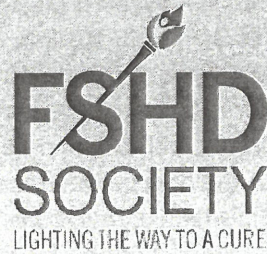




## ABSTRACT BOOK

June 13-14, 2024 • Hilton Denver City Center • Denver, Colorado

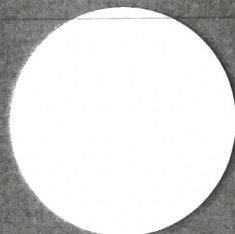


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#### **P4.04**

##### **Interleukin 1 beta levels were significantly different in male FSHD patients**

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In FSHD, *DUX4* toxicity leads to cell death. Cell death is known to start a process called sterile inflammation through IL-1 family, which includes IL-1 $\beta$ . Serum biomarker studies in the field have shown that there is a significant increase in IL-6 and TNF-alpha levels of FSHD patients compared to healthy controls (HC). In this pilot study, we investigated the potential inflammatory changes in our own patient group. For this purpose, we measured IL-1 $\beta$ , IL-6, and TNF-alpha levels in 8 male patients and 8 age-matched HC. The serum levels of Interleukin IL-1 $\beta$ , IL-6, and TNF- $\alpha$  were quantified using a Simple-Plex cartridge for ELLA Automated Immunoassay System Instrument. As a result, we found that all of the parameters – IL-1 $\beta$ , IL-6, and TNF- $\alpha$  – exhibited higher levels in the FSHD group. However, of those, IL-1 $\beta$  was the only parameter that was significantly higher in FSHD patients compared to controls ( $p = 0.012$ ). What we found was the high inter-individual variation of IL-1 $\beta$  and IL-6. The small number of participants might be a limitation, or geographic heterogeneity may be a contributing factor to this variability. It is noteworthy that the significant difference of IL-1 $\beta$  levels, an interleukin that is specifically associated with sterile cell death, was detected even in our pilot group. Based on this significance, we suggest that IL-1 $\beta$  may provide relevant clues regarding pathophysiology.



## CERTIFICATE OF ATTENDANCE

To Whom it May Concern:

This is to certify that Dr. Ceren Hangül attended the International Research Congress on FSHD online.

Sincerely,

A handwritten signature in black ink that reads "Jess Carter". The signature is written in a cursive, flowing style.

Jess Carter  
Operations Manager  
FSHD Society

