**MOLECULAR BIOLOGY**

**Premium edit**

Our previous studies on the effects of proinflammatory cytokines on mitochondrial function have shown that these cytokines modulate the expression of several mitochondrial proteins participating in ATP production. We also found that in primary cultures of rat hepatocytes, cytokines such as interleukin (IL)-1 and IL-6 regulate energy metabolism and mitochondrial function by significantly inhibiting ATP production and utilization in a time- and dose-dependent manner. To investigate these effects further, in this study, we aimed to determine whether cytokines modulate the expression of the novel mitochondrial protein mimitin and its binding partners. We found that when HepG2 cells were exposed to IL-1 and IL-6 for 12 h and 18 h, respectively, the levels of the mimitin transcript and mimitin protein increased. These cytokines also stimulated the expression of the luciferase reporter gene under the control of the mimitin gene promoter. These observations indicate that both the cytokines regulate mimitin gene expression at the transcriptional level.

# Source: [*Mimitin – a novel cytokine-regulated mitochondrial protein*](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2667391/) by Paulina Wegrzyn, Stephen J Yarwood, Nathalie Fiegler, et al. used under [CC-BY](https://creativecommons.org/licenses/by/4.0/).