

## Novel systemic therapies promise significant improvement in care for patients with Atopic Dermatitis

Findings from recent studies show that dupilumab and some other new systemic treatment options that target specific cytokines, receptors, or their intracellular signaling, significantly improve clinical outcomes in patients with atopic dermatitis (AD). The cytokines IL-4 and IL-13, for instance, play a central role in AD pathophysiology and also contribute to AD in itch. Dupilumab, an IL4Ra-antibody, specifically targets the IL-4 receptor alpha (IL-4Ra) chain, and inhibits the interactions between IL-4 and IL-13 and their receptors. The agent significantly improves atopic eczematous skin lesions, reduces pruritus in difficult to treat, highly pruritic diseases and displays rapid itch reduction in AD. Tralokinumab and lebrikizumab, are also new treatment options that reduce eczema and pruritus in AD. Nemolizumab, an IL-31Ra antagonist, has a highly significant antipruritic effect in patients with moderate to severe AD. The potential to inhibit JAK-1 and JAK-2, with selective JAK-inhibitors also opens a new treatment avenue. Oral JAK1/3 inhibitor tofacitinib could successfully reduce itch in patients with chronic pruritus. Baricitinib (4 mg) reduces itch and significantly reduces sleep disturbance. Other new systemic treatments include newly developed KOR (kappa-opioid receptor) agonists, such as nalfurafine, which have mild but significant efficacy in reducing pruritus in end-stage renal disease (ESRD) patients. Recent studies with topical formulations of tofacitinib (a JAK1/3 inhibitor), ruxolitinib (a JAK1/2 inhibitor), and delgocitinib (a pan-JAK inhibitor that blocks all members of the JAK family) have shown promising results in the reduction of eczema and especially pruritus in AD lesion.

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Reference: Legat FJ. Itch in Atopic Dermatitis - What Is New?. Front Med (Lausanne). 2021;8:644760. Published 2021 May 7. doi:10.3389/fmed.2021.644760

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