

DNA methylation as a marker of response in rheumatoid arthritis

Rheumatoid arthritis (RA) affects approximately 0.5 to 1% of the population. While there are several existing biological drugs used to manage RA, up to 40% of people with RA do not respond well to their drugs. Therefore, identifying factors that predict which people are more likely to respond to which drug before starting treatment is a research priority. One type of factor to consider is DNA methylation. This is a modification of DNA which regulates how genes are expressed. This modification has been shown by previous studies to play a role in RA disease processes. The role of DNA methylation has been studied in cancer medicine, and it has been shown that levels of methylation can predict response to treatment. This review of the published literature discusses DNA methylation in the context of RA. Although existing studies show promise in this area, more studies are required in people with RA. Future work should include larger patient numbers, in order to better understand the role of DNA methylation in RA.