

**Title of journal: Therapeutic Advancements in
Psoriasis and Psoriatic Arthritis**

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Abstract:

Background: Within the past few years, many new therapies have emerged for psoriasis and psoriatic arthritis (PsA). Current topical therapies—including corticosteroids, vitamin D analogs, tapinarof, and roflumilast—remain the mainstay for mild disease, while oral systemic and biologic options are for moderate to severe cases. Biologics—such as Tumor necrosis factor-alpha (TNF-alpha), Interleukin 12/23 (IL-12/23), Interleukin-17 (IL-17), and Interleukin-23 (IL-23)—have revolutionized care by providing highly effective and safer alternatives. Oral small molecules, including Janus kinase (JAK) and tyrosine kinase 2 (TYK2) inhibitors, further expand the therapeutic options. **Objectives:** The goal for this review article was to examine current and latest treatments for psoriasis and PsA and discuss whether these emerging therapeutic options address the unmet needs of current treatments. **Methods:** The search for this review article included PubMed, Google Scholar, and ClinicalTrials.gov for relevant articles and current clinical trials using keywords. **Results:** A wide range of novel psoriatic and PsA therapies are currently undergoing clinical trials. These include selective JAK inhibitors, TYK2 inhibitors, retinoic acid-related orphan receptor (ROR γ T) inhibitors, oral IL-23 receptor inhibitors, oral IL-17A inhibitors, nanobody products, sphingosine-1-

phosphate (S1P1R) antagonists, A3 adenosine receptor (A3AR) agonists, heat shock protein (HSP) 90 inhibitors, and rho- associated protein kinases (ROCK-2) inhibitors.

Conclusions: These different mechanisms of action not only expand treatment options but may offer potential solutions for patients who do not achieve adequate response with existing therapies. However, the safety and contraindications of these newer agents remain an important consideration to ensure appropriate patient selection and minimize potential risks. Certain mechanisms may pose increased risks for infection, cardiovascular manifestations, malignancy, or other immune-related adverse events, necessitating careful monitoring and individualized treatment decisions. Ongoing clinical research aims to address unmet needs for patients who do not respond to previous agents to achieve sustained remission, monitor long-term safety outcomes, and assess patient preferences for delivery, including a preference for oral delivery. Oral IL-23 inhibitors hold potential due to their robust safety profiles. In contrast, oral IL-17 inhibitors and TYK-2 inhibitors are effective but may present side effects that could impact their acceptability. It is essential to balance efficacy, safety, and patient preferences to guide the selection of appropriate therapies.

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