



SciTherm

SciTherm is at the forefront of developing innovative solutions for the treatment and control of obesity. Inspired in capsaicinoids, we focus on creating thermogenics designed in-silico, to turn on lipid and triglyceride degradation metabolic pathways, without the pungency and irritation effects of chili molecules.

The Problem

Currently, the most effective drugs treatments for weight control do not burn fat. They were designed either to inhibit fat accumulation or to maintain glucose homeostasis for patients with diabetes type II.

Tetrahydrolipstatin: Prevents the absorption of fats as a lipase inhibitor. Secondary effects include steatorrhea with excessive flatus, fecal incontinence and frequent or urgent bowel movements

GLP-1: Promotes insulin secretion in a glucose-dependent manner. These peptides do not promote fat degradation and might produce several secondary effects

Our solution

At SciTherm we, rationally design artificial capsaicinoids that bound to a receptor that triggers fat burn through lipolysis activation and inhibits fat accumulation.

Our new-to-nature molecules improve the ligand channel interaction to effectively turn lipolysis on without causing a spicy sensation, nor stomach irritation.

“Turning on the heat without the hot”

Approach



In-Silico Design: Computer modeling to design molecules that mimic the structure and function of natural capsaicinoids, increasing their efficacy without adverse effects.



Specificity and Potency: Our compounds are designed to specifically activate fat degradation pathways and inhibit lipid accumulation pathways, ensuring greater efficiency in weight control.

Results



In-Vitro: We have tested our molecules in 3T3-L1 adipocytes, demonstrating significant inhibition of adipogenesis and lipid and triglyceride degradation.



In-Vivo: In diet-induced obesity models in rodents, our compounds have shown a notable decrease in body fat accumulation and improvement in lipid profile, reducing LDL, VLDL, and triglycerides in serum.

Preclinical trials



Adipocytes

SciTherm 80%



Roents

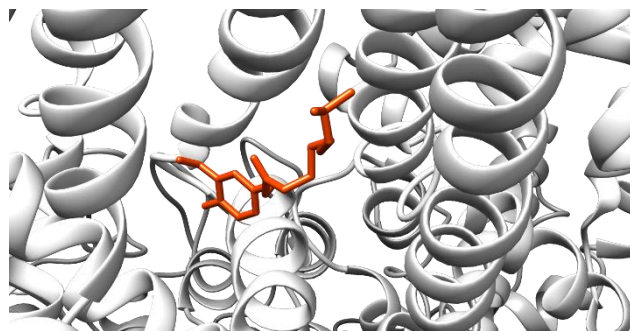
SciTherm 55%

Total lipid degradation. Data are expressed as percentage of total lipids degradation after challenge with a designed molecule.

Ongoing research

We have enzymatically synthesized new-to-nature structurally different molecules with a promising thermogenic activity. We are ready to validate:

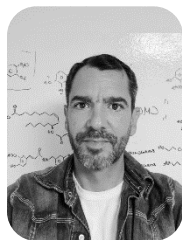
- Receptor affinity
- In-vitro lipolysis
- In-vivo fat mass decrease



Cuauhtémoc Licona



Paul Magaña



Alejandro Torres

Blend of deep technical knowledge in thermogenesis and biocatalysis with business skills.

All team members have entrepreneurial experience and have worked together in the past.

Seeking passionate partners dedicated to shaping a healthier future.

SciTherm is a recently created startup focused on validating its value proposition for thermogenesis.



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