Melanotan II Overview

Overview:
Melanotan II is a synthetic peptide analog of alpha-melanocyte-stimulating hormone (α-MSH). It was originally developed as a potential treatment for skin pigmentation disorders and has gained attention for its ability to enhance tanning and sexual function.

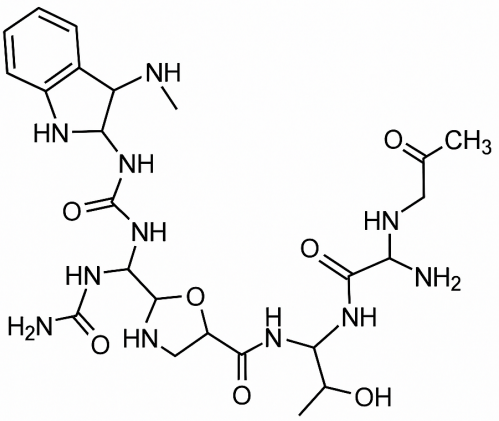
Mechanism of Action:
MC1R Activation:
Melanotan II binds to melanocortin receptors, particularly MC1R, on melanocytes in the skin.
Increases Melanin Production:
Activates tyrosinase enzyme activity, boosting melanin synthesis for darker skin pigmentation.
MC4R Activation (in the CNS):
May also activate MC4R receptors in the brain, contributing to libido enhancement and appetite modulation.

Physiological Functions in the Body:
- Skin Pigmentation: Increases melanin production, enhancing UV protection.
- Sexual Arousal: Reported to increase libido and erectile function in men and women.
- Appetite Suppression: Some users report decreased appetite during use.

Clinical & Research Use:
Not FDA-approved for any therapeutic use.
Research & Off-Label Use:
- Investigated in skin disorders like vitiligo and erythropoietic protoporphyria (EPP).
- Commonly used off-label as a tanning peptide in cosmetic applications.
- Studied for potential sexual dysfunction treatment.

Dosing (Research Context):
Subcutaneous injection:
Common dose: 0.5–1 mg per injection, 1–3 times per week.
Cycle length: 4–6 weeks.
No official therapeutic dosing – purely investigational.

Conclusion:
Melanotan II is a synthetic peptide that mimics α-MSH, enhancing melanin production for darker skin pigmentation and potentially influencing sexual function. While not approved for clinical use, it remains a subject of research and is used off-label in cosmetic tanning and sexual health contexts.



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