

# Computational Analysis of Pharmacogenomics and MicroRNA based Gene Regulatory Networks in Psoriasis †

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**Abstract:** In the era of post-genomics, computational analysis of genomics and transcriptomics to understand the non-coding microRNA (miRNA) based regulated networks in autoimmune diseases like psoriasis is an uphill task. Herein the challenge was approached based on four computational approaches, namely Top-down: miRNA-based associated regulation; Bottom-up: miRNA-based expressed and co-expressed regulation; Direct: miRNA-based Pharmacogenomic regulation, and Indirect: miRNA based pharmacovariant regulation. The outcomes of the present study on identifying a specific miRNA as a potential biomarker for treating psoriasis were analyzed and retrieved. Further research in miRNA-based gene regulation in psoriasis require challenge experiments in *in-vitro* and *in-vivo* conditions.

**Keywords:** autoimmune diseases; computational analysis; MicroRNA; pharmacogenomics and psoriasis.

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## Conflicts of Interest

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