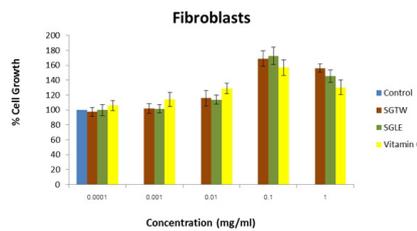


CDIP offers innovative and efficient cellular-level whitening and anti-aging product ingredient for cosmetic that satisfy the customer demands. We call this novel active ingredient; STALEAF™. The STALEAF™, an extract of *Hypoxis aurea*, is the whitening and anti-aging product ingredient which CDIP has cooperated with the researcher; patent owner, to optimize preparing and extraction process under registered patent to maximize the full potential of the STALEAF™.

The STALEAF™ is one of latest natural extracts from star grass (*Hypoxis aurea*) inspired by traditional knowledge of oriental herbal remedy for acnes, dark spots and blemish which is recorded in encyclopedia of herbs commonly used in Thai. The STALEAF™ is scientifically studied, published and proven that the STALEAF™ is a potent tyrosinase inhibitor, stimulation of collagen synthesis, plus free radical scavenger as a multifunctional bio-active extract whose studies are received many innovation awards.



Innovation awards:

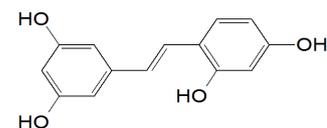


Sample	Tyrosinase Inhibition Activity IC50 (mg/ml)
Alpha-albutin	0.21±0.01
Licorice oil	0.14±0.01
Kojic acid	0.20±0.06
STALEAF™	0.06±0.02
Vitamin C	0.07±0.02

STALEAF™ offers the following benefits:

- Novel natural affective whitening and anti-aging ingredient for cosmetic
- Anti-Melanogenesis
- Potent tyrosinase inhibitor
- Stimulating collagen synthesis
- Free radical scavenger is a plus

Active Ingredients: Oxyresveratrol



Other Phenolic Active Ingredients:

Tannins
Glycosides

Application:

Whitening and Anti-Aging products
Applicable for gel and emulsion finished products

Recommended Use: 0.5-2%

Discover more details on the STALEAF™.

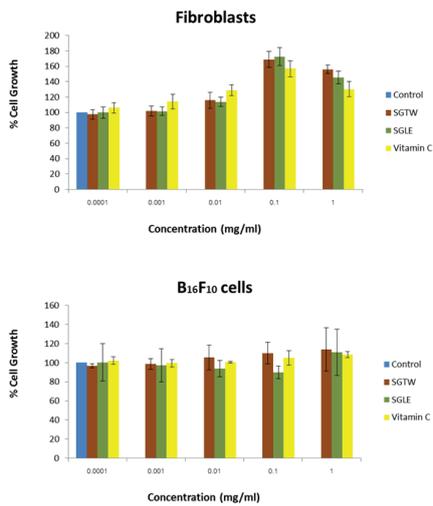
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STALEAF™

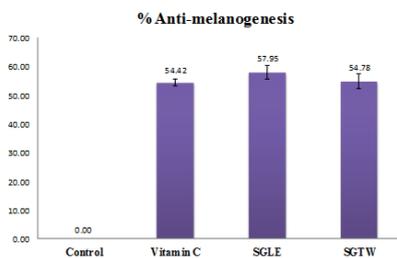


Cytotoxicity Tests (in-vitro study)



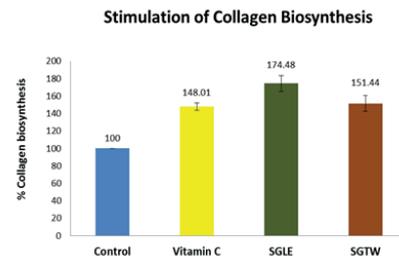
Result: SGLE (STALEAF™) at various concentrations, exhibited no cytotoxicity on the 4th passaged murine melanoma cells, and human skin fibroblasts when compared with the control ($p < 0.05$). The STALEAF™ extracts at 0.1 mg/mL indicated significant the highest stimulation index (SI), which was the ratio between the percentages of cell growth treated with the extracts and the control, on human skin fibroblast proliferation of 1.727 which was more active than vitamin C (SI of 1.569) ($p < 0.05$).

Anti-Melanogenesis Activity



Result: The SGLE extract (STALEAF™) at 0.1 mg/ml showed the anti-melanogenesis on the B16F10 cells at 24 hr, which was comparable with vitamin C ($p < 0.05$). The anti-melanogenesis activity of the extract is due to its phytochemical contents such as glycosides and tannins, and phenolic compounds.

Stimulation of Collagen Biosynthesis



Result: The SGLE extracts (STALEAF™) at 0.1 mg/ml exhibited significant stimulated the collagen biosynthesis on human skin fibroblasts when compared to control (no treated) ($p < 0.05$). In addition, the collagen stimulation of the STALEAF™ extract gave superior the stimulation than vitamin C about 26% ($p < 0.05$).

Tyrosinase Inhibitor Activity

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Vitamin C	0.07±0.02

Result: The STALEAF™ shows that its IC50 value is the lowest among other famous tyrosinase inhibitor agents and displays 3.33-fold relative inhibitory activity (RA) of kojic acid against the STALEAF™.



Discover more details on the STALEAF™.

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