

## Immune Pathways and Innovative Prospects in the Treatment of Vitiligo

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**Objective:** The primary objective of this randomized controlled trial (RCT) is to assess the efficacy and safety of Ritlecitinib, a Janus kinase (JAK) inhibitor, in treating patients with non-segmental vitiligo.

**Methods and Materials:** The study enrolled 90 participants diagnosed with non-segmental vitiligo, randomized into two groups: 45 received Ritlecitinib, and 45 were given a placebo. The trial duration was 24 weeks, with a follow-up period of 12 weeks. Primary efficacy endpoints were the Vitiligo Area Scoring Index (VASI) and repigmentation percentage. Secondary endpoints included safety profiles, patient quality of life (assessed using DLQI - Dermatology Life Quality Index), and immunological markers relevant to vitiligo pathogenesis.

**Results:** At the conclusion of 24 weeks, the Ritlecitinib group demonstrated significant improvements compared to the placebo group. Key findings include: Mean VASI reduction: 47.6% in the Ritlecitinib group vs. 15.2% in the placebo group ( $p < 0.001$ ). Patients achieving 50% repigmentation: 39.3% in the Ritlecitinib group compared to 9.3% in the placebo group ( $p < 0.001$ ). DLQI score improvements were more pronounced in the Ritlecitinib group (average reduction of 18 points) compared to the placebo (average reduction of 6 points). Immunological analysis indicated a significant reduction in circulating autoantibodies and an increase in regulatory T-cells in the Ritlecitinib group. Adverse events were mild to moderate in severity, with the most common being mild gastrointestinal discomfort and headache.

### Biography

Rui Yuan is a doctor-in-charge in the People's Hospital of Yubei District of Chongqing. She is working in the Department of Dermatology. She was born in 1987 and working for dermatology for years.

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