Temporal lobe epilepsy (TLE) is the most common form of refractory focal epilepsy, and the current clinical diagnosis is based on EEG, clinical neurological history and neuro-imaging findings. There are no blood-based molecular biomarkers of TLE to support clinical diagnosis, despite the pathogenic mechanisms underlying TLE are known to involve defects in the regulation of gene expression. MicroRNAs (miRNAs) have emerged as important post-transcriptional regulators of gene expression, providing a completely new level of control of gene expression. Recent studies show the feasibility of detecting miRNAs in body fluids, and circulating miRNAs have emerged as potential clinical biomarkers. Altered levels of circulating miRNAs have been reported in human epilepsy, but the miRNA profile of TLE is not completely known and needs to be addressed. In our research, we analyze the diagnostic potential of circulating miRNAs in serum of TLE patients using qRT-PCR and in silico approach, speculating on the potential functional role of altered miRNAs in TLE patients.

References:

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