Statement for the Record by Dr. Catherine Baucom, Chief Medical Officer, MitoSense Inc. & Director, Elliott Mitochondria Research Center

Submitted to the House Committee on Veterans' Affairs

Hearing: "A Call to Action: Meeting the Needs of the Spinal Cord Injury and Disorders Veteran Community"

Date: June 13, 2024

Honorable Members of the House Committee on Veterans' Affairs,

It is with a deep sense of responsibility and urgency that I, Dr. Catherine Baucom, on behalf of MitoSense Inc. and the Elliott Mitochondria Research Center, address this esteemed committee. As we convene to discuss "A Call to Action: Meeting the Needs of the Spinal Cord Injury and Disorders Veteran Community," I wish to underscore the critical intersection of advanced mitochondrial science and the profound impact it can have on our veterans suffering from spinal cord injuries and disorders (SCI/D).

The challenges faced by veterans with SCI/D are multifaceted, encompassing not only physical and neurological impairments but also metabolic disturbances that significantly impair quality of life. At MitoSense Inc., our mission to innovate at the forefront of mitochondrial function offers promising implications for therapeutic strategies aimed at this brave population.

Mitochondria, often described as the powerhouses of the cell, play a crucial role in energy production and cellular health. Research has increasingly shown that mitochondrial dysfunction is a key contributor to the pathology of spinal cord injuries. Our ongoing studies and developments at the Elliott Mitochondria Research Center emphasize not only understanding this critical relationship but also harnessing this

knowledge to develop interventions that can restore mitochondrial function using Mitochondrial Organelle Transplantation (MOT™), thereby improving motor and sensory outcomes for individuals with neurodegeneration.

Our commitment to advancing care for our veterans is further solidified through our collaborative efforts with the James A. Haley Veterans' Hospital and the Walter Reed Army Institute of Research (WRAIR). We are proud to be part of a Cooperative Research and Development Agreement (CRADA) that focuses on pioneering research into novel prehospital treatments for traumatic brain injuries, which share underlying pathophysiological mechanisms with spinal cord injuries.

Additionally, we are engaged in a CRADA with the James A. Haley Veterans' Hospital to explore innovative treatments for Amyotrophic Lateral Sclerosis (ALS), further underscoring our dedication to addressing a spectrum of neurodegenerative conditions affecting our veterans. These partnerships not only accelerate our research but also ensure that the findings and technologies we develop are directly informed by and tailored to the needs of veterans.

The potential for mitochondrial-targeted therapies includes:

1. Enhancing cellular energy production to support damaged nerve cells,
2. Reducing oxidative stress to limit further cellular injury, and
3. Promoting the inherent regenerative capacities of neural tissues.

Our current initiatives involve developing and testing novel therapies that can be administered safely and effectively, aiming to significantly enhance the lives of those living with neurodegeneration. The implications of this research extend beyond basic science, offering hope for tangible, improved patient outcomes.

Given the unique challenges and the severe impact on quality of life associated with spinal cord injuries and disorders, it is imperative that

we direct adequate resources and attention to accelerating research and clinical trials in this field. Enhanced funding and support can enable more rapid advancements in mitochondrial therapies, potentially revolutionizing treatment paradigms for our veterans.

As this committee seeks to galvanize efforts to support our veterans with SCI/D, I advocate for increased investment in mitochondrial research. A commitment to this area of science is a commitment to uncovering new, impactful therapies that could vastly improve the lives of thousands of veterans across the nation.

Thank you for the opportunity to submit this statement. We at MitoSense Inc. and the Elliott Mitochondria Research Center are committed to continuing our research and clinical efforts to serve our veterans and advance the field of mitochondrial medicine.

Respectfully,

Catherine Baucom MD, PhD
Chief Medical Officer, MitoSense Inc.
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