

Renzi TA, Rubino M, Gornati L, Garlanda C, Locati M, Curtale G. (2015). MiR-146b mediates endotoxin tolerance in human phagocytes. *Mediators of Inflammation* 2015:145305.

A proper regulation of the innate immune response is fundamental to keep the immune system in check and avoid a chronic status of inflammation. As they act as negative modulators of TLR signaling pathways, miRNAs have been recently involved in the control of the inflammatory response. However, their role in the context of endotoxin tolerance is just beginning to be explored. We here show that miR-146b is upregulated in human monocytes tolerized by LPS, IL-10, or TGF β priming and demonstrate that its transcription is driven by STAT3 and RUNX3, key factors downstream of IL-10 and TGF β signaling. Our study also found that IFN γ , known to revert LPS tolerant state, inhibits miR-146b expression. Finally, we provide evidence that miR-146b levels have a profound effect on the tolerant state, thus candidating miR-146b as a molecular mediator of endotoxin tolerance