

# MITOCHONDRIA COMPLETE™

## Clinician White Paper

Advanced Multi-Pathway Mitochondrial Optimization Spray Featuring SS-31, NAD, MOTS-c, and CB4211

### Executive Summary

MITOCHONDRIA COMPLETE™ is a next-generation mitochondrial wellness formulation designed for physicians and clinics focused on cellular energy optimization, metabolic resilience, healthy aging, and performance medicine.

This innovative 6C spray system combines four mitochondrial-targeted bioactives:

Core Component	Primary Role
SS-31 (Elamipretide)	Mitochondrial membrane & cardiolipin support
NAD	Redox cofactor for energy and longevity pathways
MOTS-c	Mitochondrial-derived metabolic signaling peptide
CB4211	Clinical-stage MOTS-c analog for metabolic wellness

### Key Ingredients & Scientific Foundation

#### 1. SS-31 (*Elamipretide*)

A clinically studied mitochondrial peptide known for interaction with cardiolipin, supporting mitochondrial membrane integrity and respiratory chain efficiency.

#### 2. NAD

A foundational metabolic cofactor essential for mitochondrial ATP generation, DNA repair, and cellular resilience mechanisms widely recognized in longevity science.

#### 3. MOTS-c

A groundbreaking mitochondrial-derived peptide involved in metabolic homeostasis and adaptive cellular stress response pathways.

#### 4. CB4211

An advanced MOTS-c analog explored in clinical-stage research for metabolic and hepatic wellness support.

## **Selected References**

1. Pitceathly RDS et al. Elamipretide genotype-specific effects. *Orphanet Journal of Rare Diseases*. 2024.

<https://link.springer.com/article/10.1186/s13023-024-03421-5>

2. Pinto JBB et al. NAD systematic review. *American Journal of Physiology – Endocrinology and Metabolism*. 2023.

<https://journals.physiology.org/doi/full/10.1152/ajpendo.00242.2023>

3. Lee C et al. MOTS-c metabolic homeostasis. *Cell Metabolism*. 2015.

[https://www.cell.com/cell-metabolism/fulltext/S1550-4131\(15\)00061-3](https://www.cell.com/cell-metabolism/fulltext/S1550-4131(15)00061-3)

4. ClinicalTrials.gov. CB4211 Phase 1a/1b Trial. Identifier: NCT03998514.

<https://clinicaltrials.gov/study/NCT03998514>

## **Conclusion**

MITOCHONDRIA COMPLETE™ represents a premium mitochondrial wellness innovation, combining clinically explored peptides and metabolic cofactors into one advanced delivery platform for physicians and clinics focused on cellular energy and longevity support.