A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Phase 2a Study to Evaluate the Mechanism of Action of Abrocitinib Monotherapy for Moderate-to-Severe Atopic Dermatitis (JADE MOA)

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Background: Atopic dermatitis (AD) is a common, chronic, inflammatory skin disorder characterized by skin lesions, intense pruritus, and a general deterioration in quality of life. The pathogenesis of AD involves a dysregulated proinflammatory immune response and disruption of the skin barrier. The Janus kinase (JAK) signaling pathway plays a key role in mediating the underlying pathologic immune response in patients with AD. Abrocitinib is a selective JAK1 inhibitor being investigated as a once-daily, oral treatment for moderate-to-severe AD. This study is specifically designed to evaluate the mechanism of action of abrocitinib in adults with AD.

Objective: The primary objective of the JADE MOA study (ClinicalTrials.gov, NCT03915496) is to assess the effects of abrocitinib on lesional and nonlesional skin biomarkers of adult study participants with moderate-to-severe AD.

Methods: This is a randomized, double-blind, placebo-controlled, parallel-group, multicenter, phase 2a study to investigate the mechanism of action of abrocitinib monotherapy in adult study participants with moderate-to-severe AD. Patients aged ≥18 years with a clinical diagnosis of chronic moderate-to-severe AD ≥1 year with a recent history of inadequate response to medicated topical therapy for AD or systemic therapy to control disease will be enrolled. Patients will be screened within 28 days before the first dose of study intervention to confirm eligibility. Approximately 51 patients will be randomly assigned in a 1:1:1 ratio to receive abrocitinib 200 mg once daily, abrocitinib 100 mg once daily, or matching placebo once daily for 12 weeks. At the end of 12 weeks of study treatment, qualified patients will have the option to enter a long-term extension study. Patients discontinuing early from the JADE MOA study will undergo a 4-week off-treatment follow-up period. The primary endpoint is change from baseline to week 12 in biomarkers of AD in lesional and nonlesional skin. The secondary endpoints include changes from baseline in gene, cellular (T cell and dendritic cell) markers of inflammation, epidermal markers of hyperplasia, and blood biomarkers of inflammation and immune response. Additional secondary endpoints are pruritus response and its correlation with immunohistochemistry and genetic markers. Safety will be assessed throughout the study.