

TECHNOLOGY OFFER

Prevention and Treatment of Obesity

Lipolytic and antiadipogenic coumarin derivatives against obesity and metabolic diseases

BACKGROUND

Obesity and related metabolic diseases have been rising worldwide over recent decades. Current pharmacotherapies are often associated with side effects and are not suitable or acceptable for all patients. At the same time, there is a strong and growing consumer demand for plant-based products with preventive or therapeutic effects on body weight and metabolic health. Thus, there is a clear unmet need for safe, effective, preferably natural compounds to prevent and/or treat obesity and related metabolic diseases.

TECHNOLOGY OVERVIEW

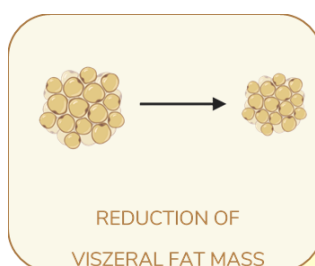
Plant-derived coumarin derivatives, in particular citropten (limettin), reduce adipogenesis and enhance lipolysis in adipocytes. Their pro-lipolytic activity has also been demonstrated in a diet-induced obesity mouse model. They can be used as purified compounds or enriched plant extracts for pharmaceutical and nutraceutical applications targeting obesity, overweight, and metabolic syndrome. Toxicological data support a favourable safety profile and low risk of adverse effects - no toxicity or hepatotoxicity in mice up to 110 mg/kg.

ADVANTAGES

- **Dual mechanism:** Prevention of new fat cell formation & mobilization of free fatty acids from stored triglycerides in adipocytes
- **Natural origin:** Obtained from citrus peels
- **Attractive** for pharmaceutical and food supplement markets
- **Favourable safety profile**
- **Strong IP position**

APPLICATIONS

- Adjuvant or stand-alone treatment of overweight, obesity and metabolic syndrome
- Over the counter weight management products
- Supplements and functional foods for weight management



KEYWORDS:

Overweight
Obesity
Metabolic diseases
Coumarin derivatives
Antiadipogenic
Lipolytic
Citropten
Limettin

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COOPERATION OPTIONS:

Licensing Agreement
Research cooperation

STATUS OF PATENT:

Patents filed & positive ESR
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