

# **Serum miR-34a-5p and miR-199a-3p as new biomarkers of neonatal sepsis**

مكان النشر: PLoS ONE :e026233917(1)

**Author :** Omayma O. Abdelaleem, Shereen Rashad Mohammed, Hassan S. El Sayed, Sherin Khamis Hussein, **Doaa Y. Ali**, Mostafa Y. Abdelwahed, Sylvana N. Gaber, Nada F. Hemeda, Rehab G. Abd El-Hmid

**Published date: January 6, 2022**

## **Abstract**

**Background:** Neonatal sepsis is a serious condition. Recent clinical studies have indicated that microRNAs (miRNAs) are key players in the pathogenesis of sepsis, which could be used as biomarkers for this condition.

**Patients and Methods:** A total of 90 neonates with sepsis and 90 healthy neonates were enrolled in this study. qRT-PCR was performed to measure the expression levels of serum miR-34a-5p and miR-199a-3p.

**Results:** miR-34a-5p and miR-199a-3p serum levels were significantly reduced in neonates with sepsis compared with those in healthy neonates (  $P=0.006$  and  $P=0.001$ , respectively). Significant correlations of miR-34a-5p and miR-199a-3p with each of TLC, RDW, RBS, and C-reactive protein (CRP) as well as SNAPII were observed, indicating their associations with the severity of neonatal sepsis.

**Conclusion:** miR-34a-5p and miR-199a-3p may be useful as novel biomarkers in neonatal sepsis and may provide a new direction for its treatment.